

**PATRICIA A. PESHKA**

**PURCHASING AGENT**



**SCOTT AVEDISIAN**

**MAYOR**

**CITY OF WARWICK**

**PURCHASING DIVISION  
3275 POST ROAD  
WARWICK, RHODE ISLAND 02886  
TEL (401)738-2013  
FAX (401) 737-2364**

The following notice is to appear on the City of Warwick's website Monday, February 26, 2018. The website address is <http://www.warwickri.gov/bids>.

**CITY OF WARWICK  
BIDS REQUESTED FOR**

**Bid2018-275 Type I Medical Rescue Vehicle**

Specifications are available in the Purchasing Division, Warwick City Hall, Monday through Friday, 8:30 AM until 4:30 PM on or after Monday, February 26, 2018.

Sealed bids will be received by the Purchasing Division, Warwick City Hall, 3275 Post Road, Warwick, Rhode Island 02886 up until 11:00 A.M., Friday, March 16, 2018. The bids will be opened publicly commencing at 11:00 A.M. on the same day in the City Council Chamber at Warwick City Hall.

Awards shall be made on the basis of the lowest evaluated or responsive bid price. Please note that no bids can be accepted via email or fax.

Individuals requesting interpreter services for the hearing impaired must notify the Purchasing Division at 401-738-2013 at least 48 hours in advance of the bid opening date.

Patricia A. Peshka  
Purchasing Agent

**PLEASE COMPLETE THIS PAGE & SUBMIT WITH YOUR BID**

**Acknowledgement of Addendum (if applicable)**

**Addendum Number**

**Signature of Bidder**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

COMPANY ADDRESS: \_\_\_\_\_

COMPANY ADDRESS: \_\_\_\_\_

BIDDER'S SIGNATURE: \_\_\_\_\_

BIDDER'S NAME (PRINT): \_\_\_\_\_

TITLE: \_\_\_\_\_ TEL. NO.: \_\_\_\_\_

EMAIL ADDRESS: \_\_\_\_\_ \*

\*Please include your email address. Future bids will be emailed, unless otherwise noted.

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**II. AWARD AND CONTRACT:**

The CITY OF WARWICK, acting as duly authorized through its Purchasing Agent/Finance Director/Mayor (delete if inapplicable), accepts the above bid and hereby enters into a contract with the above party to pay the bid price upon completion of the project or receipt of the goods unless another payment schedule is contained in the specifications. All terms of the specifications, both substantive and procedural, are made terms of this contract.

DATE: \_\_\_\_\_

Bid2018-275

\_\_\_\_\_

Purchasing Agent

**PLEASE COMPLETE THIS PAGE & SUBMIT WITH YOUR BID**

**CERTIFICATION & WARRANT FORM\***

**This form must be completed and submitted with sealed bid.  
Failure to do so will result in automatic rejection.**

Any and all bids shall contain a certification and warrant that they comply with all relevant and pertinent statutes, laws, ordinances and regulations, in particular, but not limited to Chapter 16- Conflicts of Interest, of the Code of Ordinances of the City of Warwick. Any proven violation of this warranty and representation by a bidder at the time of the bid or during the course of the contract, included, but not limited to negligent acts, either directly or indirectly through agents and/or sub-contractors, shall render the bidder's contract terminated and the bidder shall be required to reimburse the City for any and all costs incurred by the City, including reasonable attorney fees, to prosecute and/or enforce this provision.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

**\*This form cannot be altered**

**CITY OF WARWICK  
NOTICE TO BIDDERS**

**Bid2018-275 Type I Medical Rescue Vehicle**

If you received this document from our homepage or from a source other than the City of Warwick Purchasing Division, please check with our office prior to submitting your bid to ensure that you have a complete package. The Purchasing Division cannot be responsible to provide addenda if we do not have you on record as a plan holder.

The opening of bids shall be in the order established by the posted agenda and the agenda shall continue uninterrupted until completion.

Once an item has been reached and any bids on that item has been opened, no other bids on that item will be accepted and any such bid shall be deemed late.

The contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap for any position for which the employee or applicant is qualified and that in the event of non-compliance the City may declare the contractor in breach and take any necessary legal recourse including termination or cancellation of the contract.

A bidder filing a bid thereby certifies that no officer, agent, or employee of the City has a pecuniary interest in the bid or has participated in contract negotiations on the part of the City, that the bid is made in good faith without fraud, collusion, or connection of any kind with any other bidder for the same call for bids, and that the bidder is competing solely in his own behalf without connection with, or obligation to, any undisclosed person or firm.

All bids should be submitted with one (1) original and one (1) copy in a sealed envelope, which should read: *YOUR COMPANY NAME* plainly marked on the exterior of the envelope as well as "Bid2018-275 Type I Medical Rescue Vehicle."

Bids received prior to the time of the opening will be securely kept, unopened. No responsibility will be attached to an officer or person for the premature opening of a bid not properly addressed and identified. No bids shall be accepted via facsimile or email.

Should you have any questions, please contact Jason Umbenhauer, Warwick Fire Department, at 401-468-4063.

All bids should be written in ink or typed. If there is a correction with whiteout, the bidder must initial the change.

Negligence on the part of the bidder in preparing the proposal confers no rights for the withdrawal of the proposal after it is open.

Any deviation from the specifications must be noted in writing and attached as part of the bid proposal. The bidder shall indicate the item or part with the deviation and indicate how the bid will deviate from specifications.

The IRS Form W-9 available on [www.warwickri.gov](http://www.warwickri.gov) should be completed and submitted with the bid if the bidder falls under IRS requirements to file this form.

The successful bidder must comply with all Rhode Island Labor Laws, Chapter 37-12-13, and all other applicable Local, State and Federal Laws.

The contractor shall keep himself informed of and comply with all laws, ordinances and regulations of the federal, state and municipal governments which may apply and be in force during the life of the contract, in any manner which may affect himself/employees or the conduct of the work or the materials used or employed in the work. Before submitting bids, prospective bidders shall examine the terms, covenants and conditions of all codes, permits and laws, which may apply. By submitting a bid, the bidder agrees to comply with all pertinent laws/regulations if awarded a contract.

Bid surety in the form of a bank check, original bid bond or certified check in the amount of ten (10) percent of the total bid price must be submitted with each bid. If a bid bond is submitted, it shall be duly executed by the bidder as principal and having as surety thereon a surety company licensed to do business in the State of Rhode Island and approved by the owner.

The successful bidder must provide the City of Warwick with an original **Certificate of Insurance** for General and Automobile Liability in a minimum amount of \$1 million, naming the City of Warwick as the additional insured and so stated on the certificate with the bid name and bid number. It is the vendor's responsibility to provide the City of Warwick with an updated Certificate of Insurance upon expiration of the original certificate.

The successful bidder must furnish a performance and payment bond in the amount of 100 percent of the total bid price.

For a bid to be awarded to a corporation, limited liability company or other legal entity, prior to commencing work under the awarded bid, that corporation, company or legal entity may be required to provide to the Purchasing Agent a **Certificate of Good Standing** dated no more than thirty (30) days prior to the date upon which the bid approval was made.

The successful bidder will provide said **Certificate of Insurance** and **Certificate of Good Standing** (if required) within ten (10) calendar days after notification or the City reserves the right to rescind said award.

Prices to be held firm one (1) year from date of award. Term contracts may be extended for one (1) additional term upon mutual agreement unless otherwise stated.

The City is exempt from the payment of the Rhode Island Sales Tax under the 1956 General Laws of the State of Rhode Island, 44-18-30, Paragraph I, as amended.

The contractor must carry sufficient liability insurance and agree to indemnify the city against all claims of any nature, which might arise as a result of his operations or conduct of work.

The Purchasing Agent reserves the right to reject any and all bids, to waive any minor deviations or informalities in the bids received, and to accept the bid deemed most favorable to the interest of the City.

The City reserves the right to terminate the contract or any part of the contract in the best interests of the City, upon 30-day notice to the contractor. The City shall incur no liability for materials or services not yet ordered if it terminates in the best interests of the City. If the City terminates in the interests of the City after an order for materials or services have been placed, the contractor shall be entitled to compensation upon submission of invoices and proper proof of claim, in that proportion which its services and products were satisfactorily rendered or provided, as well as expenses necessarily incurred in the performance of work up to time of termination.

No extra charges for delivery, handling or other services will be honored. All claims for damage in transit shall be the responsibility of the successful bidder. Deliveries must be made during normal working hours unless otherwise agreed upon.

All costs directly or indirectly related to the preparation of a response to this solicitation, or any presentation or communication to supplement and/or clarify any response to this solicitation which may be required or requested by the City of Warwick shall be the sole responsibility of and shall be borne by the respondent.

If the respondent is awarded a contract in accordance with this solicitation and the respondents bid or response and if the respondent fails or refuses to satisfy fully all of the respondents obligations thereunder, the City of Warwick shall be entitled to recover from the respondent any losses, damages or costs incurred by the City as a result of such failure or refusal.

The City reserves the right to award in part or full and to increase or decrease quantities in the best interest of the City.

Any quantity reference in the bid specifications are estimates only, and do not represent a commitment on the part of the City of Warwick to any level of billing activity. It is understood and agreed that the agreement shall cover the actual quantities ordered during the contract period.

The City reserves the right to rescind award for non-compliance to bid specifications.

The successful bidder must adhere to all City, State and Federal Laws, where applicable.

**PLEASE COMPLETE THIS PAGE & SUBMIT WITH YOUR BID**

**CITY OF WARWICK**

**BID AND CONTRACT FORM**

**TITLE OF SPECIFICATION:** Bid2018-275 Type I Medical Rescue Vehicle

**I. BID:**

WHEREAS, the CITY OF WARWICK has duly asked for bids for performance of services and/or supply of goods in accordance with the above-indicated specifications.

The person or entity below does irrevocably offer to perform the services and/or furnish the goods in accordance with the specifications, which are hereby incorporated by reference in exchange for the bid price below;

This offer shall remain open and irrevocable until the CITY OF WARWICK has accepted this bid or another bid on the specifications or abandoned the project.

The bidder agrees that acceptance below by the CITY OF WARWICK shall transform the bid into a contract. This bid and contract shall be secured by Bonds, if required by the specifications.

