STANDARD BID SPECIFICATION

EMERGENCY MEDICAL VEHICLE

TYPE I- AD (Additional Duty)

I70RMW

RESQ-MEDIC 170RM

Walk-Through

1.0 Scope, Purpose and Classification

1.1 Scope:

This specification covers a new, commercially produced, surface medical care vehicle, hereinafter referred to as ambulance or vehicle. A vehicle in compliance with this specification shall be defined as a standard ambulance.

1.2 Purpose:

The purpose of this document is to provide minimum specifications and test parameters for the manufacture of an emergency medical care vehicle that meets the needs and desires of this agency. It establishes essential criteria for the design, performance, equipment and appearance of the vehicle. The object is to provide a vehicle that is in accordance with nationally recognized guidelines.

1.3 Classifications:

This specification calls for the following type of vehicle. It is in accordance with KKK-A-1822.

Type I-AD - Cab/Chassis, Medium-Duty, with modular ambulance body.

1.4 General:

This is an engineer, design, construct and deliver type specification and it is not the intention of this agency to write out vendors or manufacturers of similar or equal equipment of the types specified. It should be noted, however, that this specification is written around specific needs of this agency. With the intent to standardize certain components, therefore, in numerous places we have named specific brands of components. This has been done to establish a certain standard of quality. Other brands will be accepted providing the vendor provides documentation in the bid that the particular brand offered meets or exceeds the quality of the actual brand called for in the specification.

1.5 Materials:

The emergency medical care vehicle, chassis, ambulance body, equipment, devices, medical accessories and electronic equipment to be delivered under this contract shall be standard commercial products, which meet or exceed the requirements of this specification. The ambulance shall comply with all Federal Motor Vehicle Safety Standards (FMVSS), the Federal regulations applicable or specified for the year of manufacture. The chassis, components and optional items shall be as represented in the manufacturer's current technical data. Materials used in the construction shall be new and not less than the quality conforming to current engineering and manufacturing practices. Materials shall be free of defects and suitable for service intended.

1.6 Manufacturing Ability:

It is the intent of these specifications that the manufacturer of these vehicles has the ability to manufacture a complete ambulance within a single location plant facility, except for the chassis. The basic modular body must be built "in house" by the manufacturing firm and not "farmed out" to another company, corporation or production site to ensure quality control of product. Accessories such as light bars, sirens, etc., are not considered as basic components of the modular body. The ambulance manufacturer must have significant experience in the construction of modular ambulance bodies and have built a minimum of 8,000 such bodies. In addition, the Bidder/ manufacturer must include with this bid, proof of $10,000,000.00 product liability coverage. *NO EXCEPTIONS*.

1.7 Exceptions to Specifications:

Any exceptions to these specifications indicated must be clearly pointed out. Otherwise, it will be considered that items offered are in strict compliance with these specifications and the successful bidder will be held responsible for delivering a vehicle meeting these specifications. Any exceptions must reference by Paragraph Number and Line and be explained in detail on a separate sheet marked "Exceptions". Any bidder not complying shall not be considered as responsive.

1.8 Information and Descriptive Material:

Bidder must furnish all information requested. In addition, in the space provided on the bid, vendors shall supply at least one (1) complete set of drawings, descriptive literature and complete specifications covering the products offered. Bids not meeting this requirement will be rejected.

1.9 Prices and Payments:

All bid prices shall be complete and include warranty and delivery of the completed vehicle to this agency.

Payment shall be made in accordance with these specifications and the Bid Proposal submitted by the Bidder. Payment will be made upon acceptance of the vehicle(s) and equipment specified under these specifications.

All bid prices and conditions must be specified on the Bid Proposal Form. Bid prices shall be valid for at least 30 days from the date of the Bid Opening, or as otherwise specified on the Bid Proposal form.

Full payment will be made as each unit is received, inspected and found to comply with procurement specifications, free of damage and properly invoiced.

1.10 Warranty:

The successful bidder shall provide manufacturer's warranty coverage for the ambulance or rescue vehicle conversion, which coverage shall, at a minimum include:

(A) A Limited Warranty on the ambulance conversion: Forty-eight (48) months or 48,000 miles from date of original purchase.
(B) Paint: Seven (7) years from date of original purchase
(C) Electrical: Six (6) years or 72,000 miles from date of original purchase.
(D) Modular Body Structural Integrity: Fifteen (15) years from date of original purchase.
Chassis: warranty on the chassis portion of the completed ambulance or rescue vehicle shall be the responsibility of the chassis manufacturer.

The manufacturer shall warrant to the original retail purchaser that, for the warranty period that the ambulance or rescue vehicle shall be free of substantial defects in materials and workmanship, which are attributable to Warrantor and which may arise during the course of normal use and service. There shall be copies of the Warranty statements included with the bid documents.

1.11 Delivery:

The delivery schedules that are submitted by the Bidder and agreed upon by the Purchaser shall automatically become binding upon the successful Bidder.

1.12 Non-Collusion Statement:

By executing and submitting this bid, the Bidder certifies that his Bid is made without reference to any other bid and without any agreement, understanding, collusion or combination with any other person in reference to such bidding.

1.13 General Vehicular Design, Types and Floor plan:

The ambulance and the allied equipment furnished under this specification shall be the manufacturer's current commercial vehicle of the type and class specified. The ambulance shall be complete with the operating accessories as specified herein: furnished with such modifications and attachments as may be necessary and specified to enable the vehicle to function reliably and efficiently in sustained operation, the design of the vehicle and the specified equipment shall permit accessibility for servicing, replacement and adjustment of component parts and accessories with minimum disturbance to other components and systems. The term "heavy-duty" as used to describe an item, shall mean in excess of the usual quantity, quality or capacity that is normally supplied with the standard production vehicle or component.

2.0 TECHNICAL REQUIREMENTS - CHASSIS

The ambulance shall be a Type III-AD and shall be a chassis furnished with a 2-door cutaway cab. Chassis shall be suitable for subsequent mounting of a modular (containerized), transferable, equipped ambulance body conforming to the requirements specified herein.

2.1 Manufacturer and Model Year:

The chassis requirement for this specification is a ***2011*** International.

Does your bid comply? Yes_____No_____

2.2 Model Type:

The model type required is a 4300 SBA LP 4X2 (MH025) Cab/Chassis.

Does your bid comply? Yes_____No_____

2.3 Trim Level

Trim level shall be Deluxe. The cab shall have rubber flooring instead of carpet for easier cleaning, power door locks and windows and soft padded cloth headliner with OEM overhead console (dual storage pockets with nets and CB Radio pocket).

Does your bid comply? Yes_____No_____

2.4 GVWR

The gross vehicle weight rating shall be 20,000 lb.

Does your bid comply? Yes_____No_____

2.5 Axles and Suspension

The chassis provided shall be a 169" wheelbase, Heavy-duty front springs with International Ride Optimized Suspension (12,000lb capacity) with shock absorbers. Brake system shall be Hydraulic (ABS) anti-locking. Front axle shall be rated at 8,000-lb. capacity with the rear axle at 15,500 lb. rated capacity. Rear axle is Dana Spicer S16-130 with a ratio of 4.10:1. Rear wheels to be dual.

Does your bid comply? Yes_____No_____

2.6 Electrical

The vehicle shall be supplied with three “No-Maintenance’ 12-volt batteries. They shall be standard OEM Heavy Duty Batteries with total capacity of 1950 and mounted in an OEM steel battery box.

Does your bid comply? Yes_____No_____

2.7 Electrical Generating System

The ambulance shall be equipped with Leece-Neville 14931PAH 12 volt 320 AMP Capacity Alternator.

Does your bid comply? Yes_____No_____

2.8 Engine

Engine size shall be a MaxxForceDT EPA 10 with 230HP @2200 RPM.

Does your bid comply? Yes_____No_____

2.9 Engine Block Heater

The chassis shall have an OEM engine block heater. This heater shall be wired so that the end user has the option to directly connect the heater to the 110V shoreline input on the modular body.

Does your bid comply? Yes_____No_____

2.10 Exhaust System

The exhaust system shall be the OEM manufacturer's standard. There shall be galvanized heat shields above the exhaust system in accordance with Ford’s QVM. The heat shields must be a minimum of 16-gauge material for additional strength to prevent rattling.

Does your bid comply? Yes_____No_____

2.11 Fuel Tanks

The vehicle shall be equipped with a single aluminum fuel tank, with a capacity of at least 50 gallons (189 liters), mounted on right side of chassis under cab.