<b><u>Description</u></b>	<b><u>Bid</u></b>
<b>Year</b>	
<b>Make</b>	
<b>Model</b>	
<b>Cost</b>	<b>\$</b>
<b>Delivery Time from Order Date (in Calendar days)</b>	

**WARWICK FIRE DEPARTMENT  
OVERVIEW TO SPECIFICATIONS  
TYPE I MEDICAL RESCUE VEHICLE**

**INTENT OF SPECIFICATIONS:** **Bidder Complies** YES \_\_\_ NO \_\_\_

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

Bids will only be considered from companies which have an established reputation in the field of emergency vehicle construction, and have been in business for a minimum of 25 years. Each bidder must furnish satisfactory evidence of his ability to construct the vehicle specified, and must state the location of the factory where the vehicle is to be built. The bidder must also show that they are able to render prompt service, and to furnish replacement parts for said emergency vehicle.

**CONTRACTOR'S SPECIFICATIONS:** **Bidder Complies** YES \_\_\_ NO \_\_\_

Each bid must be accompanied by a set of "Contractor's Specifications" consisting of a detailed description of the ambulance and equipment proposed and to which the ambulance furnished under contract must conform. These specifications must indicate size, type, model, and make of all component parts and equipment.

**LATE PROPOSALS** **Bidder Complies** YES \_\_\_ NO \_\_\_

It is the bidder's responsibility to see that their proposals arrive on time. Late proposals, facsimiles, telegraphed, or telephone bids will not be considered. The purchaser reserves the right to accept or reject any or all bids on such basis as the purchaser deems to be in its best interest.

**SAFETY REQUIREMENTS:** **Bidder Complies** YES \_\_\_ NO \_\_\_

It is expected that the Bidder will meet all State and Federal safety standards and laws that are in effect on the date of the bid for the item(s) that are being specified and the particular use for which they are meant.



**ACQUAINTANCE WITH SPECIFICATIONS: Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_**

It is the responsibility of the bidder to review all of the bidding requirements. Failure of a bidder to be acquainted with this information must not relieve him/her from any obligations of the bid requirements.

**QUALITY AND WORKMANSHIP: Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_**

The design of this emergency vehicle must embody the latest approved automotive engineering practices. Experimental designs and methods will not be acceptable. The workmanship must be of the highest quality in its respective field. Special consideration will be given to the following points; accessibility of the various units which require periodic maintenance operations, ease of operation, and symmetrical proportions. Construction must be rugged and ample safety factors must be provided to carry loads as specified.

**LIABILITY: Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_**

The bidder, if his bid is accepted, must defend any and all suits and assume all liability for the use of any patented process, device, or article forming a part of the emergency vehicle or any equipment furnished under the contract.

**WARRANTY: Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_**

A copy of the warranties for the electrical system, paint, module structure, and general conversion must be furnished with each bidder's proposal.

**EXCEPTION TO SPECIFICATIONS: Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_**

The following chassis and body specifications must be strictly adhered to. Exceptions will be allowed if they are equal to or superior to that specified and provided they are listed and fully explained on a separate page entitled "EXCEPTIONS TO SPECIFICATIONS". Exception lists must refer to the specification page number. PROPOSALS TAKING TOTAL EXCEPTION TO THESE SPECIFICATIONS WILL BE IMMEDIATELY REJECTED. The buyer is aware that all bidders will have to take some exceptions to these specifications. Therefore, BIDDERS THAT TAKE NO EXCEPTIONS WILL BE REQUIRED TO MEET EVERY PARAGRAPH TO THE FULLEST EXTENT, SHOULD THEIR BID BE ACCEPTED. It is our intent to receive bids that do not require telephone calls or other communications to ascertain what a bidder is intending to supply.

Upon delivery, the emergency vehicle will be inspected against THESE specifications and not those supplied by the bidder with their proposal. Deviations will not be acceptable unless they were noted as exceptions at the time of bid. The vehicle will be rejected until said deviations are corrected to the satisfaction of Warwick Fire Department's Chief or his designee.

Decisions regarding "equal to" or "better than" will be the responsibility of Warwick Fire Department's Chief or his designee, rather than those companies submitting bids. If exceptions are not taken, but inconsistencies are noted in the submitted detailed specifications, the bid may be rejected.

**PROPOSAL SEQUENCE:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

Bid Proposals must be submitted in the same sequence as these specifications for ease of checking compliance to same.

**SERVICE CENTER** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The dealership supplying the emergency vehicle must maintain a full service, repair, and warranty center. The service center must be owned and operated by the dealership, which must be an established business entity. Third party service or repair services must not be allowed. Furthermore, the dealership's service center and office must be located in a commercial business district; neither the office or service center may be located in a residential district. These requirements are set forth to assure that competent, 24-hour service can be provided without interruption. THERE MUST BE NO EXCEPTIONS TO THIS PARAGRAPH.

**IMPORTANT!**

**It is our intent to inspect each bidder's service center, personnel, and mobile service units. Service of this emergency vehicle is of the utmost importance to the Warwick Fire Department. It is completely unacceptable for any bidder not to have mobile service units, in house personnel, and a service center within 100 miles (driving distance) of Warwick RI.**

ALL BIDDERS MUST PROVIDE PHOTOGRAPHIC DOCUMENTATION OF THE SERVICE CENTER, AS WELL AS THEIR MOBILE SERVICE TRUCKS.

THERE MUST BE NO EXCEPTIONS TO THE ABOVE LISTED SERVICE REQUIREMENTS.

**REFERENCE LIST:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

All bidders must supply a list of communities in which their emergency vehicles are located. No bids will be accepted from any contractor who cannot show they have manufactured at least 50 similar emergency medical units. **(NO EXCEPTIONS)**

**DRAWINGS:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

Accurate drawings of the apparatus must be submitted for final approval. These drawings must be the same as the unit being proposed by the bidder. Similar drawings are not acceptable. **(NO EXCEPTIONS)**

**FACTORY TRIPS:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

There must be two (2) factory inspection trips for up to four (4) representatives of the Warwick Fire Department. All traveling, lodging, food, and related expenses must be paid by the bidder. (NO EXCEPTIONS)

**TAG ON ORDERS:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

The purchaser reserves the right to require tag on purchases to this order for up to one (1) year from signing contract. The contract may be used for neighboring communities as well, as long as it is legally permissible for the neighboring community to avail themselves of this opportunity.

**NEW DEALER LICENSE:**

**Bidder Complies YES \_\_\_**

**NO \_\_\_**

All bidders must supply a copy of their DMV license to sell new vehicles for their State of incorporation. Used dealer, manufacturer, general repairer, or limited repairer licenses are not acceptable. Warwick Fire Department is buying a new vehicle and requires that any dealer selling the vehicle be a licensed and bonded "New Vehicle" dealer per State statues. Warwick Fire Department requires this license so that "Lemon Laws" for this new vehicle can be enforced.

DEALER LICENSE NUMBER \_\_\_\_\_ STATE OF INCORPORATION \_\_\_\_\_

Signature of person attesting to the above statements \_\_\_\_\_

Printed or typed name of person signing this document \_\_\_\_\_

**MILEAGE REQUIREMENT:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

The new vehicle must be delivered to the City of Warwick with less than 1500 miles on the odometer. Our intent is to purchase a "new" vehicle; not a vehicle with substantial use, or a "demonstrator" unit. It must be the bidder's responsibility to pay for any and all transportation / trucking charges. No exceptions.

WARWICK FIRE DEPARTMENT  
SPECIFICATIONS FOR A TYPE I MEDICAL RESCUE VEHICLE

**CHASSIS SPECIFICATIONS:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The requested chassis is an **INTERNATIONAL DURASTAR LITE, 2019 4300 SBA LP 4X2 (MH025)**

**APPLICATION:** Ambulance/Rescue

**MISSION:** Requested GVWR: 19500. Calc. GVWR: 19500

**DIMENSION:** Wheelbase: 175.00, CA: 102.00, Axle to Frame: 66.00

**ENGINE, DIESEL:** {Cummins B6.7 300} EPA 2017, 300HP @ 2600 RPM, 660 lb-ft Torque @ 1600RPM, 2600 RPM Governed Speed, 300 Peak HP (Max)

**TRANSMISSION, AUTOMATIC:** {Allison 1000 EVS} 5th Generation Controls, Close Ratio, 5-Speed with Overdrive, with PTO Provision, Less Retarder, Includes Park Pawl, with 19,500-lb GVW and 26,000-lb GCW Max

**AXLE, FRONT NON-DRIVING:** {Dana Spicer D800-F} I-Beam Type, 8,000-lb Capacity

**AXLE, REAR, SINGLE:** {Dana Spicer S14-130} Single Reduction, 13,500-lb Capacity, 190 Wheel Ends Gear Ratio: 4.30, with rear magnetic drain plug

**CAB:** Conventional

**TIRE, FRONT:** Three (3) 245/70R19.5 Load Range H HYBRID HS3 (CONTINENTAL), 631 rev/mile, 81 MPH, All-Position

**TIRE, REAR:** Four (4) 245/70R19.5 Load Range G G622 RSD (GOODYEAR), 620 rev/mile, 75

MPH, Drive

**SUSPENSION, RR, SPRING, SINGLE:** Vari-Rate; 13,500-lb Capacity

**PAINT:** Cab schematic 100GA

Location 1: 2785, Red (Custom)

**TOW HOOK, FRONT:** Two (2) Frame Mounted

**FRAME RAILS:** High Strength Low Alloy Steel (80,000 PSI Yield); 9.125" x 3.062" x 0.312" (231.8mm x 77.8mm x 8.0mm) with Transition to 6.500" x 3.062" x 0.312" (165.1mm x 77.8mm x 8.0mm) 388.4" (9864mm) Maximum OAL; For LP Chassis

6.50" Web Height in AF Section

**LICENSE PLATE HOLDER:** Includes Upper & Lower Mounting Plate Hardware, Mounted in Existing Holes in Front Bumper

**BUMPER, FRONT:** Full Width, Aerodynamic, Chrome Plated Steel; 0.142" Material Thickness

**SUSPENSION, FRONT, SPRING:** Parabolic, Taper Leaf; 8,000-lb Capacity; with Shock Absorbers

**SPRING PINS:** Rubber Bushings, Maintenance-Free

**BRAKE SYSTEM, HYDRAULIC:** {Wabco} Split System, with Automatic Adjustment and Four Channel ABS

**DRAIN VALVE:** {Berg} with Pull Chain, for Air Tank, Mounted in Wet Tank

**AIR DRYER:** {Bendix AD-IP} with Heater.

**BRAKE, PARKING:** {Bosch} DSSA Drum Type; 12" x 3", Spring Actuated; For Hydraulic Brake Chassis with Air Source; Activated by Parking Brake Knob on Instrument Panel; Differential Mounted

**PARKING BRAKE CONTROL:** Applies Hydraulic Actuated Powered Park Brake

**BRAKES, FRONT, HYDRAULIC DISC:** Quadraulic; Four (4) 70mm Diameter Pistons

**TRACTION CONTROL, HYDRAULIC:** Automatic; Hydraulic Brake System

**BRAKES, REAR, HYDRAULIC DISC:** Quadraulic; Four (4) 70mm Diameter Pistons

**AIR COMPRESSOR:** {Cummins} 18.7 CFM Capacity, with Tank for Air Source on Hydraulic Chassis, with Air Pressure Gauge, Low Pressure Alarm and Wiring

**STEERING COLUMN:** Tilting and Telescoping

**STEERING WHEEL:** 2-Spoke, 18" Dia., Black

**STEERING GEAR:** {TRW (Ross) TAS40} Power

**EXHAUST SYSTEM:** Single, Horizontal After-treatment Device, Frame Mounted Under Right Rail, Back of Cab, Includes Short Horizontal Tail Pipe

**SWITCH, FOR EXHAUST:** Three (3) Position, Momentary, Lighted Momentary, ON/CANCEL, Center Stable, INHIBIT REGEN, Mounted in IP Inhibits Diesel Particulate Filter Regeneration When Switch is Moved to ON While Engine is Running, Resets When Ignition is Turned OFF

**ELECTRICAL SYSTEM:** 12-Volt, Standard Equipment

Includes

: DATA LINK CONNECTOR for Vehicle Programming and Diagnostics in Cab

: HAZARD SWITCH Push On/Push Off, Located on Top of Steering Column Cover

: HEADLIGHT DIMMER SWITCH Integral with Turn Signal Lever

: JUMP START STUD Located on Positive Terminal of Outermost Battery

: PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light

: STARTER SWITCH Electric, Key Operated

: STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector

: TURN SIGNAL SWITCH Self-Cancelling for Trucks, Manual Cancelling for Tractors, with Lane Change Feature

: TURN SIGNALS, FRONT Includes Reflectors and Auxiliary Side Turn Signals, Solid State Flashers; Flush Mounted

: WINDSHIELD WIPER SWITCH 2-Speed with Wash and Intermittent Feature (5 Pre-Set Delays), Integral with Turn Signal Lever

: WINDSHIELD WIPERS Single Motor, Electric, Cowl Mounted

: WIRING, CHASSIS Color Coded and Continuously Numbered

**HORN, ELECTRIC:** Two (2) Disc Style

**POWER SOURCE:** Cigar Type Receptacle without Plug and Cord

**ALTERNATOR:** {Leece-Neville BLP4006HN} Brushless, 12 Volt 325 Amp. Capacity, Pad Mount, with Remote Sense

**BODY BUILDER WIRING:** Back of Standard or Sleeper Cab at Left Frame or Under Extended or Crew Cab at Left Frame; Includes Sealed Connectors for Tail/Amber Turn/Marker/Backup/Accessory Power/Ground and Sealed Connector for Stop/Turn

**BATTERY SYSTEM:** {International} Maintenance-Free, (3) 12-Volt 2775CCA Total

**RADIO:** AM/FM/WB/Clock/3MM Auxiliary Input, with Multiple Speakers, with CD Player

**BATTERY BOX:** Steel, with Plastic Cover, 25" Wide, 2 or 3 Battery Capacity, Mounted Right Side Under Cab

**WINDSHIELD WIPER SPD CONTROL:** Force Wipers to Slowest Intermittent Speed When Park Brake Set and Wipers Left on for a Predetermined Time

**HEADLIGHTS:** Halogen; Composite Aero Design for Two Light System; Includes Daytime Running Lights

**CLEARANCE/MARKER LIGHTS:** Five (5) {Truck Lite} Amber LED Lights, Flush Mounted on Cab

**TEST EXTERIOR LIGHTS:** Pre-Trip Inspection will Cycle all Exterior Lamps Except Back-up Lights

**HEADLIGHTS ON W/WIPERS:** Headlights Will Automatically Turn on if Windshield Wipers are turned on

**STARTING MOTOR:** {Delco Remy 38MT Type 300} 12 Volt; less Thermal Over-Crank Protection

**INDICATOR, LOW COOLANT LEVEL:** with Audible Alarm

**CIRCUIT BREAKERS:** Manual-Reset (Main Panel) SAE Type III with Trip Indicators, Replaces All Fuses

**TURN SIGNALS, FRONT:** Includes LED Side Turn Lights Mounted on Fender

**GRILLE:** Chrome

**FRONT END:** Tilting, Fiberglass, with Three Piece Construction

**GRILLE EMBER SCREEN:** Mounted to Grille and Cowl Tray to Keep Hot Embers out of Engine and HVAC Air Intake System

**PAINT SCHEMATIC:** PT-1 Single Color, Design 100

**PAINT TYPE:** Base Coat/Clear Coat, 1-2 Tone

**ANTI-FREEZE:** Red, Extended Life Coolant; To -40 Degrees F/ -40 Degrees C, Freeze Protection

**BLOCK HEATER, ENGINE:** 120V/1000W, for Cummins ISB/B6.7/ISL/L9 Engines

**FAN DRIVE:** {Borg-Warner SA85} Viscous Type, Screw On; Includes Fan Nylon

**RADIATOR:** Aluminum; 2-Row, Cross Flow, Over/Under System, 717 Sq In Louvered, with 313 Sq In Charge Air Cooler. with In-Tank Transmission Cooler  
Includes

: DEAERATION SYSTEM with Surge Tank

: HOSE CLAMPS, RADIATOR HOSES Gates Shrink Band Type; Thermoplastic Coolant Hose Clamps

: RADIATOR HOSES Premium, Rubber

**AIR CLEANER:** with Service Protection Element

Includes

: GAUGE, AIR CLEANER RESTRICTION Air Cleaner Mounted

**FEDERAL EMISSIONS:** {Cummins B6.7} EPA, OBD and GHG Certified for Calendar Year 2018

**THROTTLE, HAND CONTROL:** Engine Speed Control for PTO; Electronic, Stationary Pre-Set, Two Speed Settings; Mounted on Steering Wheel

**OIL PAN** 15 Quart Capacity, For Cummins ISB/B6.7 Engines

**EMISSION COMPLIANCE:** Engine Shutdown System Exempt Vehicles, Complies with California Clean Air Regulations

**ENGINE CONTROL, REMOTE MOUNTED:** Provision for; Includes Wiring for Body Builder Installation of PTO Controls; with Ignition Switch Control for Cummins ISB/B6.7 or ISL/L9 Engines

**TRANSMISSION OIL:** Synthetic; 20 thru 28 Pints

**SHIFT CONTROL PARAMETERS:** Allison 1000 or 2000 Series Transmissions, 5th Generation Controls, Performance Programming

**FUEL/WATER SEPARATOR:** 12 VDC Electric heater, Includes Pre-Heater, Includes Water-in-Fuel Sensor, Cummins Supplied on Engine

**FUEL TANK:** Top Draw, Non-Polished Aluminum, D-Style, 16" Tank Depth, 40 US Gal (151L), with Quick Connect Outlet, Mounted Left Side, Under Cab

**DEF TANK:** 7 U.S. Gal. 26.5L Capacity, Frame Mounted Outside Left Rail, Under Cab

**CAB:** Conventional

Includes

: ARM REST: Two (2) Molded Plastic; One Each Door

: CLEARANCE/MARKER LIGHTS: Five (5) Flush Mounted

: COAT HOOK, CAB: Located on Rear Wall, Centered Above Rear Window

: CUP HOLDERS: Two (2) Cup Holders, Located in Lower Center of Instrument Panel

: DOME LIGHT, CAB: Rectangular, Door Activated and Push On-Off at Light Lens, Timed Theater Dimming, Integral to Console, Center Mounted

: GLASS, ALL WINDOWS: Tinted

: GRAB HANDLE, CAB INTERIOR: One (1) "A" Pillar Mounted, Passenger Side

: GRAB HANDLE, CAB INTERIOR: Two (2) Front of "B" Pillar Mounted, One (1) Each Side

: INTERIOR SHEET METAL: Upper Door (Above Window Ledge) Painted Exterior Color

: STEP: Four (4), Two (2) Steps per Door

**AIR CONDITIONER:** Provision for Accommodation Package, for Air Conditioning, Includes Auxiliary Compressor in Secondary Position and Compressor Drive Effects for Vehicle with Primary Compressor Mounting

**GRAB HANDLE, CAB INTERIOR:** Two (2) Safety Yellow

**GAUGE CLUSTER:** English with English Electronic Speedometer

Includes

: GAUGE CLUSTER: Five (5) Engine Oil Pressure (Electronic), Water Temperature (Electronic), Fuel (Electronic), Tachometer (Electronic), Voltmeter

: ODOMETER DISPLAY: Miles, Trip Miles, Engine Hours, Trip Hours, Fault Code Readout

: WARNING SYSTEM: Low Fuel, Low Oil Pressure, High Engine Coolant Temp, and Low Battery Voltage (Visual and Audible)

**GAUGE, OIL TEMP, AUTO TRANS:** for Allison Transmission

**GAUGE, AIR CLEANER RESTRICTION:** {Filter-Minder} with Black Bezel Mounted in Instrument Panel

**IP CLUSTER DISPLAY:** On Board Diagnostics Display of Fault Codes in Gauge Cluster

**GAUGE, DEF FLUID LEVEL:**

**SEAT, DRIVER:** {National 2000} Air Suspension, High Back with Integral Headrest, Vinyl, Isolator, One (1) Chamber Lumbar, Two (2) Position Front Cushion Adjustment, -3 to +14 Degree Seat Back Angle Adjust, Dual Shocks

Includes

: SEAT BELT 3-Point, Lap and Shoulder Belt Type

**SEAT, PASSENGER:** {National 2000} Air-Suspension, High Back with Integral Headrest, Vinyl, Isolator, One (1) Chamber Lumbar, Two (2) Position Front Cushion Adjustment, Dual Shocks