Does your bid comply? Yes_____No_____

2.12 Tires and Rims

The vehicle shall be equipped with 245/70R19.5 tires. The OEM manufacturer's standard steel vented rims painted white will be provided. Spare tire, wheel and tire changing tools (if supplied by OEM chassis manufacturer) will also be provided (Shipped loose with the unit).

Does your bid comply? Yes_____No_____

2.13 Transmission

The vehicle shall be equipped with an Allison 2200 EVS automatic transmission 5 speed with Overdrive.

Does your bid comply? Yes_____No_____

2.14 Air Conditioning and Heater

The vehicle shall be equipped with factory air conditioning with heavy-duty cooling package and heavy-duty radiator. The heater shall be the manufacturer's standard with cut-off valves accessible. Heater hoses shall be silicone.

Does your bid comply? Yes_____No_____

2.15 Glass

The chassis shall be equipped with the chassis manufacturer's standard tinted glass supplied as part of their Air Conditioning Cooling Package. The glass provided shall meet all the requirements of KKK-A-1822F and those of the Federal Motor Vehicle Safety Standards.

Does your bid comply? Yes_____No_____

2.16 Horns

The OEM manufacturer's dual electric horns shall be provided.

Does your bid comply? Yes_____No_____

2.17 Instrument Console

In the vehicle's cab there shall be provided a control console. It shall be constructed to allow easy access to the specified gauges, controls and switches as required by these specifications. This console shall be installed in a floor-mounted housing to the driver's right side. The console will be constructed of aluminum and will be coated with a base/coat – clear/coat finish to provide a smooth and durable finish. The console will include a storage area for map slots, cup holders and the driver's control panel. It shall not interfere with the operation of dash mounted controls or passenger-side airbag. The console shall be connected to the master printed circuit board by a single cable with quick-disconnect, computer-type plug-in connections. There shall be no electrical components for this console mounted in the vehicle dash.

Consoles mounted overhead are unacceptable since they require the driver to look away from the road. *NO EXCEPTIONS*.

Does your bid comply? Yes_____No_____

2.18 Instruments and Gauges

The vehicle shall be provided with the following as a minimum:

1. Voltmeter (showing total voltage)
2. Ammeter (200 amp shunt type)

The OEM chassis manufacturer's standard gauges and instruments in addition to the above shall be supplied. These gauges shall have digital readouts and shall be mounted in the front switch control panel.

Does your bid comply? Yes_____No_____

2.19 Mirrors

The vehicle's exterior mirrors shall be OEM Lang Merka rectangular 7.09" x 15.75" w/integral convex both sides, breakaway type, heated heads thermostatically controlled, power both sides, clearance led lights and bright finish heads.

Does your bid comply? Yes_____No_____

2.20 Radio

The chassis manufacturer's standard AM/FM/CD radio shall be included with a built-in clock, weather band, and auxiliary input .

Does your bid comply? Yes_____No_____

2.21 Seats

The Chassis shall be equipped with National 2000 air suspension seats with high back, integral headrests, vinyl, 1 chamber lumbar, 2 position front cushion adjustment and -3 to +14 degree adjustable back.

Does your bid comply? Yes_____No_____

2.22 Speed Control and Steering Wheel

Cruise speed control to be supplied.

Does your bid comply? Yes_____No_____

2.23 Driver, Passenger Air Bags and Restraint Pre-Tensioning Devices

The chassis shall be equipped with manufacturer's restraint pre-tensioning devices, bar-coded to the chassis VIN. Due care shall be given to the protection of these systems during manufacture and assurance provided that the correct devices are re-installed in the chassis.

Does your bid comply? Yes_____No_____

2.24 Daytime Running Lights

The chassis will be provided with OEM daytime running lights.

Does your bid comply? Yes_____No_____

3.0 ELECTRICAL SYSTEMS AND COMPONENTS

3.1 Electrical System:

The emergency medical vehicle's electrical system shall be equipped with, but not limited to the following: three (3) 12 volt batteries, ignition, starting, generating, lighting, visual and audible warning systems; specified electronics equipment and devices to include control consoles located in the cab and patient compartment and other specified accessory wiring. The electrical systems and equipment shall comply with all applicable FMVSS including Federal Motor Carrier Safety Regulations (FMCSR), and shall also conform to all the applicable SAE recommended standards and practices whether or not specifically referenced in this document. Additionally, the electrical system shall meet the requirements of AMD Standard 005. All electrical and electronic components shall be selected to minimize electrical loads and levels of heat generated by those electrical components thereby not exceeding the vehicle's generating system capacity or diminish its ability to provide the required levels of electrical power. Electrical systems utilizing switching of "hot load" circuits for emergency and warning lighting shall not be accepted by this agency. All electrical system components and wiring shall be readily accessible through access panels for checking and maintenance. The cab and patient compartment consoles shall also be constructed in such a way that the switches and gauges are easily serviced. They shall be accessible through service panels. These panels will be secured in the closed position in a positive manner, yet can be easily opened for service.

Does your bid comply? Yes_____No_____

3.2 Electrical Load Warning:

The manufacturer will not install warning lights beyond those required by this specification. Additional lighting will utilize reserve alternator capacity and could result in overloaded electrical systems, which may result in electrical system failure and cause the ambulance to fail in the field.

Does your bid comply? Yes_____No_____

3.3 Battery Selector Switch:

There shall be furnished a CDR-357 (featuring a programmable timer) master module. The disconnect module shall be capable of carrying the load of all batteries.

Does your bid comply? Yes_____No_____

3.4 Battery System:

The vehicle shall be supplied with three 12-volt batteries. The batteries will have a combined minimum cold cranking ampere capacity of 1950 CCA.

Does your bid comply? Yes_____No_____

3.5 Battery Indicator:

A battery indicator light shall be provided. It shall be a GREEN LED backlit battery symbol etched into the switch panel with a 5/8" x 5/8" etched outline around the symbol. When the vehicle ignition switch is in the "ON" position this indicator symbol shall light and indicate batteries are "on line" and powering the system.

Does your bid comply? Yes_____No_____

3.6 Driver's Compartment Controls:

The Front Control Switch Panel shall incorporate low-voltage ***full size easy-to-use rocker switches***. Switches are for ambulance equipment operation, including, but not limited to the following: siren, all warning and emergency lights, battery indicator lights, horn/siren cut-off switch, silent signal intercom, side and rear flood lights, compartment and entry door ajar warning light, patient compartment master switch, emergency lights master switch, voltmeter, ammeter and air conditioner/heater master switch. The control console shall be connected to the electronic control module by a computer cable. This console shall be installed in a floor-mounted housing to the driver's right side. The control panel shall be positioned for efficient use by the driver or passenger and to facilitate peripheral vision operation by the driver allowing him continued visual contact with the roadway ahead. The control console's gauges shall be internally illuminated and controlled by the headlight switch rheostat function. There shall be ***three (3)*** blank switches provided for customer-specified options or future use.

Does your bid comply? Yes_____No_____

3.7 Warning Indicators:

The electrical system shall incorporate a warning light panel located in the front control switch panel. It shall provide indicator light showing patient entry doors, either side or rear are open and shall flash a RED light behind lettering etched into the control panel stating 'ENTRY OPEN'. There shall also be an exterior compartment "door open" warning light and shall be a flashing AMBER light behind lettering etched into the control panel stating 'COMPT. OPEN'. Both systems will incorporate an audible alarm if a door is open and the emergency brake is not activated. The etched letters shall be 1/8" high with a 5/8" x 5/8" etched outline around the lettering, both will light when activated.

Does your bid comply? Yes_____No_____

3.8 Back-Up Alarm:

The vehicle shall have an Ecco model #EC520 solid-state back-up alarm of at least 97 decibels equipped with a cancel button located on the front control switch panel, which will deactivate the alarm. The alarm shall be an automatically resetting type whereby the alarm is reactivated automatically each time the vehicle is placed in reverse gear. The purchaser acknowledges and accepts that the provision for back-up alarm cut-off switch may be in non-compliance with motor vehicle regulations in certain States.

Does your bid comply? Yes_____No_____

3.9 Ammeter:

The electrical system shall incorporate an L.E.D. (digital) ammeter, which is capable of indicating a current of 200 amperes and shows the total amp draw of the conversion system on the dual batteries. The ammeter shall incorporate an external shunt, which does not exceed ***50*** millivolts at maximum current. The ammeter and shunt shall have a combined accuracy of approximately 10 percent of the full-scale reading. The ammeter shall be located in the driver's control console. The shunt shall be protected against physical damage, weather and road spray and shall be mounted in an easily accessible location which shall minimize the length of the power cables.