Includes

: SEAT BELT 3-Point, Lap and Shoulder Belt Type

**GRAB HANDLE:** Two (2) Chrome Towel Bar Type with Anti-Slip Rubber Inserts; for Cab Entry, Mounted Left and Right, Each Side at "B" Pillar

**MIRRORS:** Two (2) {Lang Mekra} Styled; Rectangular, Power Both Sides, Thermostatically Controlled Heated Heads, Clearance Lights LED, Bright Finish Heads & Brackets, Breakaway Type, 7.09" x 15.75" & Integral Convex Both Sides, 102" Inside Spacing

**SEAT BELT:** All Orange; One (1) to Three (3)

**ARM REST:** RIGHT, DRIVER SEAT

**ARM REST:** LEFT, PASSENGER SEAT

**AIR CONDITIONER:** {Blend-Air} with Integral Heater & Defroster

Includes

: HEATER HOSES Premium

: HOSE CLAMPS, HEATER HOSE Mubea Constant Tension Clamps

: REFRIGERANT Hydrofluorocarbon HFC-134A

**INSTRUMENT PANEL:** Center Section, Flat Panel

**WINDOW, POWER:** Two (2) and Power Door Locks, Left and Right Doors, Includes Express Down Feature

**HVAC FRESH AIR FILTER:**

**CAB INTERIOR TRIM:** Premium

Includes

: CAB INTERIOR TRIM PANELS Cloth Covered Molded Plastic, Full Height; All Exposed Interior Sheet Metal is covered Except for the Following: with a Two-Man Passenger Seat or with a Full Bench Seat the Back Panel is Completely Void of Covering

: CAB SOUND INSULATION Includes Dash and Engine Cover Insulators

: CONSOLE, OVERHEAD Molded Plastic; With Dual Storage Pockets with Retainer Nets, CB Radio Pocket, Speakers, and Reading Lights

: COURTESY LIGHT Two (2) Mounted In Front Map Pocket Left and Right Side

: DOOR TRIM PANELS with Cloth Insert on Bolster Driver and Passenger Doors

: FLOOR COVERING Rubber, Black

: GAUGE, TEMPERATURE, AMBIENT Includes Wiring and Sensor with Display Unit Mounted in Cluster

: HEADLINER Soft Padded Cloth

: INSTRUMENT PANEL TRIM Molded Plastic with Black Center Section

: STORAGE POCKET, DOOR (2) Molded Plastic (Carpet Texture), Full-Length; Driver and Passenger Doors

: SUN VISOR Three (3) Padded Vinyl: Two (2) Moveable (Front-to-Side) Primary Visors, Driver Side with Vanity Mirror and Toll Ticket Strap, plus 1 Auxiliary Visor (Front Only), Driver Side

**LOW WASHER FLUID INDICATOR:**

**WHEEL, SPARE, DISC:** {Accuride 50180} 19.5x6.75 Rims, Powder Coat Steel, 4-Hand Hole, 8-Stud, 275mm BC, Hub-Piloted



**WHEELS, FRONT** {Accuride} DISC; 19.5x7.50 Rims, Polished Aluminum; 8-Stud, 275mm BC, Hub-Piloted, Flanged Nut, with Steel Hubs

Notes

- : Aluminum Wheels not Painted or Coated
- : Compatible Tire Sizes: 245/70R19.5, 265/70R19.5

**WHEELS, REAR:** {Accuride} DUAL DISC; 19.5x7.50 Rims, Polished Aluminum Outer Wheel; Steel Inner Wheel with 6.75DC Rim, 8-Stud, 275mm BC, Hub-Piloted, Flanged Nut, with Steel Hubs

Notes

- : Aluminum Wheels not Painted or Coated
- : Compatible Tire Sizes: 245/70R19.5, 265/70R19.5

**TIRE, SPARE:** Equal to Model Standard

**WHEEL SEALS, FRONT:** {International} Oil-Lubricated Wheel Bearings

**Services Section:**

**WARRANTY:** Standard for Durastar 1000/4000 Series, Effective with Vehicles Built January 2, 2015 or Later, CTS-2475P

**EXTENDED WARRANTY REQUIRED:** Ten (10) Year, 200,000 Mile Major Components, Navistar Policy #359096.

**MODIFICATIONS:**

- : EXTEND PASSENGER SIDE EXHAUST TO EXIT IN FRONT OF REAR DRIVE TIRES ON DRIVER'S SIDE (CROSSOVER)
- : DEACTIVATE AUTO DOOR LOCKS.
- : RELOCATE AIR DRYER TO INSIDE OF FRAME RAIL
- : INSTALL DUAL STUTTERTONE HORNS MOUNTED ON HOOD WITH CENTER LANYARD AND STEERING WHEEL SWITCH
- : SUPPLY AND INSTALL LIQUID SPRING SUSPENSION

**DESIRED VEHICLE DIMENSIONS**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

- Overall Height: 113"
- Overall Length: 290"
- Overall Width: 99" (excluding mirrors)
- Interior Headroom: 75"
- Module Length: 170"

**EXTERIOR, ALUMINUM BODY CONSTRUCTION**

**FRAMES:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

The module body must consist of an electric welded, unitized aluminum roll cage structure throughout. The framework must consist of six individual frames that are constructed in such a manner to insure squareness and flatness before being assembled into a box configuration.

**MATERIAL:** Bidder Complies YES  NO

All material used on any frame member, corner and upper cove must be high strength aluminum alloy. This alloy must be 6061-T6 with tensile strength of 45,000 psi. The use of lesser materials such as 6063 is not allowed due to its lesser mechanical properties. The ultimate strength of 6061-T6 is approximately 25% greater than 6063 alloy. Material certifications showing 6061-T6 alloy must be provided upon request to verify the use of this material for all frame members.

**WELDING:** Bidder Complies YES   
NO

All welding done on any part of the frame structure must be done by welders tested in welding this alloy and type of structure. Welders testing certifications must be provided upon request. All butt welds must have 100% weld penetration using a filler wire approved for this alloy aluminum. All welding must be done in accordance with American Welding Society (AWS), Structural Welding Code.

**FLOOR FRAME:** Bidder Complies YES  NO

The main floor structure must consist of a primary load bearing support frame. This primary frame must consist of 2"x3"x.250" square wall tubular aluminum. This primary frame is of critical importance to the structural integrity of the module. The use of channel sections or frame members less than 2" x 3" x .125" is not acceptable due to its moment of inertia and section modulus calculations are less than minimum acceptable. The secondary support frames of the floor frames must consist of 2"x 2" x .250" (square) and 1 1/2" x 2" x .125" (rectangular) wall tubular aluminum. Areas between exterior compartments and sub-floor support members must be a minimum of 2"x 2" x .250 (square). A heat shield made of 22 GA galvanized steel is attached to the underside of the Floor Frame. The shield is creased for stiffness and deflects the heat of the exhaust from the modular body.

**VERTICAL FRAMES:**

**FRAMES, Left and Right Sides:** Bidder Complies YES  NO

The vertical left and right side frames must consist of heavy duty custom aluminum extrusion members. The vertical corner and horizontal upper "Main Beam" must consist of an extrusion with the minimum dimensions of 5 3/4 by 3 7/8 inches with a cross section across the web of .1875 inches. Built into the inside edge of the vertical and horizontal section must be an area where the exterior door seal must mate. This door jamb area must be designed into, and be part of the main corner extrusion. Door jamb sections which are welded in place are unacceptable due to the possibility of the welds cracking which in turn leads to door and or exterior paint cracking and failure. The inside door jamb which is part of the structural member (not a welded section)

must have minimum dimensions of 1 inch wide by 1 1/4 inches deep and have minimum side vertical wall thicknesses of .1875 inches. This door seal and jamb section must be recessed behind the exterior surface of the body approximately 7/8 of an inch to allow the door seal to be placed outboard of the door latches and provide for a full uninterrupted hollow core door seal mounted on every door. Each door of the vehicle must seal on this integrated section of the extrusion. The outer exterior mounted finish trim must be sealed to the body during fabrication. The sealant used must be a high strength automotive product which can be painted. All parts which utilize sealant must not be structural members but just trim sections. The FMVSS 206 Rated door closure bolt must be mounted directly to this structural member and not to a welded door jamb section. Door alignment must be maintained by discrete alignment grooves extruded in the custom shape. This designed in feature eliminates the need for excessive adjustment allowance which could become maintenance issues at some future time. The area of the structural member which is in contact with the roof box beams must incorporate a 1/2 inch flange to carry the load of the roof structure and resulting static load when applied. This support flange is utilized to prevent the need for the roof and roof structure to be held in place by the welds only.

The main support, structural members around the door openings must incorporate a built in door seal and jamb surface similar to the one found around the main corner extrusion, with all the strength and design features the same. Two distinctly different types of structural members must be used for different types of door configurations. Doors which are placed in the modular body which are not adjacent to any other door must utilize an extrusion with the overall dimensions of 3 inches wide by 2 inches deep. This extrusion must form the two vertical and two horizontal door seal, and jamb surfaces. Doors of this type which are placed on the forward most or rear most positions of the body, must utilize the main corner extrusion with its built in door seal to act as one side of the structural door seal and jamb surface. For the same reason a door which extends the full height of the modular body must utilize the upper most main corner extrusion for the top horizontal door seal and jamb surface. Door configurations which have two doors adjacent to one another must utilize a structural body extrusion with minimum dimensions of 4 inches wide by 2 inches deep. Between each door must be a minimum of a 2 inch structural wall and floor support. Under no circumstances must two adjacent compartments not include this 2 inch structural member. Similar to previous door structural extrusions this member must incorporate two built in door sealing surfaces without the need for welding additional parts as stated previously.

The remaining structural members of the vertical side frames must utilize 2 inch by 2 inch by .125 inch thick wall and 1 1/2 inch by 2 inch by .125 inch thick wall structural box beam members. All members of the side vertical frames must be placed at a maximum of 12 inches on center. Closer spacing must be utilized in areas of critical strength requirements. Along the floor line, must be 2 inch by 2 inch by .1875 inch structural angle attached to the side frame, which then during assembly into a module must be fully welded to the floor frame. These members must act as the main attachment point for the side frames, where the vertical frames meet the floor frame, and at this point of attachment full welds must be utilized.

**VERTICAL FRAMES, Front and Rear:**

**Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_**

The front and rear frames must be fabricated utilizing the same main structural corner extrusion as the side vertical frame along the horizontal top edge. The remaining structural members of this frame must utilize 2 inch by 2 inch and 2 inch by 1 1/2 inch by .125 inch structural box beam members. These structural members must be placed on a minimum of 20 inches on center. A closer spacing must be utilized in areas of critical strength. Rear facing door openings must utilize custom aluminum extrusions in place of box beam members as required. The door openings must be exactly as specified for the doors located on the vertical side frames as described previously.

**ROOF FRAME:** Bidder Complies YES  NO

The roof frame of the vehicle must be fabricated from 2 inch by 1 1/2 inch by .125 inch box beam structural members. The transverse frame members must be spaced a maximum of 12 inches on center.

**MODULE ASSEMBLY:** Bidder Complies YES  NO

The six frames as previously stated must be assembled into a module, including the floor, front, rear, two sides and roof sub frame before any of the exterior skin is applied. The structural frame work must be a self-supporting body and not require the use of the exterior skin for structural integrity. The framed body, without the skin must be capable of supporting the required static load of the vehicle per A.M.D. 001 specifications.

The floor frame must be welded to the two vertical side frames at the area of the floor, in front and behind the wheel box area. This welding must be 100% continuous in these areas. The full perimeter welding and center bonding of the exterior panels must enhance the overall strength of the modular body.

## **SIDE IMPACT PROTECTION**

**BODY PROTECTION** Bidder Complies YES  NO

Per Federal Motor Vehicle Safety standards, the vehicle must be designed to protect the occupants or equipment from side impacts. This must be accomplished by: (a) Two side impact rails with minimum dimensions of, 2 inch by 5 inch by .125 inch 6061-T6 aluminum alloy, structural box beam member located approximately 24 inches from the lower side rail; and approximately 18 inches from the upper side (b) full structural members which extend across the body in the transverse direction between the compartments. Modular bodies that do not provide this protection at each compartment location must be cause for rejection of the vehicle.

**MODULAR BODY DOOR PROTECTION** Bidder Complies YES  NO

In addition to the vertical body sides, each door with a vertical height greater than 30 inches, on the left and right sides of the vehicle must incorporate a 2 inch by 5 inch by .125 inch 6061-T6 aluminum alloy, structural box beam members. Each member must be welded to the interior door

extrusions. The structural members must be placed approximately 24 inches from the lower side rail. There must be no exceptions to side impact protection in modular body doors.

**EXTERIOR PANELS:** Bidder Complies YES \_\_\_\_\_  
NO \_\_\_\_\_

The two sides, front and rear must be covered with .125" thick 5052-H34 stretcher leveled aluminum alloy sheet with tensile strength of 38,000 psi. The center areas of the sheets must be applied using "Very High Bond" structural bonding tape. Before any tape is applied to the structure, both the sheets and the structure must be thoroughly cleaned with an approved solvent. In addition to the structural bonding tape the exterior skin must be welded along the perimeter corners and along all door openings. This welding is only done in areas that will not show dimple on the finished body module. The side panels of the vehicle must be single piece and not welded or fabricated. Additional welding must be done at the lower rub rail area where the body exterior panels meet the lower structural support members. This welding is done to completely bond the exterior panel to the substructure in an area where weld dimples will not show on the finished vehicle.

**ROOF SHEET:** Bidder Complies YES \_\_\_\_\_  
NO \_\_\_\_\_

The roof sheet must be a one piece sheet of .125" 5052-H34 aluminum. There must be no seams in the roof panel or any overlapping seams. The roof sheet must be fully welded to the roof sub frame from the inside. The outside perimeter of the roof sheet where it meets the upper cove must be 100% welded prior to painting. This 100% welding eliminates the need for caulks or sealers and the possibilities of water leaks into the body.

**CORNER AND ROOF CORNER EXTRUSIONS:** Bidder Complies YES \_\_\_\_\_  
NO \_\_\_\_\_

The exterior body corners and coves must be an extruded aluminum section made of 6061-T6 aluminum. Both the corners and roof corner extrusions must have a 1 5/8" radius hollow extrusion design with an inside flat mating surface. The exterior surface must be designed to form a smooth transition at all corners of the body. The corners must be designed in such a way as to provide an interlocking surface with the "Main Beam" extrusion. This surface contact must provide a weld surface to attach the corners to the main beam. The process of attachment must include threaded mechanical fasteners to pull the two surfaces tight prior to the welding. This provides a completely tight interface surface. To enhance the corner waterproof integrity a recessed sealant groove must be incorporated into the exterior flanged surface which is in contact with the body and roof exterior panels. This groove allows the surfaces to be sealed to prevent water infiltration and prevent corrosion. The corners must be designed so they are NOT a structural component of the body, but means to provide a smooth exterior transition and water tight surface. NO EXCEPTIONS. Designs which include an integral exterior corner surface/structural member are unacceptable.

**CORNER CASTINGS:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The upper four corners of the module must have a cast aluminum ball corner that matches the radius of the corner extrusions. This ball corner must be completely 100% welded in place to pre-vent water leaks and finished to have a smooth transition at the corner.

**EQUIPMENT MOUNTING LOCATIONS & REINFORCEMENTS:**                      **Bidder Complies**    **YES**\_\_\_\_ **NO**\_\_\_\_

Areas within the body that have equipment mounted or items bolted must have additional structural-al members welded in place. The areas are as follows:

1. A .250" thick 1.25" by 2.5" structural angle to mount squad bench and seat belt restraints must be installed on the side interior walls, including left side attendant seat. The entire assembly must be tested and certified to F.M.V.S.S 210. Documentation must be provided upon request.
2. Cot mounts must be mounted/bolted to structural members welded within the floor structure. Cot mounts must be tested and meet A.M.D. Standard A.M.D-004. Documentation must be provided upon request.
3. Rear facing attendant seat pedestal must be mounted to a reinforced structural channel members between the frame members of the floor structure. The entire assembly must be tested and certified to F.M.V.S.S. 210. Documentation must be provided upon request.
4. The oxygen bottle retention bracket must be bolted to a reinforcing structure within the storage compartment. Under No Circumstances must an oxygen bottle be secured to interior cabinets only, they must always be bolted to a structural member of the module body. The entire assembly must be tested to A.M.D-003.
5. Reinforcing plates for ceiling dome lights must be installed between the roof frame members.
6. Double laminated reinforcing plates must be installed in the front body frame for added strength in the areas where the body is bolted to the cab, in addition to structural angles in the front frame above the cab roof.

**WHEEL WELL CONSTRUCTION:**                      **Bidder Complies**    **YES**\_\_\_\_ **NO**\_\_\_\_

The rear wheel well housings must be designed to OEM manufacturers recommended clearances. The inner well must be formed to follow the contours of the wheel and be fabricated from .125 aluminum sheet, and extend down to the lower body skirt level. Tolerances must include clearance for full tire chains. All wheel well housings must be completely sealed and undercoated prior to mounting the body.

**LIFETIME STRUCTURAL WARRANTY**                      **Bidder Complies**    **YES**\_\_\_\_ **NO**\_\_\_\_

Manufacturer will warranty to original purchaser that the new emergency vehicle body (exclusive of paint finish) is structurally sound and free from all structural defects of both

material and workmanship, and further warrants that it will maintain such structural integrity for the life for the body. Warranty transferable subject to inspection by manufacturer. Bidder must include statement of warranty policy with bid.

**FINITE ELEMENT ANALYSIS** Bidder Complies YES \_\_\_\_\_  
NO \_\_\_\_\_

The Manufacturer must certify that a Finite Element Analysis, using Solid Works Simulation, has been successfully performed to simulate side impact crash testing to the ambulance body. Loading must conform to the Code of Federal Regulations, Title 49, Section 571.208, Section 8.2.2, Section 8.3.5, and Section 8.3.6. The analysis must show that the ambulance body will not experience a localized displacement of greater than 3 inches in critical areas. Documented proof of the analysis must be provided at the time of the bid submission. Detailed specifications and the results of FEA must be provided upon request. This analysis must be in addition to certification of conformance to KKK-A-1822, revision F.

**EXTERIOR COMPARTMENT CONSTRUCTION:** Bidder Complies YES \_\_\_\_\_  
NO \_\_\_\_\_

The exterior compartments must be fabricated from fully enclosed aluminum sheets. The floor and ceiling material must be fabricated from .125" aluminum sheets. Each compartment must be its own independent unit with two sides, rear, top and bottom, and not share a common wall with an adjoining compartment. All vertical seams of the compartment must be continuous one piece bend or 100% welded construction. Overlapping caulked vertical seams are unacceptable. Each compartment unit must be welded to the inside of the structural door jamb. All compartments must incorporate a flush sweep out design. No compartment floor lips or door gaskets must come above or protrude into the compartment opening at all.

**EXTERIOR COMPARTMENT FINISH:** Bidder Complies YES \_\_\_\_\_  
NO \_\_\_\_\_

The rear and two side walls of the interior surface of the exterior compartments must be fabricated from 100% welded, .080" polished aluminum diamond plate panels.

**EXTERIOR COMPARTMENT SHELVES:** Bidder Complies YES \_\_\_\_\_  
NO \_\_\_\_\_

All shelves as specified in exterior compartments must be fabricated from .125" formed aluminum diamond plate with a 1" flange bent up on both the front and rear of the shelf. The shelf must be mounted to heavy duty UNISTRUT shelving standards to allow for full adjustment. The front edge of the shelf must be finished with a Trim-Lock snap on vinyl edging.

**CAB TO BODY PASS-THRU:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

A cab to body pass-thru window must be installed in the front of the body and rear of cab. In the front of the body the module framework must be positioned to allow for a minimum opening of

18" wide x 18" high. The opening must have a full perimeter 5/8" flange on the body side with 2" radius in the corners. The rear of the cab must be modified by adding a flange to the rear glass center framework section. The frame flange must have a matching 5/8" flange to align with the opening in the body and provide approximately a 1 3/4" gap between the cab and body for flexing. Attached to the flange must be an automotive quality EPDM rubber bellows material with steel spring carrier attachments completely sealed at the seam. The seal must be semi-permanent and removable if required at some future time.