Does your bid comply? Yes_____No_____

3.10 Voltmeter:

The vehicle shall be equipped with an LED (digital) voltmeter to monitor total system voltage. The voltmeter connection shall be direct to eliminate erroneous readings from connection voltage drops. ***The voltmeter shall have a minimum accuracy of +/- 5%.*** The voltmeter shall be mounted in the front control switch panel.

Does your bid comply? Yes_____No_____

3.11 Module Disconnect Switch:

This switch shall be located on the front control switch panel and shall disconnect all patient compartment conversion circuits. The switch shall be connected to the electronic control module through a computer cable. The switch label shall be back lighted, permanently identifying it as to function and have a green L.E.D. indicator to show that function is activated. This switch shall be different than other switches on the console with a duckbill and be red in color.

Does your bid comply? Yes_____No_____

3.12 Emergency Lights Master Switch:

The emergency lights "master" switch shall be a paddle type switch having a translucent label with a RED "on" indicator. The remainder of the function switches shall be low- voltage switches. The switch shall be connected to the electronic

control module through a computer cable. All switch labels shall be backlighted, permanently identifying it as to function and have an LED indicator to show what function.

Does your bid comply? Yes_____No_____

3.13 Door Open Display Module:

There will be an LED door open indicator module mounted below the driver's control panel in the front console. This panel will allow the driver to identify which individual door(s) have been left open.

Does your bid comply? Yes_____No_____

3.14 Back-Lighting:

Backlighting for the front control switch panel shall turn on with the headlights and be controlled by the headlight switch rheostat function.

Does your bid comply? Yes_____No_____

3.15 Exterior Lamps:

All exterior housings for lamps, electrical devices and fixtures shall be corrosion resistant and weatherproofed. Electrical fixtures attached to the sides of the ambulance below the 75-inch level shall be near flush mounted, not to protrude more than two (2) inches.

Does your bid comply? Yes_____No_____

3.16 Radio Interference Protection:

All electronic devices and equipment installed which produce RFI, shall have the proper filters, suppressers or shielding to prevent electromagnetic radiation and the resultant interference to radios and other medical electronics.

Does your bid comply? Yes_____No_____

3.17 Wiring Installation:

The ambulance body and accessory electrical equipment shall be served by circuit(s) separate and distinct from the vehicle chassis circuits. All power wiring provided by the ambulance manufacturer shall be copper and conform to all the SAE J1292 requirements and shall have type GXL or SXL high temperature thermoplastic or better insulation rated to 125 degrees centigrade and conforming to SAE J1127 and J1128. Insulation on the low-voltage computer-type control cables shall have a minimum temperature rating of eighty (80 C.) degrees centigrade.

Does your bid comply? Yes_____No_____

3.18 Wiring Labeling:

The wiring shall be permanently color-coded, Ink Jet Dyed with the function the wire serves. These functions shall be embossed at a minimum of 4" intervals the entire length of the wire.

Does your bid comply? Yes_____No_____

3.19 Wiring Loom:

The engine wiring shall be routed in conduit or high temperature looms with a rating of 300 degrees Fahrenheit, which is a different color than the OEM chassis manufacturer's loom. All added wiring shall be in protective loom, located in accessible, enclosed and protected locations, and kept at least six inches away from the exhaust system components. Electrical wiring and components shall not terminate in the oxygen storage compartment except for the compartment light and door switch plunger. Wiring necessarily passing through an oxygen compartment shall be routed in metal conduit. All conduits, looms and wiring shall be secured to the body or frame with insulated metal straps in order to prevent sagging and movement which results in chafing, pinching, snagging, or any other damage. All apertures on the vehicle shall have properly installed grommets for passing wiring and conform to SAE 1292. All items used for protecting or securing the wiring shall be appropriate for the specific application and be standard automotive, aircraft, marine or electronic hardware.

There shall be two (2) Deutsch HD30 connectors in the cab, behind the driver's seat, so the main wiring harness can quickly and easily disconnected in the event of removing the cab for repairs or for remounting of the body.

Does your bid comply? Yes_____No_____

3.20 Circuit Connections (1):

Circuit connections shall be made on high current terminal block; brass bolts, or approved electronic connectors.

Connection components selected to minimize heat generation under circuit load. All terminals shall fasten directly to the terminal block or be machine crimped to plastic enclosed spade terminals or open ring connectors.

Does your bid comply? Yes_____No_____

The use of "Scotch-Lock" type fasteners is NOT ACCEPTABLE. To ensure minimal voltage drop and secure connections, NO splices shall be allowed in the wiring harness.

Does your bid comply? Yes_____No_____

3.21 Wiring Gauge:

All main harness wiring installed by the ambulance manufacturer shall be rated to carry 125% of the maximum load ratings of the circuit it is designed to service. All cables larger than 18 AWG shall have the terminals mechanically crimped to insure minimal voltage drop.

Does your bid comply? Yes_____No_____

3.22 Battery Cable Routing:

The routing of the battery cable shall be from the engine compartment to the main power distribution panel. This panel's location is defined by where the manufacturer elects to mount the major electrical components that control the electrical system. The manufacturer may mount this panel at a place in the vehicle of their own choosing so long as it is NOT in the engine compartment or in an outside storage compartment. The battery cables shall be 00 AWG cables run to the main power distribution panel via the cab and shall be fully protected by the high temperature loom and routed through rubber insulated metal cable clamps. The battery cables shall not be routed under chassis frame components. Cables routed in this manner shall render the bidder as unresponsive and shall constitute grounds for rejection of any vehicle delivered to this agency.

Does your bid comply? Yes_____No_____

3.23 Wiring Criteria:

All wiring devices, outlets, etc., except circuit breakers, and switches shall be rated to carry at least 125% of the maximum ampere load for which the circuit is protected. There shall be a main power distribution board located within the ambulance. This panel shall incorporate an etched-trace "printed" circuit board with plug in ***style*** relays and circuit breakers. The board shall be a polyclad layered glass epoxy with a NEMA grade rating of FR-4. The board shall be rated to withstand the MIL-STD-810C Corrosion test and the MIL-STD-55110D Thermo Shock test. ***The panel shall incorporate LED lights indicating relay drive circuit operation. These LED's are labeled to indicate the circuit that is energized.*** This board shall be mounted to a .125" aluminum panel that shall be attached to the bulkhead in a manner to allow easy removal. All circuits in the panel shall be permanently labeled with circuit number and function. These labels shall match the wiring schematic included with the vehicle(s) at time of delivery. It is preferred that this panel be mounted on or near the bulkhead of the patient compartment in a closed, locking, well ventilated cabinet. All circuit breakers, relays, flashers and diodes shall be mounted on this panel and be easily accessible. NO EXCEPTIONS.

Does your bid comply? Yes_____No_____

Adjacent to the main power distribution board there shall be the electronic control module. This module shall include four (4) etched trace "printed" circuits boards connected to the total electrical system by three (3) computer type cables. This module shall direct low voltage switch commands from the front and rear control panels to the relays on the main power distribution board. This module shall include a five-minute delay timer circuit for patient compartment dome lights to function as checkout lights. This circuit shall be activated by opening the rear or curbside door with the battery switch off. After five minutes the circuit shall automatically turn off the dome lights. **Cycling the left dome circuit switch will reactivate the circuit.** This module shall be capable of an upgrade to include, if specified, an automatic sequencer circuit for emergency lighting and/or a load manager circuit to automatically "unload" non-critical lighting in the event of battery or charging system problems. There shall be spare jumper cards supplied with the vehicle for the logic board; one (1) each for the five-minute timer circuit and the sequencer/load manager circuits, if specified. NO EXCEPTIONS.

Does your bid comply? Yes_____No_____

A six-inch service loop of wire or harness shall be provided at all electrical components, terminals, and connection points. Circuit breakers shall be of the automatic reset type and designed specifically for each circuit. One spare 15-ampere circuit breaker shall be provided for future use. A Vanner 3860GCPE flasher will be provided for control of the flashing warning light system. Low-voltage switches through the electronic control module shall control this flasher. All connections and terminals provided shall comply with SAE J163, or J561 or J928 as applicable.

Does your bid comply? Yes_____No_____

The main wiring harness for the module body shall be installed down the center of the patient compartment ceiling. Each electrical circuit shall branch from the master harness as needed. There shall be no splices in this harness. Each circuit wire shall run from the distribution panel to the fixture without a break or connection. An access panel shall run the entire length of the center of the ceiling to simplify access to the "master" wiring harness. A padded upholstery type material to prevent head injuries shall cover the access panel. This panel shall be fastened to the ceiling with collared trim screws.

Does your bid comply? Yes_____No_____

3.24 Internal 12 Volt DC Power:

The patient compartment shall be furnished with a 12 Volt DC 20 ampere capacity, separately protected circuit, with two (2) Cigarette type outlet receptacles, battery hot at all times. (1) Outlet shall be located in the action wall area, and (1) in the Advanced Life Support cabinet (Upper section). The outlets shall have hinged covers and be labeled “12V”.

Does your bid comply? Yes_____No_____

3.25 115 Volt AC Utility Power:

The vehicle shall be furnished with a 2-wire plus ground 115 volt AC wiring system that is separate and distinct from the vehicle's 12-volt DC wiring system. The 115-volt AC electrical system, including wiring and associated equipment, shall comply with Article 551 of the National Electrical Code and with AMD Standard 009. This system is to be used while the vehicle is on standby for powering maintenance devices, medical equipment, battery chargers, and for any other device(s) deemed necessary by this Agency. The 115-volt system shall incorporate a 15-ampere ground fault interrupter (GFI) device.

Does your bid comply? Yes_____No_____

3.26 115-Volt Outlets and Inverter Wiring:

The ambulance shall be pre-wired for a 115-volt AC inverter. The wiring shall include two (2) duplex-grounded, lighted hospital grade outlets, one in the action wall area, and one in the Advanced Life Support cabinet (Upper section). Either the inverter or the shoreline with an automatic transfer switch to prevent power interruptions will power these outlets. The interior outlets shall have pilots indicating power at the outlet. Inverter wiring shall terminate in exterior compartment #2. This wiring shall comply with AMD Standard 009.

Does your bid comply? Yes_____No_____

3.27 Shoreline Inlet:

A shoreline inlet shall be installed on the vehicle street side exterior behind the driver's door. This inlet wiring shall connect to the 115-volt AC outlets in the patient compartment. This inlet shall be rated at 115-volt AC, 20 amperes and be permanently marked as such. This wiring shall comply with AMD Standard 009.

Does your bid comply? Yes_____No_____

3.28 Rear Control Switch Panel:

All switches and controls for the patient compartment including those for the heat and air units shall be located on a service panel in the action area. These switches shall be of the same design and construction as found on the front control switch panel. The control console shall be connected to the electronic control module by a computer cable. The panel shall include but not be limited to, controls for patient compartment dome lights, fluorescent lights (if specified), action area light, vacuum system, electric oxygen solenoid (if specified), three-light silent intercom, and three spare switches for future use. The switch for the vacuum system must be red in color as opposed to all the rest being standard black. These switches shall not be activated unless the "MASTER" switch on the front control switch panel is in the "ON" position. There shall also be a digital clock incorporated into the rear switch panel with a “stop clock” mode.

Does your bid comply? Yes_____No_____

3.29 Marking of Switches, Indicators and Control Devices:

All switches, indicators and control devices supplied by the ambulance manufacturer shall employ permanently engraved translucent labels. Backlighting shall be activated when the "MASTER" switch is on. Decals or other "stick on" type labels are NOT ACCEPTABLE.

Does your bid comply? Yes_____No_____

3.30 Door Open Warning Module

All door open warning switches will be wired through individual circuits directly to a solid-state LED diagnostic board.

There will be individual circuit connections with individual LED circuit indicators for identifying switch or circuit failures. This module will be located in the ECC. An audible alarm will be mounted in the front control console and will be an integral part of the electrical conversion system. The audible alarm will be activated when any exterior compartment or entry door is open. The alarm will be bypassed when the emergency brake is set and will automatically reactivate when the brake is released.

Does your bid comply? Yes_____No_____

4.0 VEHICLE LIGHTING REQUIREMENTS

4.1 Vehicle Exterior Lighting:

The basic exterior ambulance lighting shall comply to FMVSS Standard No. 108 and the requirements therein and include: amber front and rear directional signals and hazard warning lights, front and rear side marker lights, backup light(s), loading light(s), clearance lamps, ambulance emergency lights, floodlights and scenelight(s). The side marker lights shall also function as a turn signal indicator as described in Federal Specification KKK-A-1822F.

Does your bid comply? Yes_____No_____

4.2 Vehicle Emergency Lighting Systems:

The emergency lighting system must provide the vehicle with 360 degrees of visual warning conspicuity. The system must display highly perceptible and attention-getting signals that function in a mode system and convey the message in the PRIMARY MODE - "Clear the Right-of-Way" and the SECONDARY MODE – "Hazard Vehicle stopped on Right-of Way". A switch on the front control console through the electronic control module shall control Primary/Secondary mode.

Does your bid comply? Yes_____No_____

4.3 Warning Lights:

The basic warning light system shall contain ten (10) Whelen halogen lights and (4) Whelen LED lights. The red upper body warning lights shall be identical and mounted at the extreme upper corner areas of the ambulance body below the horizontal roofline. These will consist of: two (2) red 900 Series halogen warning lights located on the front, two (2) red 900 Series halogen warning lights located on each side and two (2) red 900 Series halogen warning lights on the rear. There will be one (1) clear 900 Series halogen warning light centered on the front above the cab, and one (1) 900 Series amber halogen warning light centered over the rear doors. These lights shall function in a dual mode system as shown in KKK-A-1822F and meet the physical and photometric requirements of that same document. Doors, auxiliary lights, or siren(s) shall not obstruct these warning lights. The red Whelen 700 Series "Grille" halogen lights shall be located at least 30 inches above the ground, below the bottom edge of the windshield and will be laterally separated by at least 18 inches, measured from centerline to centerline of each lamp. The red Whelen 400 Series halogen "intersection" lights shall be mounted on the front fenders of the chassis as far forward as possible. Both "Grille" and "Intersection lights to have "Deutsch" style connectors due to possibly being exposed to external weather elements. All warning lights furnished shall be mounted to project their highest effective intensity beams on the horizontal axis. A Vanner flasher power supply will be provided.

Does your bid comply? Yes_____No_____

4.4 Tail Lights:

The unit will be supplied with Whelen 600 Series brake-tail, back-up and turn lights.

Does your bid comply? Yes_____No_____

4.5 Hardware, Construction, Switching Arrangements:

The emergency lighting system shall be comprised of components and devices that comply with the general requirements and tests of SAE J575g, J576d, and J551. Warning lights shall be firmly fastened to reinforced body surfaces. All connectors and wiring shall be rated to carry a minimum of 125% of their maximum ampere load.

Does your bid comply? Yes_____No_____

All emergency light switches shall be labeled as specified in KKK-A-1822, and the PRIMARY/SECONDARY mode switch shall have an indicator light to show the driver when primary mode is activated. All warning light control switches shall be located in the driver's control console. The emergency light switches shall be wired and arranged to provide the

warning light signal modes and combinations as specified in KKK-A-1822.

Does your bid comply? Yes_____No_____

4.6 Flood and Loading Lights (Exterior):

Scene and loading lights shall be not less than 75" inches above the ground and unobstructed by open doors. There will be four (4) Whelen 900 Series scene lights located two (2) on the left and two (2) on the right side of the ambulance body. They will be firmly fastened to the reinforced body surfaces below the roofline and centered between the red emergency lights. The two (2) rear load lights shall be Whelen 900 Series clear load lights. Switches for both the scene and load lights shall be located on the front switch control panel. Rear load lights shall illuminate the area surrounding the back loading door(s). Rear loading lights shall automatically be activated when the vehicle is shifted into reverse gear or when the rear doors are opened, but may be turned off with an override switch on the front switch console.

Does your bid comply? Yes_____No_____

4.7 Spotlight, Hand-Held:

A hand-held spotlight shall be provided with a minimum 400,000-candlepower lamp. It shall be a corrosion proof housing with a momentary switch and a minimum 8-foot heavy-duty coiled cord. It shall be hard-wired into the front switch console.

Does your bid comply? Yes_____No_____

4.8 Vehicle Interior Lighting:

The basic interior ambulance lighting configuration shall be designed to minimize electrical loads and include: A driver's compartment dome light, instrument panel lights, master switch panel and console light(s). Lighting shall be designed and located so that no glare is reflected into the driver's eyes or his line of vision from switch control panels or other areas that are illuminated while the vehicle is in motion.