**BODY MOUNTING RUBBER DONUTS:** Bidder Complies YES \_\_\_\_\_  
NO \_\_\_\_\_

The modular ambulance body must be mounted to the chassis in such a manner to facilitate easy removal for future remounting with other manufacturer's vehicle chassis having the cab to axle dimensions. Mounting devices must be ten (10) high strength 5/8" Grade 8 bolts five (5) on each side. Such bolts must secure the body to the frame via rubber isolation mounting donuts. The rubber donuts must be mounted to the frame rail of the chassis utilizing steel outriggers secured to the frame with two (2) grade 8 bolts on the side and one (1) through the donut.

Outriggers are fabricated from ASTM A36 3/8" steel plate with 1/4" steel gussets for maximum strength. Mounting surface for the donut has a reinforced thickness of 7/8". ASTM A36 Steel Plate has a Tensile strength of 58000 to 80000 PSI, and a Yield strength 36000 PSI minimum – which is equal to the Chassis frame specifications.

A full length 2" x 5" x 1/4" mounting channel is attached with Grade 8 bolts through the donut. Body floor frame is fully welded to the mounting channel at all cross members. Floor frame tubes are a minimum of 2" x 2" x .250 (1/4") tubular aluminum 6061T6. THIS MOUNTING SYSTEM MEETS OR EXCEEDS ALL FMVSS REQUIREMENTS.

**LOWERED SIDE SKIRTS:** Bidder Complies YES \_\_\_\_\_  
NO \_\_\_\_\_

The right and left side skirts of the body, forward of the rear wheels, must be 3" lower than the right and left skirts aft of the rear wheels. This is to allow easier access into the side entrance door and the left side forward compartment of the vehicle.

**STEPWELL COMPARTMENT/  
INTERMEDIATE STEP:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

Inside the side entrance door must be a recessed step well compartment. The compartment must extend into the body approximately 20 7/8" and be the full width of the side entrance door. An intermediate step must be fabricated as part of the step well area. This intermediate step must be an 8 1/2" step from the floor of the step well, and the actual floor of the ambulance must be another 8 1/2" step.

The vertical sides of the compartment must be fabricated from .080 polished aluminum diamond plate. The floor must include non-skid turtle tile, removable with a drain/sweep out plug for ease



of cleaning. The intermediate step must also be provided with the same non-skid turtle tile on the horizontal stepping surface. Aluminum diamond plate on the floor is unacceptable due to the slippery surface when wet.

The Stepwell compartment must also provide for recessed storage with access from the side entrance door. The stepwell area must be integrated into the head of the squad bench resulting in a diamond plate recessed storage area with approximate dimensions of 5" d x 12" w x 24" high. The intermediate step must be fabricated with a 45 degree angle to allow for easy placement and removal of the portable oxygen cylinders stored in the recessed area.

The sub-floor of the compartment must be fabricated from 3/16" aluminum plate to provide a heavy duty walk surface which will not flex under foot. The upper edge where the step well meets the flooring material must include non-slip polished aluminum threshold trim which is screwed in place.

**DOOR CONSTRUCTION:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

All doors including personnel and compartment doors must be constructed of a custom designed extrusion made of 6061-T6 aluminum alloy, used in combination with a "Bent Box Pan" exterior door panel. ~~The bent exterior door panel must be fabricated from .125" 5052-H34 aluminum alloy panels that have the exact properties and quality as the exterior side panels.~~ Each door pan must be manufactured with a 3/4" sharp inside corner bend to minimize outside bend radius. The custom extrusion must be 45 degree miter cut and fit into the 3/4" recessed area of the pan. An epoxy seal must be applied between the door pan and the extrusion to seal each door in addition to 100% welding on the outside corners of the door pan. The door must have an overall dimension of 2 1/2", with the primary door seal being mounted to the door at the 3/4" dimension of the door exterior pan. The door latching hardware must be mounted inboard of the seal in all cases. The door must have gussets welded from the inside and must be reinforced in areas where windows are to be installed and for areas where heavy objects might be hung from them.

The door extrusion must be designed in such a way to provide two surface grooves which are used for proper alignment of the door hardware concealed within the door. The grooves must be used for proper in-out placement of the hardware so that proper alignment is always maintained. All slots and cutouts required for the rotary latches must be machined or stamped prior to the construction of the door. Door configurations requiring double doors, must utilize a structural member attached to the adjoining edge of the second opening door. This structural member must match the seal surface of the door jambs on the balance of the door opening. This member must be welded in place and be a permanent member of the door. Add-on or bolted double door dividers are unacceptable.

**DOOR SEALS:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The door must incorporate a continuous seal permanently attached around the entire perimeter of the door. Automotive latching hardware must not interrupt the seal surface. The seal must be a custom designed hollow core seal specifically designed for hinged doors. It must be a "Dynamic"

type seal with vent holes on the outside edge to allow for easier closing of door against seal. Flat open or closed cell solid rubber "Static" seals are not acceptable for hinged doors.

**DOOR HINGES:** Bidder Complies YES  NO

Each door must be hung with stainless steel continuous hinges. The hinge must have a 1/4" pin which is staked every six (6) inches to prevent the pin from sliding. The hinges must be held to the door and to the body using 1/4-20 stainless steel threaded machine fasteners every, 4" on both sides, use of rivets on hinges is not acceptable. All hinges installed on the body must include a closed cell foam barrier between the dissimilar stainless steel hinge surface and the painted aluminum body. A close cell gasket must be added between hinge and body to seal any gaps caused by securing the hinge.

**DOOR LATCH HARDWARE:** Bidder Complies YES  NO

Every door must utilize an automotive type rotary slam latch. All doors used for personnel access must utilize two latches; one located on the top of the door the other at the bottom. All compartment doors taller than 70" must utilize two latches; one located on the top of the door and the other at the bottom. Single point hardware for this type or any other type of door hardware is unacceptable. The latches must meet FMVSS 206 standard and must not be modified in any way to jeopardize its integrity. Latch pins without heads intact must be cause for immediate rejection of vehicle.

All rotary slam latches must be activated by adjustable steel rods. Cable activated rotary latches are unacceptable. All door hardware and rod assemblies must be designed to minimize hardware rattle.

Compartments that require double opening doors must incorporate two (2) point latches on first closing door in addition to second closing door. The latches must be activated by a handle in **each** compartment door on the exterior which matches the other exterior handles on the vehicle.

All door hardware, including rods and latches, must be concealed within the inner door panel. Doors with any exposed latching hardware are unacceptable. All door systems, including latches, hinges and body/door components must be tested and certified to meet AMD-002. Test documentation must be provided upon request.

**ANODIZED ALUMINUM DRIP MOLDINGS:** Bidder Complies YES   
NO

Anodized extruded aluminum drip moldings must be provided above all exterior compartment and entrance doors. The moldings must be attached without the use of unsightly screws and must be easily replaceable if damaged. This molding must direct excess water away from the compartment and entrance door opening.

**COMPARTMENT DOOR BUMPERS:** Bidder Complies YES   
NO

Heavy duty tape on type rubber (Styrene butadiene rubber, SBR) bumpers must be installed on all compartments that may come in contact with one another.

**LOCKTITE/FASTENERS:**

**Bidder Complies** YES \_\_\_\_\_  
NO \_\_\_\_\_

All exterior door hinge bolts, inner door panels on both compartment and entrance door panel, and door latching bolts must be installed with the use of Locktite thread locking material.

**TRIMARK POWER LOCKING  
ENTRANCE DOOR HANDLES:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

The right side and right and left rear entrance doors must incorporate a Trimark automotive style paddle handle. This handle must activate an F.M.V.S.S. approved rotary style automotive door latch, two latches per door. Single point door latches for entrance doors are unacceptable. The exterior handle must have chrome housing and chrome release paddle. There must be no mounting hardware exposed to the outside for security reasons. The inside handles on all entrance doors including the left rear door, must be a matching automotive design, flush paddle release type designed specifically for use with this system. Door hardware must incorporate a rod activated power door locking system. This system must be used in at least 100 Ambulances in service. Prototype systems are unacceptable. All rods used for interior door release mechanisms must incorporate anti-rattle devices to prevent door hardware noise.

All entrance doors must incorporate a power locking unlocking feature. The control of the power door locks must be from a switch located on the driver's console. All handles must have key activated override of power locking feature.

**TRIMARK POWER LOCKING  
COMPARTMENT DOOR HANDLES:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

All compartment doors must incorporate automotive style paddle handles. This handle must activate an F.M.V.S.S. approved rotary style automotive door latch. The exterior handle must have chrome housing and chrome release paddle. There must be No mounting hardware exposed to the outside for security reasons. Door hardware must incorporate a rod activated power door locking system. This system must be use in at least 100 Ambulances in service. Prototype systems are unacceptable. NO EXCEPTIONS

All compartment doors must incorporate a power locking - unlocking feature. The control of the door locks must be from a switch located on the driver's console. All handles must have key activated override of power locking feature.

**GAS SPRING DOOR HOLDERS:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

All hinged compartment doors and right side entrance door must incorporate a pneumatic gas spring door holder. The mounting bracket, piston end for the door side, must be secured to the

1/4" gusset within the door. The door holder gas spring end must be attached to compartment ceiling. The gas spring must be installed with a 10 degree pitch downward to improve function and extend life of gas spring.

**ALL COMPARTMENT DOORS TO CHECK Bidder Complies YES\_\_\_ NO\_\_\_**  
**PAST 90 DEGREES**

The Gas spring door checks on all standard compartments must be set beyond the standard 90 degree, open default position to allow easier access into the compartments.

**REAR ENTRANCE DOOR HOLDER, Bidder Complies YES\_\_\_ NO\_\_\_**  
**"GRABBER":**

The rear entrance doors must incorporate a Polished Aluminum Cast Products Grabber door holder device. This device must hold the door at approximately 170 degrees. The door holders must be securely bolted to the vehicle substructure of the body, and at the bottom of the rear doors..

## **COMPARTMENTS**

**COMPARTMENT "A" Bidder Complies YES\_\_\_ NO\_\_\_**

Left front compartment with the dimensions of 20w x 86h x 21.75d.

**COMPARTMENT "B" Bidder Complies YES\_\_\_ NO\_\_\_**

Left side half high compartment with dimensions of 40w x 42h x 21.75d.