Does your bid comply? Yes_____No_____

4.9 Patient Compartment Illumination:

The patient compartment shall be provided with eight (8) overhead "dual-intensity" dome style halogen lights. There shall be four (4) lights located over the "primary" patient area and four (4) over the squad bench. These lights shall be recessed in the patient compartment headliner and not protrude more than 1.5 inches. The supplied lights have "dual-element" bulbs for two (2) levels of illumination. The technician shall be able to control these lighting levels from switches on the rear switch control panel through the electronic control module. These dual levels shall work together or differ from side to side. This "dual" light level shall not be provided by the use of a rheostat, but by low-voltage, ***full size easy-to-use rocker switches*** located on the rear switch control panel. When either the curbside or rear doors are opened, four (4) lights over the squad bench shall light automatically in low intensity mode. The lights over the primary cot shall not light to conserve power.

Does your bid comply? Yes_____No_____

Any system using rheostat-controlled lighting shall be unacceptable and shall not be considered. An independent testing laboratory shall provide certifications that the required patient compartment illumination is provided. In addition to the overhead lighting, there shall be provided a 12" bar light in the technician's work or "action" area. A switch on the rear console shall control the action area light. There shall be provided a step-well light for the curbside and rear entry doors. When either the curbside or rear doors are opened, the step-well lights shall be automatically lighted.

Does your bid comply? Yes_____No_____

5.0 VEHICLE BODY AND PATIENT AREA

5.1 Body, General Construction

It is the intention of these specifications to require that the all aluminum ambulance modular body be designed and fabricated to provide the safest possible surroundings while offering the greatest available payload capability in an affordable, state of the art environment. No rivets, screws, or other metal fasteners shall be used for the attachment of any exterior body panel to a structural member.

Does your bid comply? Yes_____No_____

5.2 Body Skin Thickness and Alloy

All sidewall, front and rear panels will be single piece .125" - 5052-H32 aluminum with a minimum density of 1.75 pounds per square foot. The single piece body skin shall be attached to the 2" x 2" structural with interval welds along the mating edge of each structural tubing member. In addition, the skin shall be bonded to each structural upright full length using high strength Chemrex CX400QT structural adhesive. The body side skin is welded to each corner post along the inside contact point of each corner extrusion. This method of installation provides a welded application to the entire perimeter of the body side skin, a bonded attachment to the wall substructure and an additional flexible adhesive bond for enhanced support. Alternative bonding methods that utilize liquids, caulks, tape or rivets as an attachment process for bonding the side skin to the body structure will ***not*** be acceptable.

Does your bid comply? Yes_____No_____

5.3 Body Structural Framing

All framing will be a minimum of 2" x 2" square tubing with a wall thickness of .125" and an alloy rating of 6061-T6. Tubing members will be spaced on minimum 12-inch centers for optimum load and structural support. Gussets shall be added at all stress points. Gussets will be either .250" plate or 2" square tubing welded to the adjacent structural members at 45-degree angles for diagonal strength.

Does your bid comply? Yes_____No_____

5.4 Vertical Corner Posts

As a part of the inherent structural strength of the modular unit, the use of reinforced extruded corner post is required. The vertical posts will measure 2.75" x 2.75", with a 2.125" radius, a minimum wall thickness of .125" and will have an alloy rating of 6061-T6. **The extrusion shall have full-length slots for insertion of the exterior wall skin.** This characteristic eliminates exposed panel edges and with the added benefit of seam sealed joints, reduces oxidation and corrosion. The slot provides an area on the inside of the extrusion/sheet junction for welding the body side skin to the corner extrusion. Additionally, the extrusion shall incorporate a full-length, integrally extruded center reinforcement rib with a minimum thickness of .200 inches and two side flanges. Rolled radius corners post, or "add-on" type covers that are not a part of the extruded vertical corner posts, shall not be accepted. Bidder must be prepared to verify compliance with this section. Drawings and samples of actual materials used may be required. The lower ends of the vertical corner posts must be closed off with an aluminum plate. The vertical corner posts and the roof corner extrusion shall be mated by a cast aluminum corner cap welded to all three extrusions inside and out. Construction, which merely welds the extrusions together, is unacceptable**.**

Does your bid comply? Yes_____No_____

5.5 Roof

The roof skin shall consist of a single sheet of .090"– 5052H32 aluminum. Roof framing shall be 2" x 2" square tubing with a wall thickness of .125" and an alloy rating of 6061-T6. These structural tubing members will be set on 12 inch centers below three (3) longitudinal full length extruded hat sections measuring 1" x 3" x .125" and an alloy rating of 6061-T6. The roof sheeting shall not be required as integral part of the roof structure; however, the roof skin shall be welded to the outer extrusions using a full perimeter, continuous weld on all four sides. The roof structure itself shall be designed to enhance the safety and structural integrity of the modular body and to meet or exceed the load requirements of AMD Standard No. 001. **To facilitate water dispersion, a minimum 3/4" "crown" shall be built into the roof structure. A flat roof will not be considered.**

Does your bid comply? Yes_____No_____

5.6 Horizontal Roof Edge

The extruded roof edge structural members will measure 6" x 4.75" with a 2" radius, a minimum wall thickness of .125" and an alloy rating of 5052-H32. The roof extrusions will include an integral, full-length drip rail for each side and from side to side on both the front and rear of the module.

Does your bid comply? Yes_____No_____

5.7 Static Load Test

The ambulance body as a unit shall be designed and built to provide impact resistance. The body shall be of sufficient strength to support a minimum of 2.5 times the entire weight of the "fully" loaded vehicle on its top or side if overturned, without crushing, separation of joints, or excessive deformation of roof bows, reinforcements, body parts, doors, floor members, inner linings, outer panels, rub rails or any other structure in accordance with AMD Standard No. 001.

Does your bid comply? Yes_____No_____

5.8 Drip Rails

In addition to the drip rail found in the roof extrusion there shall be a drip rail provided over each exterior compartment door. These drip rails shall be attached in such a manner to provide quick and easy replacement in the event they are damaged. They shall not be riveted, welded, or integral to the doorframe extrusion.

Does your bid comply? Yes_____No_____

5.9 Sub floor Structure

The sub floor structure of the modular body shall be constructed of 2" x 2" and 1" x 2" x .125" structural tubing. There shall be two (2) longitudinal and twelve (12) lateral tubes welded together to form a sub floor structure. The floor structure shall be designed to provide strength while conforming to chassis component clearance requirements and to provide appropriate locations for body mounting devices. Sufficient structure for maximum support and the safe installation of cot mount hardware or other floor-mounted devices will be integral to the sub floor structure. The sub floor structure shall include a 4" x 5" x .250" tube of 6061-T6 alloy as an "in-frame" pass through for the OEM fuel filler neck. Routing under the sub-floor frame or frame trimming to accommodate the fuel fill hose is not acceptable to this agency and will not be accepted.

Does your bid comply? Yes_____No_____

5.10 Body Mounting

The modular body shall be mounted to the chassis with a system of bolts through rubber pucks. Other methods of body to chassis mounting which do not match the way the OEM cab is mounted will not be considered because of the inordinate amount of stress created by the cab and the modular body flexing differently and thereby working against each other.

There shall be ten (10) ½" thick by 6" wide aluminum plates of 6061T6 alloy welded to the underside of the structural floor to provide puck mounting locations five (5) per side. Steel mounting brackets shall be welded or bolted, depending on location, to the exterior side of the chassis frame rails in a manner so as to comply with all QVM and SVM specifications. The puck mounting bolts shall be installed from the underside up through the puck assembly and both mounting brackets with a steel plate and weld nut assembly on top. Puck mounting bolts are to be properly tightened to a specified torque rating to 60-65 ft/lb. For ease of remount, the bolts can be easily removed from the underside of each puck.

Does your bid comply? Yes_____No_____

5.11 Module Side Entry Door

The modular body shall be provided with one (1) entry door on the curbside of the module. A forward hinged single door shall provide an opening of 32 inches wide by 70 inches high and swing out to 100 degrees for clear access. This door shall be fitted with a Suspa or equivalent gas strut hold open device. The attachment of the push rod to the door shall be accomplished by bolting into riv-nuts secured in the extruded frame of the door with stainless steel screws. The door shall be attached using a 2.5" wide, full length slotted stainless steel piano hinge with a .250" diameter hinge pin. The hinge must be slotted in order to provide for field adjustment.

Does your bid comply? Yes_____No_____

5.12 Module Rear Entry Doors

The modular body shall be provided with two (2) entry doors on the rear of the module. They shall cover a clear opening of not less than 62 inches high by 48 inches wide. The doors shall be attached using a 2.5" wide, full-length slotted stainless steel piano hinge with a .250" hinge pin. The hinge must be slotted to allow field adjustment. Hold opens for these doors shall be Cast Products "Grabber" type located on the exterior of each door with mating receptacle on the rear of the module body. The Grabber hold opens shall be mounted using bolts and rivet-nuts, sheet metal screw attachment is **not acceptable**.