**COMPARTMENT "C" Bidder Complies YES\_\_\_ NO\_\_\_**

Left rear half high compartment with dimensions of 36w x 39h x 21.75d.

**COMPARTMENT "D": Bidder Complies YES\_\_\_ NO\_\_\_**

Right front inside/outside storage compartment, with the width and height dimensions of 20w x 63h. Above the vehicle floor level, access must be from either the exterior or the interior of the vehicle with a depth of 33". Below floor level must be outside only access, of the lower compartment with a depth of 14".

**COMPARTMENT "E" Bidder Complies YES\_\_\_ NO\_\_\_**

Right rear compartment with the dimensions 24w x 83h x 21.75d. The compartment must provide inside outside access from the center isle of the vehicle.

**COMPARTMENT DOOR PANELS:** Bidder Complies YES \_\_\_ NO \_\_\_

Interior door panels on compartment doors must be made of .100" polished aluminum diamond plate held on with threaded fasteners that provide access for repairs or replacement of hardware.

**STAINLESS STEEL DOOR SILL PROTECTION PLATES:** Bidder Complies YES \_\_\_ NO \_\_\_

Heavy duty stainless steel protection plates must be installed on the lower edge of all entrance and compartment door openings. The plates must be a formed polished stainless steel angle with dimensions of 1/2" x 1", by full width of the door opening. The angle plates must be permanently mounted without the use of screws and be removable for replacement if necessary. All edges must be filed and deburred for a finished appearance.

**COMPARTMENT VENTING:** Bidder Complies YES \_\_\_ NO \_\_\_

The exterior compartments must be vented to the exterior of the vehicle. The vents must be located in the lower portion of the compartments. Vents are installed to allow air to escape and allow the compartment door to close with ease. -The vents are added to an area above floor level to prevent road debris from entering the compartment. The vents must have a total of 25 square inches.

**DRI-DEK FLOOR MATTING:** Bidder Complies YES \_\_\_ NO \_\_\_

Dri-Dek material must be installed on all floors of the exterior compartments. The Dri-Dek must be custom cut to fit around oxygen bottles and mounted equipment. The flush sweep-out floor edges must include the Dri-Dek tapered edges.

**RUBBER MATTING SHELVES:** Bidder Complies YES \_\_\_ NO \_\_\_

A .125" rubber mat material must be installed on all shelves of the exterior compartments. The rubber matting material must be custom cut to fit each compartment shelf.  
Turtle Tile Non-skid Stepwell Mat (removable)

**SIDE ENTRANCE DOOR STEPWELL:** Bidder Complies YES \_\_\_ NO \_\_\_

The floor of the step well compartment must be lined with nonskid Turtle Tile mat. The mat must be removable for ease of cleaning.

**ADJUSTABLE SHELF EXTERIOR COMPARTMENT "A":** Bidder Complies YES \_\_\_ NO \_\_\_

An adjustable shelf must be added to the left front exterior compartment. The shelf must be mounted on four sections of aluminum Unistrut, and be fully adjustable. An LED light fixture must be installed under the shelf. The compartment light must be controlled by an automatic door post switch in the door. The compartment open indication light must activate anytime any compartment door is opened. The door post switch must activate the compartment lighting relays. The door post switch must not carry the current of the compartment lights.

**VERTICAL DIVIDER:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

Compartment "B" must be equipped with a full height divider. The divider must be fabricated from a 0.125" aluminum panel with flanges on top and bottom and back edge for better attachment to the compartment. Dividers must have a brushed aluminum finish.

**ADJUSTABLE SHELVES (2) AND A FIXED DIVIDER:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

Compartment "C" must contain two (2) vertically adjustable aluminum diamond plate shelves that will be mounted on Unistrut shelving standards, and attached to a full-height fixed divider located 12" from the right wall. Within this 12" space, there must be a trash container, and a flap from within the ambulance so refuse may be discarded.

**FULL HEIGHT DIVIDER W/(3) ADJUSTABLE SHELVES:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

Compartment "E" must be equipped with a full height divider 12" off front wall, with one side for long equipment storage and three 10.25" adjustable shelves on the other side of the divider. The divider must be fabricated from a 0.125" aluminum panel with flanges on top and bottom and back edge for better attachment to the compartment. Dividers will be finished off with a "Powder Coat" paint process. The shelves must be mounted on four sections of aluminum Unistrut, and be fully adjustable.

**BACKBOARD MOUNTS:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The right rear full height compartment must be provided with (2) black rubber friction mounts for securing two (2) backboards. The mount must be fabricated from an "L" shaped (45"h x 16"d) 3" aluminum channel. The channel will be bolted to the interior compartment. The rubber friction mount must be press fitted onto each side of the 3" channel, full length. Proper spacing must be provided to allow for Long Boards with runners.

**MOUNTING HANGER FOR SCOOP STRETCHER:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The right rear full height compartment must be provided with a rubber coated "Ferno EXL" Scoop hanger for hanging of a Ferno #65 Scoop Stretcher or Ferno #65 EXL Scoop Stretcher.

**SCBA MOUNTING, CORNER BRACKETS:** Bidder Complies YES \_\_\_ NO \_\_\_

Compartment "B" must be equipped with factory supplied ZICO angle mount, mounted in the inside corners of the compartment to accept SCBA brackets.

**REAR STEP BUMPER:** Bidder Complies YES \_\_\_ NO \_\_\_

A full length reinforced rear bumper must be installed on the rear of vehicle. The bumper must be fabricated from 3" aluminum 6061-T6 structural channel and securely bolted to the vehicle frame using high strength, grade 8, 1/2" bolts. The bumper must have contoured ends and be covered with polished aluminum diamond plate end caps. In addition, two full end gussets must be provided to support the bumper ends in the event of minor impact. The gussets must be fabricated from 3" x 2" x 1/4" structural aluminum tube 6061-T6. No exceptions to size of gussets.

The bumper must incorporate a design that allows it to be recessed under the rear of the body. Any rear bumper design that does not have a recessed design must be unacceptable. The under body recessed bumper design allows the chassis frame to absorb minor impact without any damage to ambulance body.

**LIFT-UP REAR STEP;  
RECESSED STEP RISER:** Bidder Complies YES \_\_\_ NO \_\_\_

The rear step bumper must incorporate a 44" long by 9 1/2" deep, lift-up center section made of extruded aluminum, "Diamond Back" safety grating. The step must hinge on a full length stainless steel piano hinge. Note: When the step is in the load position the step must be totally within the exterior of the body and must not protrude beyond the door sill.

**DOCK BUMPERS:** Bidder Complies YES \_\_\_ NO \_\_\_

Two (2) Heavy duty black rubber dock bumpers must be installed on the rear bumper ends, (1) each side. The bumpers must be 2" high, 10" long and protrude 2" outward from rear bumper. The dock bumpers must be bolted to the structural channel of the rear step bumper.

#### **ALUMINUM DIAMOND PLATE ACCESSORIES**

**FRONT STONE GUARDS:** Bidder Complies YES \_\_\_ NO \_\_\_

High polished .100 aluminum diamond plate stone guards must be installed on the front body corners. The guards must be one piece & contoured to fit the 1 5/8" outside radius of the body. The stone guards must be removable for repair in event of damage. The edges of the diamond plate panels must be sealed with a closed cell gasket around the perimeter, to prevent moisture from getting behind panels. All panels must be removal if required.

**RUB RAILS, "C" CHANNEL:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

"C" Shaped rub rails must be installed on the lower body skirt panels under the door line with open Flanges pointing away from the body. The rub rails must be Custom Aluminum Channel. The ends must be chamfered and all sharp edges sanded. The aluminum must be protected with an anodized Bright-Dip finish. The rub rails must be attached to the body with .625 deep rubber spacers that hold the channel off the body. This spaced design prevents debris from accumulating between the Rub Rails and the painted body. Designs that are not offset from the body are unacceptable due to their tendency to accumulate debris. The rub rails must span the left and right side of the ambulance body on either side of the rear wheel opening.

**DIAMOND PLATE FUEL TANK COVER AND STEP: Bidder Complies YES \_\_\_ NO \_\_\_**

The driver side fuel tank must be covered with a custom fitted, polish aluminum diamond plate cover. The cover must be bolted on, and be easily removable for access to fuel delivery and sending unit components. The tank must include an upper and lower aluminum grip strut helper step built into the diamond plate cover. All seams and corners must be 100% Heliarc welded for strength and a finished appearance.

**DIAMOND PLATE FULL WIDTH STEP: Bidder Complies YES \_\_\_ NO \_\_\_**

The curb side Cab step must be a custom fitted, polish aluminum diamond plate cover, with built in grip strut steps. Lower portion is bolted on, and the upper portion will be a removable cover with two hand release catches for battery access. All seams and corners must be 100% Heliarc welded for strength and a finished appearance.

**REAR DIAMOND PLATE PANEL & CORNER GUARDS: Bidder Complies YES \_\_\_ NO \_\_\_**

A polished aluminum diamond plate kick panel must be installed above the rear step bumper and below the rear doors. The panel must overlap. The step riser panel must be removable.

Polished aluminum diamond plate panels must be installed on the rear body corners. Panels must extend to the rear step riser, and protect the lower area of the body around the rear recessed bumper step. The panel height must be approximately 4" in height.

**EXTERIOR TRIM**

**REAR WHEEL FENDERETTES, RUBBER: Bidder Complies YES \_\_\_ NO \_\_\_**



Heavy Duty Rubber, fenderettes must be installed around the rear wheel opening, sized to allow for proper tire clearance. The fenderettes must be bolted on for easy removal. All hardware must be concealed. Exposed mounting hardware is unacceptable.

**LICENSE PLATE HOLDER:** Bidder Complies YES  NO

A recessed Cast Products polished aluminum license plate holder must be installed in the left rear body panel of the ambulance. The housing must be installed with an EPDM 40 to 60 durometer rubber gasket. It must include (1) LED license plate light activated with the running / headlights of the vehicle.

**UNDERCOAT:** Bidder Complies YES  NO

The underside of the modular body, including frame members and compartment lower panels must be undercoated with AudioGuard® Acoustical Coating P8060. The material must be applied prior to the body being mounted to the chassis to ensure maximum coverage. Material application will be evenly sprayed to a minimum of 40 mils under body and 80-100 mils in the wheel box and stepwell areas.