Does your bid comply? Yes_____No_____

5.13 Module Entry Door Windows

There shall be one 19"H x 18"W window in each module entry door. The windows shall be aluminum framed and the glass will be smoke-tinted safety glass. The curbside door shall have a sliding glass window with a screen. The rear door windows shall be fixed to prevent exhaust gases from entering the vehicle. Windows, which open on the rear of the unit, are unacceptable because of the negative pressure created behind a moving vehicle.

Does your bid comply? Yes_____No_____

5.14 Door Construction

All module entry and compartment doors to be a minimum of 2 inches thick and fabricated in the following manner:

(A). Exterior door skin shall consist of a single .125" aluminum sheet that is machine cut and formed to provide a smooth and unbroken finish. The door shall include a full perimeter internal extrusion designed to create a solid, square support structure for each door. This extrusion shall be designed in such a way that when the door is finished, there is no visible extrusion showing, thus creating a smoothly finished edge that will not allow dirt, salt, or other foreign matter to be trapped around the extrusion. Door extrusions will be mitered at each corner, fitted with an extruded, saw-toothed key seat specifically designed to insert into the door extrusion and welded to promote a square fit and to prevent frame member to separation. The doors will be interval welded around the inside seam of the formed door skin and the extruded internal support. **Doors that are purely pan-formed or having visible extrusions will not be considered.**

(B).). The doorjamb will consist of a custom exterior extrusion with an alloy rating of 6061-T6. The doorjamb extrusions will be mitered at each corner and welded to promote a square fit and to prevent frame member separation. The doorjamb will be attached to the body door framing with 3M-VHB tape, interval welding around the full perimeter of the door opening and the joint between the jamb and the body side skin will be thoroughly seam sealed to provide a smooth unbroken finish and to prevent contamination, oxidation and corrosion. Bolting or screwing the casing to body is not acceptable.

(C). The exterior door skin panel shall be .125" thickness, 5052-H32 alloy rated aluminum, with the formed corners welded and finished to provide a smooth, unbroken appearance.

(D). All doors to be reinforced with extruded internal braces bonded to skin surfaces.

(E). All doors are to be flush with their adjacent extruded doorjambs.

(F). All doors shall have full-length stainless steel hinges with a .250" diameter pins. Stainless steel hinges shall be punch slotted for vertical and horizontal adjustments and attached with stainless steel screws. A layer of ECK must be applied on both sides of hinge attachment.

(G). All doors shall close on a continuous, extruded rubber gasket complex mounted on the inner flange of the door extrusion. The automotive style hollow bulb seal will have an integral rubber flange designed to be inserted into a groove provided on the inner doorframe extrusion. The interior edge of the doorjamb shall be specifically engineered to provide a flat sealing surface around the entire perimeter of the door opening. This specialized design provides an unbroken, full perimeter seal outside the door latching assembly to enhance the watertight integrity of each door. **Seals that are glued on or mounted to the compartment doors will be unacceptable due to their tendency to be torn by loading or unloading onboard equipment.**

(H). All access doors to be insulated with 1.875" Styrofoam.

(I). The interior door panel of the exterior compartment doors shall be of highly polished aluminum diamond-plate.

(J). Patient entry door interior panel to be .100" thickness, 5052-H32 aluminum attached to exterior door extrusion by ¼" x 20 machine screws and matching thread serts installed around the perimeter of each door. All door panels shall be cut by computer-operated machines to ensure the exact location of windows, locks and even the mounting holes for the screws that attach the liner to the doorframes. This ensures that like doors will have the same door liners and that replacements if needed would fit exactly. The aluminum panel shall be painted with Multispec paint covered with a clear coat, to harmonize with the interior.

(K). The interior surface of the module entry doors (rear and curbside) shall be finished in a safe and attractive manner that harmonizes with the interior appointments. The lower portion of this surface shall be a kick plate of diamond-plate aluminum.

(L). The lower surface of the door jamb of each exterior compartment shall be trimmed with a stainless steel trim piece which conforms to the door sill and breaks over and down the side of the body behind the lower body rub rail. Similar trim pieces shall be applied to the curbside and rear entry doorsills. The side and rear thresholds shall be 6" minimum. To improve threshold seal, strengthen the threshold and prevent equipment snags or tripping, the side and rear thresholds will be fit with a 2° chamfer where the threshold meets the floor.

Does your bid comply with "A" through L"? Yes_____ No_____

5.15 Hold-Open Devices

(A). All compartment doors are to have spring style hold-opens.

(B). The side entry door shall have a Suspa dual action gas strut hold open device.

(C). rear entry doors are to have Cast Products Model DH00171A "Grabber" Door Stays.

(D). Compartment and access doors are to have separate "door open" warning indicator lights installed on the front switch control panel.

Does your bid comply? Yes_____No_____

5.16 Exterior Entry and Compartment Latching Mechanisms

All compartments shall have a latching mechanism with the following characteristics:

(A). The locking device shall be TRIMARK ROTARY STYLE LATCHES.

(B). All exterior compartments shall have near flush TriMark automotive style paddle handles with rotary type latches. These rotary style locks shall lock on to a "NADER" type pin located in each doorjamb. Nader pins shall be adjustable. Locking systems not using the above style hardware will be unacceptable.

(C). The module curbside and rear entry doors shall have stainless steel, locking, paddle style handles with rotary latches and "NADER" pins.

(D). All of the above latches must be installed with a corrosion barrier type gasket between latch and door surfaces. C1052 zinc-plated steel connecting rods shall be used between the paddle handle and the rotary latches. These rods shall be threaded at the latch end to allow the door rod connector to be screwed onto the rod itself. The other end of the rod shall be a formed eyelet incorporating a hole for the handle pin. This system shall conform to AMD Standard 002. Systems using pulleys, cables, turnbuckles, or welded together components are not acceptable, and will be rejected. No exceptions to the above requirements will be allowed.

(E). To reduce the probability of corrosion and oxidation around the paddle latch, the mounting area will be treated with ECK.

Does your bid comply? Yes_____No_____

5.17 Exterior Storage Accommodations

The ambulance shall be equipped with exterior compartments as shown in the drawings at the conclusion of this text. There shall be no more than a 3" dimension between door openings of adjacent compartments. Since the location of equipment and maximum space utilization is of prime importance to this agency, the sizes and location of the various compartments required is necessary as shown. Deviations from the compartments as shown are not acceptable and may be cause for rejection of the bid.

Does your bid comply? Yes_____No_____

The exterior compartments shall be lockable with one key fitting all. They shall be equipped with the handle and door locks as described in paragraph 5.16. Each exterior compartment shall be automatically lighted when the door is opened and shall activate the "compartment door" open warning light on the driver's console. The unit shall be wired so that only the light in the compartment that is open will be activated.

Does your bid comply? Yes_____No_____

5.18 Compartment construction

All compartment top, sides and back panels must be a minimum thickness of .100 diamond-plate aluminum. Bottom of compartment must be .125 diamond-plate aluminum. Each compartment must be built as an individual unit, no common walls between compartments will be allowed. All compartment joints must be sealed after MIG or TIG welding.

Does your bid comply? Yes_____No_____

5.19 Compartment Shelving

Outside compartment shall have the following minimum requirements:

(A). All shelving to be fabricated from .125" diamond-plate with retainer lips of 1" in height showing diamond-plate on exposed surface.

(B). Shelving to be supported by four (4) heavy duty angle brackets attached to four (4) full height formed vertical channel tracks (2 per side). Interior flanges of channel bracket to be serrated to insure positive locking of shelf position and prevent shakedown of shelving during transit under heavy loads.

(C). Easy adjustment of shelf position to be accomplished by loosening four (4) bolts.

Does your bid comply with (A) thru (C)? Yes_____No_____

5.20 Body Trim

The following fixtures shall be added to the module shell for body protection and enhanced appearance. All items to be constructed of a minimum .100" thick bright polished aluminum tread plate with a minimum alloy property of #3003. All diamond plate trim shall be attached with 3/16" aluminum pop rivets or bolts treated with ECK and shall consist of the following:

(A). Radius formed diamond-plate corner guards on all four corners with a minimum height of 10 inches.

(B). 2" high by 1" wide boxed rub rails with tapered; closed ends shall be installed at the bottom edge on each side of the body. Rub rails are to be bolted on for ease of replacement and shall be spaced away from body .125" to prevent forming a dirt trap.

(C). An 8.5" high diamond-plate liner shall fully encase all sides and bottom of the side step entrance well. Corner seams of this liner shall be MIG or TIG welded to insure a watertight, flushable-type stepwell.

(D). A full height, full width rear diamond-plate kick plate shall be installed from the rear step to the bottom of the rear doors.

(E). An aluminum open grip strut step with individual diamond-plate end caps shall be installed at the rear loading doors. Step to be non-flexing and shall pivot upward by means of a full width stainless steel hinge. End cap pod framework to be constructed of 2" x 3" steel closed tube, corner braced and welded to main frame.

(F). A polished aluminum fender flare shall be installed at each modular wheel well opening. The flare shall provide additional body protection and shall be installed in such a manner as not to rub the rear tires.

(G). Extruded drip rails shall be installed above all exterior compartments. These drip rails shall be attached in such a manner to provide quick and easy replacement. They shall not be riveted, welded, or an integral part of the door frame extrusion.

(H). A recessed polished cast aluminum fill guard shall be installed at the gas fill opening in the street side of the module.

(I). To reduce the probability of corrosion and oxidation around the trim mounting points, each mounting area will be treated with ECK.

Does your bid comply with "A" thru "H"? Yes_____No_____

5.21 Floor

The sub floor of module body shall be .063 inch 5052-H32 alloy rated aluminum securely welded to the wall structures and exterior compartment ***and completely sealed from outside elements.***

Does your bid comply? Yes_____No_____

Over the aluminum sub-floor there shall be a one-piece top floor of ¾" exterior-grade solid cross-band plywood. This shall be securely anchored to the sub-floor by #8 x 1.5" floor screws. The flooring shall extend the full length and width of the patient compartment, including the space under the cabinets.

Does your bid comply? Yes_____No_____

5.22 Floor Covering and Color

The floor covering shall be Loncoin Fleckstone II heavy-duty floor, vinyl requiring a minimum of service yet completely water and detergent proof. This covering shall be of a color that matches and compliments the color scheme of the interior. The flooring shall extend the full length and width of the patient compartment and be rolled up the sides of the squad bench and street side cabinet 3 inches.

Does your bid comply? Yes_____No_____

5.23 Rear Bumper

The rear bumper framework shall be constructed of 2"x 3"x .1875" wall, 11 gauge steel tube. The outboard pods shall be covered with .100" diamond-plate and the center section shall incorporate a flip-up step of grated material.

Does your bid comply? Yes_____No_____

5.24 Stepwell (side door)

The curbside door stepwell shall be automatically lit when the side or rear doors are opened. The step-well shall be finished with highly polished aluminum diamond-plate.

Does your bid comply? Yes_____No_____

5.25 Front Wall Walk-Thru:

There shall be a walk-through between the driver and patient compartments. This walk-through shall be accomplished by the addition of a steel collar welded to the back of the cab surrounding the walk-through cutout. The collar shall be sealed on the module side by means of a vulcanized rubber, accordion style seal. The rubber seal shall be attached to the module and the collar by the "C"-clip mounting flange integral in the rubber seal. Aluminum diamond plate panels shall be affixed to the rear of the cab on either side of the walk-through cutout. These panels shall be isolated from the steel cab with closed cell polyethylene tape to prevent electrolysis of dissimilar metals. The interior of the cab shall be finished with upholstered panels. Aluminum diamond plate covers shall be mounted on the exposed portion of the chassis frame rails to provide protection for wiring and an esthetically pleasing trim between the cab and module. The walk-thru opening shall be closed with a hinged wood door with sliding Plexiglas window and positive latches to hold door in open or closed position.

Does your bid comply? Yes_____No_____

5.26 Insulation

The entire ambulance body, sides, ends, and roof of the patient's compartment shall be insulated to meet or enhance the environmental criteria specified in Federal Specifications KKK-A-1822F. The insulation shall have a minimum "R" factor of eleven (11). There shall be 3.5" inch, R11 fiberglass batten in the sidewalls and roof. The doors shall be insulated with at least 1.875" of plank foam. This insulation shall not interfere with the workings of the door latching hardware.

Does your bid comply? Yes_____No_____

5.27 Patient Compartment Sound Level

Sound levels within the patient compartment shall not exceed eighty (80) decibels in accordance with AMD Standard 006.

Does your bid comply? Yes_____No_____

5.28 Patient Compartment Carbon Monoxide Level

The ambulance modular body shall be constructed in such a manner as to provide a safe environment for patients and crew as pertains to the presence of carbon monoxide (CO). A CO level of not more than ten (10) PPM shall be attained in accordance with AMD Standard 007.

Does your bid comply? Yes_____No_____

6.0 PATIENT COMPARTMENT

6.1 Interior Surfaces:

The interior of the patient compartment shall be free of all sharp projections. Exposed edges and corners shall be broken with a radius or chamfer. All hinges or supports for equipment and devices shall be mounted as flush as possible with the surrounding surface when not in use. Padding shall be placed at all head area obstructions, which may prove dangerous to persons moving about in the patient compartment. Other exposed edges shall be broken with a least .125" radius or chamfer and at least a .50-inch radius aluminum extrusion on exposed corners.

Does your bid comply? Yes_____No_____

The finish of the entire patient compartment, including storage cabinets and equipment, shall be impervious to soap and water, disinfectants, mildew and shall be fire resistant as per FMVSS 302. The color of the interior shall be chosen by this Agency from samples provided by the successful Bidder.

Does your bid comply? Yes_____No_____

6.2 Interior Storage Accommodations:

The interior of the patient compartment shall provide but not be limited to a minimum volume of 50 cubic feet of enclosed storage cabinetry, compartment space and shelf space, which shall be conveniently located for medical supplies, devices or other equipment. All interior cabinets shall be fully lined inside with white plastic laminate. Carpet or other linings are unacceptable. Refer to interior drawings at the conclusion of this text for detailed information as to cabinet size and location. Since this agency is very concerned about standardizing the location of various equipment and supplies, it is important that the interior layout be followed as closely as possible. Alternate or standard layouts may not meet the requirements of this agency and may be cause for rejection of the bid.

Does your bid comply? Yes_____No_____

6.3 Location of Medical Equipment and Supplies:

The equipment and supplies necessary for airway care, artificial ventilation, oxygenation and suction shall be within easy reach of the technician at the head of the stretcher.

Does your bid comply? Yes_____No_____

6.4 Storage Compartments and Cabinet Design:

Storage cabinets, drawers, and kits shall be easily opened, but shall not come open in transit. Where specified the storage cabinets shall have shatterproof Plexiglas doors set in an extruded anodized aluminum frame. This frame shall encompass all four sides of the opening creating a "picture" frame appearance, will incorporate a replaceable track section and be welded for ease of replacement and durability. The Plexiglas used in these compartments shall be at least .1875" thick. Full height extruded aluminum handles affixed to one end of each Plexiglas door shall facilitate opening the sliding doors.

Does your bid comply? Yes_____No_____

Where specified there shall be adjustable shelves in the cabinets. These shelves shall be bolted to heavy-duty infinitely adjustable shelf track by aluminum angle brackets. The cabinets shall be of .75 inch exterior grade plywood, glued, screwed and stapled together, and shall be covered on all surfaces and edges with plastic laminate. Cabinet latches, where specified, shall be positive closure latches. At least one compartment shall have a locking latch. This agency shall choose the color scheme from samples supplied by the successful Bidder. Fiberglass, metal, plastic or particleboard cabinet construction shall be unacceptable. These cabinets shall be firmly anchored (bolted) to the tapping plates found in the ambulance structure.

Does your bid comply? Yes_____No_____

The technician's work or "action" area shall be of the size shown in the drawings and shall provide space for the installation of needle disposal and/or hazardous waste containment devices.

Does your bid comply? Yes_____No_____

6.5 Squad Bench:

The squad bench shall be constructed of .75" exterior grade plywood and covered with laminated plastic. The squad bench shall have a padded seat cushion covered with heavy-duty thermal-formed vinyl. This cushion shall be a minimum of 3 inches thick. The cushion shall provide a smooth surface for ease of cleaning and disaffection. (Note: "Hot Press" type pleating is also unacceptable.)

Does your bid comply? Yes_____No_____

The squad bench lid is to be split with at least one (1) lid that can be operable with an automatic hold open device. The squad bench is to have a full-length backrest covered with matching heavy-duty thermal-formed vinyl.

Does your bid comply? Yes_____No_____

There shall be three (3) sets of seat belts, with automotive-style retractors, on the bench so as to secure three persons seated or one patient on the secondary litter.

Does your bid comply? Yes_____No_____

There shall be a storage area beneath the seat, lined with laminate and capable of storing a scoop stretcher, backboards, traction splints, etc. All squad bench corners shall have aluminum plates installed so as to prevent damage when loading or removing cots and equipment. These protection plates shall be anodized aluminum.

Does your bid comply? Yes_____No_____

6.6 Technician Seat:

The technician seat shall be mounted on the partition bulkhead positioned so that the technician, when seated, is located at the head of the primary cot facing the patient. There shall be a minimum of 25" inches and a maximum of 30" inches clearance at floor level between the head of the cot and the technician seat backrest. Seat construction shall be of the same materials as the squad bench. The technician's seat base shall be lined with the same white plastic laminate as the interior of the medical cabinets. The cabinet shall provide approximately 1.88 cubic feet of storage space. Access to storage shall be through a bottom hinged wood door facing the curbside of the patient compartment. A technician's seat belt shall be provided with automotive style retractors.

Does your bid comply? Yes_____No_____

6.7 Ceiling Headliner:

The ceiling headliner shall be .5" inch foam padded upholstery material. The headliner shall have an access panel full length to facilitate repairs and maintenance of the main electrical wiring loom in the patient compartment.

Does your bid comply? Yes_____No_____

6.8 Cot Mounting Device:

A Ferno Model 175-4, two-position, removable cot retention system shall be provided and installed for the cot of this agency's choice. There will be 1/2" aluminum plates welded into the module frame structure for securing the stretcher mount. The installation shall conform to the requirements of AMD Standard 004.

Does your bid comply? Yes_____No_____

6.9 IV Hangers:

There shall be two (2) CPI #2008 rubber fold down style brackets with Velcro retaining straps securely fastened to the headliner, (1) over primary cot and (1) over the squad bench.

Does your bid comply? Yes_____No_____

6.10 Oxygen, Main Supply:

The ambulance shall have a hospital type piped oxygen system capable of storing and supplying a minimum of 3000 liters of medical oxygen. The cylinder controls shall be accessible from inside the vehicle. The pressure gauge shall be visible through Plexiglas access door. Oxygen shall be piped to a self-sealing duplex oxygen outlet station located in the action wall area of the patient compartment. The style of the outlets shall be Ohio quick disconnects.

Does your bid comply? Yes_____No_____

6.11 Oxygen Tank Retention System:

A heavy-duty adjustable retaining system shall be supplied to secure an "H" or "M"-size oxygen cylinder. This retention system shall be installed and comply with AMD Standard 003.

Does your bid comply? Yes_____No_____

6.12 Suction Aspirator:

The vehicle shall be equipped with an on-board aspirator, Rico Model RS-4X, with 1000ml disposable receptacle. Vacuum shall be provided by a 12-volt electric vacuum pump mounted in an outside compartment and controlled by a low voltage switch on the rear switch control panel. This switch shall be red in color and shall be connected to the electronic control module through a computer cable. The pump shall be mounted in a manner to reduce noise and vibration in the top front corner of street side compartment #2.

Does your bid comply? Yes_____No_____

The suction aspirator system shall provide a free airflow of at least 20-LPM and achieve a minimum of 300 mm Hg Vacuum within four (4) seconds after the suction tube is clamped off. The system includes a vacuum control and shut-off valve for manual control of vacuum flow.

Does your bid comply? Yes_____No_____

6.13 Hazardous Waste Disposal:

Facility for the disposal of soft bio-medical waste shall be provided. A rubber waste container shall be provided and located in the 1.25" inch stainless steel "A" bar at the head of the squad bench.

Does your bid comply? Yes_____No_____

6.14 Contaminated "Sharps" Disposal:

Facility for the disposal of contaminated medical "sharps" shall be provided. A 2-quart sharps container shall be provided and located in the 1.25" inch stainless steel "A" bar at the head of the squad bench.

Does your bid comply? Yes_____No_____

6.15 Environmental Controls:

The ambulance shall be equipped with an OEM factory installed heater and air conditioner in the driver's compartment. The ambulance manufacturer shall also install a combination rear air conditioning and heating unit in the patient compartment. Control of the temperature in the patient compartment shall be by a thermostat located near the rear switch control panel and by a fan-speed switch on the panel.

Does your bid comply? Yes_____No_____

The patient compartment combination heater/air conditioner unit shall be positioned over the ALS cabinet in the right front of the patient compartment with controls accessible to the ambulance technician. The air conditioner shall be capable of lowering the patient compartment ambient temperature from 35° C (95° F) to 26° C (78° F) within 30 minutes per KKK-A-1822F. The heater shall be capable of raising the patient compartment ambient temperature from 0° C (32° F) to 20° C (68° F) within 30 minutes per KKK-A-1822F.

Does your bid comply? Yes_____No_____

6.16 Antennas:

There shall be one (1) RG58A-U antenna coax lead extending from the ceiling of the module and terminating behind the driver's seat in the cab.

Does your bid comply? Yes_____No_____

6.17 Siren - Public Address System:

The ambulance shall be equipped with a Whelen WS-295HFSA7 dual tone remote amplifier electronic siren. Functions of the siren shall include radio rebroadcast, PA, horn/siren operation, manual operation with push-button control, wail, yelp and piercer tones. The siren control head shall also indicate the function of each speaker and provide for manual adjustment of the microphone volume. Two (2) Cast Products SAP4314 100 Watt speakers will be provided. The system as installed shall meet the minimum requirements of Federal Specification KKK-A-1822F.

Does your bid comply? Yes_____No_____

7.0 ADDITIONAL SYSTEMS, EQUIPMENT, ACCESSORIES AND SUPPLIES

7.1 Standard Mandatory Miscellaneous Equipment:

Unless otherwise precluded elsewhere in this specification, the ambulance shall be equipped with but not limited to the following:

7.2 No Smoking Signs:

Two (2) "No Smoking Oxygen Equipped" signs.

Does your bid comply? Yes_____No_____

7.3 Fasten Seat Belt Signs:

Two (2) "Use Of Seat Belt Required" signs.

Does your bid comply? Yes_____No_____

7.4 Overhead Grab Rail:

Minimum 96"L x 1.25"D, maximum 4-inch depth, on the ceiling over the primary patient, contour rolled at each end with no protruding sharp edges. The grab rail shall be installed and perform in accordance with AMD Standard 008

Does your bid comply? Yes_____No_____

7.5 Paint:

The ambulance shall be painted in accordance with KKK-A-1822 specifications for Preparation and Painting. Only a PPG Delfleet basecoat/clear coat paint system will be used to paint the modular body. Prior to painting, the entire module shall be carefully ground to remove all welding slag and major scratches in the body surface and then be washed with DX330 wax and grease remover to remove all oil, dirt, and grease leftover from the manufacturing process. The entire Module will be sanded with 80 grit on a DA, body filled and re-sanded. Any pinholes will be filled with DF715 poly putty glaze coat, sanded smooth with 120-220 grit sandpaper, then rewashed with DX330 wax and grease remover. Next the module will be etched with (1) coat of a PPG mixture of F3963 and F3964 etch primer. Then, the unit will be primed with (2) heavy coats of a mixture of PPG F3980 and F3981 high build primer. After unit is dry, it will be sanded down with 320 grit sandpaper and any defects will be repaired at this time. The unit will then be seam sealed with 3M 8360 seam sealer, washed with DX330 wax and grease remover again and tacked off before painting. Module will be sealed with PPG 3985 white sealer, followed by 2 to 3 coats of Delfleet System basecoat and clear coats. Unit will be baked and then buffed with the 3M Perfect-it II system.

The body shall be painted 'off chassis' so that all exterior areas of the body shall be protected by paint, especially where the body meets the cab. Units that are painted on the chassis, except for body stripes, shall not be acceptable.

All materials in the painting process must be rated as containing low V.O.C.'S making the process as environmentally friendly as possible.

Does your bid comply? Yes_____No_____

7.6 Decals:

Decals are optional.

Does your bid comply? Yes_____No_____

8.0 CHASSIS, QUALITY, CERTIFICATION

8.1 Manufacturer's Quality Standards:

To assure purchaser that engineering, manufacturing and quality control procedures have been verified and approved by a chassis manufacturer, the ambulance manufacturer must be a Ford Motor Company QVM. (Qualified Vehicle Modifier) "fully meets" manufacturer. A copy of the certification shall be included with the bid. NO EXCEPTIONS.

Does your bid comply? Yes_____No_____