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After the body has been mounted to the chassis 40 mils of AudioGuard® material will be applied under the cab and to the body aluminum sub floor with the exception of areas near the exhaust and other heat generating components per the guidelines of Ford QVM.

AUDIOGUARD® ACOUSTIC COATINGS P8060 is a one-component, waterborne, sprayable, coating designed to reduce structure-borne vibrations and associated sound transmission. The characteristics of the coating provide a tough material that can prevent chipping, cracking, or marring of painted or unpainted surfaces. The coating is useful wherever a reduction in airborne noise is desired.

## **EXTERIOR BODY WINDOWS**

**SLIDING SIDE DOOR WINDOW:** Bidder Complies YES  NO

A Transportation Products, Inc. 18"W x 22"H window must be installed in the side entrance door. It must have sliding, 31% tinted automotive safety glass and be mounted within an aluminum black anodized frame. The window must be completely sealed and held to the door via an inside clamp ring which matches the exterior of the window. The window must incorporate a sliding removable screen.

**FIXED REAR DOOR WINDOWS:** Bidder Complies YES  NO

Two (2) Transportation Products, Inc. 15"W x 22"H windows must be installed in the rear entrance doors. They must have fixed automotive 31% tinted safety glass and be mounted with an aluminum black anodized frame. The windows must be completely sealed and held to the door via an inside clamp ring, which matches the exterior of the window.

**RIGHT SIDE SLIDING BODY WINDOW: Bidder Complies YES \_\_\_ NO \_\_\_**

A Transportation Products, Inc. 45"W x 15"H window must be installed in the right side body panel above the interior squad bench. It must have sliding 31% tinted automotive safety glass and be mounted within an aluminum black anodized frame. The window must be completely sealed and held in the body via an inside clamp ring which matches the exterior of the window. The window must incorporate a sliding removable screen.

**INTERIOR MODULAR BODY CONSTRUCTION TYPE**

**STANDARD CABINET CONSTRUCTION: Bidder Complies YES \_\_\_ NO \_\_\_**

The interior cabinets of the vehicle must be completely constructed of 3/4" and 1/2" premium grade, cabinet birch plywood and in non-stress areas 1/4" plywood. Assembly of the cabinets must be with 1 1/4 inch #8 zinc screws through 1/2 inch plywood and 1 1/2 inch through 3/4 inch plywood. 1 1/4" staples are utilized for both applications. 3/4 inch staples are utilized for 1/4" plywood. The staples are spaced approximately 2 inches apart and the screws should be 6-8 inches apart. All wood to wood joints are glued. Each cabinet must include a reinforced attachment point where it is secured to the vehicle framework. All cabinets must be attached directly to the vehicle framework and all mounting bolts must be placed on a maximum of 12" centers for any cabinet.

All cabinets must be covered with AEON Enhanced Performance high pressure 1.35mm plastic laminate and trimmed with aluminum moldings for a finished appearance. Raw wood or unfinished edges of any kind including aluminum panels are unacceptable.

When a full height left front cabinet, full height right rear cabinet, or a full height cabinet in the right front exists in the vehicle, it will have rounded corners of radius 1.5" on the inboard vertical edges. The rounded corner will be constructed from two extrusions made from 6061-T6 aluminum. The interior extrusion is designed to attach two perpendicular sheets of furniture grade laminated plywood. The exterior or visible extrusion will be satin anodized and designed to snap into the interior extrusion, so that it may be replaced if damaged. If the full height left front cabinet, right rear cabinet, or full height cabinet in the right front have specific components preventing the cabinet from incorporating the rounded corner design it will have the edge of the cabinet finished with anodized aluminum three quarter round molding.

**WALLS: Bidder Complies YES \_\_\_ NO \_\_\_**

All walls of the vehicle must be fabricated using 1/4" plywood covered with color coordinated high pressure AEON enhanced performance plastic laminates. Walls must be attached to the body framework using threaded fasteners.

**ADJUSTABLE SHELVES: Bidder Complies YES \_\_\_ NO \_\_\_**

All adjustable shelves within the interior cabinets must be constructed from 1/2", high-density polyethylene material. The shelves will be mounted to Unistrut shelving standards. Each cabinet must be equipped with four adjustable standards for each cabinet and have (4) retaining clips for each shelf. The shelf will have 2 securing screws attached to retaining clips. The shelf must be the full width and depth of the cabinet and must include a 1" anodized aluminum angle on the shelf front edge, creating a full length 5/8" high retaining lip.

**HINGED DOORS:** Bidder Complies YES \_\_\_ NO \_\_\_

All hinged doors must be equipped with hinges and a locking Southco stainless steel positive latching device to prevent opening while in motion. All surfaces of the door including the edges must be finished to match the interior of the vehicle cabinets.

**WIRE RACEWAY:** Bidder Complies YES \_\_\_ NO \_\_\_

A full length drop down wire raceway must be installed down the center of the ceiling. It must be finished with 1/8" padded vinyl material to match the upholstery in the vehicle. Vehicles which utilize wire raceways above or behind interior cabinets are unacceptable.

**SOFFIT TRIM:** Bidder Complies YES \_\_\_ NO \_\_\_

A vinyl covered soffit trim piece must be installed around the perimeter of the interior cabinets where they meet the ceiling. This trim must be added to allow access to the cabinet mounting bolts and provide a finished transition between the ceiling and cabinet surfaces.

**CUSHION AND UPHOLSTERY FOAM PADDING:** Bidder Complies YES \_\_\_ NO \_\_\_

The foam padding on all head bumpers and upper padded surfaces must be a Volara 2A, closed cell foam which is laminated and layered to a 1/2" thickness, to provide both compression resistance and compression density. This laminated, closed cell foam creates a padded surface that acts as an air-spring when compressed. This specialty foam naturally resists force and will not "bottom out" upon impact and provides positive resistance to pressures applied in any dimension,

The foam padding on all side attendants, squad-bench seating and all seating backrests must be a 3" Nimbus open cell foam with a # 1865 grade standard, which provides maximum rigidity while still maintaining comfortable seating upon a variety of weight compression. This grade of open cell foam allows the air to escape the foam under compression, thus providing a comfortable seating surface. Also, the density of the foam does not allow the foam to "bottom out" upon compression. The foam types used have low water absorption and vapor transmission rating and excellent thermal insulation and chemical resistant properties

**ADDITIONAL FOAM PADDED SURFACES:** Bidder Complies YES \_\_\_ NO \_\_\_

A 1/8" thickness of Volara 2A closed cell foam must be applied to the radius area of the ceiling Heat and Air Conditioning duct work to provide a softer surface while enhancing the thermal properties of the heating and cooling system. The upholstered center section of the side and rear body entrance doors must also include the 1/8" Volara 2A closed cell foam to provide a uniform appearance and a softer surface with an increase in thermal resistance.

## **INSULATION**

**MODULAR BODY INSULATION:** Bidder Complies YES \_\_\_ NO \_\_\_

The entire inside surface of the modular body, including walls and ceiling, must be insulated with a minimum of 1.7" (44mm) thick, AU 6020-2 High Performance Acoustic Thinsulate. The thermal property of this insulation installation is R 9.1. The insulation must completely fill the voids between the frame members and the exterior skin. In addition to the modular body Thinsulate insulation, the interior surfaces of the rear wheel wells and the side and rear entrance door panels must be provided with an adhesive backed composite acoustical sound deadening material. This material is specifically designed for the reduction of transmitted sound in single skin aluminum panels and must not be substituted with other spray on products.

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**MODULAR BODY ENTRANCE DOOR INSULATION:** Bidder Complies YES \_\_\_ NO \_\_\_

All exterior patient compartment entrance doors must be sound deadened with a composite acoustical sound deadening material. The internal skin surface of the interior door must have this material bonded to it. The modular entrance doors must have an additional thermal insulation of 2" thick "Thinsulate" bonded in place with clearance provided for door hardware. Interior door panels are provided with vibration isolators for the internal rods connecting the door handles to the latching mechanisms.

**MODULAR BODY COMPARTMENT DOOR INSULATION:** Bidder Complies YES \_\_\_ NO \_\_\_

All exterior compartment doors must be insulated and sound deadened with a slow rise foam in place insulation material which has an R value of 6.2. The interior skin surface of the door must have this material sprayed and bonded to it. The use of fiberglass or undercoating type material is unacceptable in this exterior door application.

**FLOOR:** Bidder Complies YES \_\_\_ NO \_\_\_

The floor must consist of 3/4" Expanded PVC Polymer material. This material must have .016 lbs. per cu in density and be impervious to fluid intrusion. An aluminum sub-floor must be installed between the floor material and the floor frame members.

**FRONT BULKHEAD WALL**

**HEATER/AIR CONDITIONER  
CABINET:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

The Heater/Air Conditioner cabinet must be provided in the upper most area, centered above the cab to body pass-thru. This cabinet must be designed in such a way to allow for quick easy removal of Heater/Air Conditioner unit without the removal of any other equipment. The interior of the cabinet must be designed to allow fresh air intake from the front of the exterior body and exit to a closable vent located under the cabinet platform. The vent allows fresh air from the exterior of the vehicle to shut off in the summer months for maximum air conditioning performance. The lower platform must also allow adequate return air flow to the Heater/Air Conditioner unit. The air return must have a minimum air opening in the cabinet for two 6" by 10" filtered return grills.

**ELECTRICAL DISTRIBUTION  
CABINET:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

The Electrical Distribution Cabinet must be located on the front left wall of the body. The cabinet must be approximately 12 1/2" wide x 17" deep and run from the floor to the underside platform of the heater/air conditioner cabinet. The cabinet must have a dual removable access panels and a larger main cover, located on the right side of the cabinet. The main cover must be secured with four threaded fasteners. An access panel, within the main cover, must latch in the closed position by two flush mounted locking trigger latches. The size of the access panel must be approximately 11 1/4" wide by 24 3/4" high. A secondary removable access panel, on the front side of the cabinet, separate from the removable access cover, must provide access to the vehicle relays, and be secured with four threaded fasteners. The size of the relay access panel must be approximately 11" wide by 23 1/2" high. All the main wiring harnesses must terminate within this compartment. Cabinet must be provided adequate compartment ventilation. The cabinet cover and all access panels must be covered in heavy duty vinyl to match interior upholstery.

An LED light must be mounted on the ceiling of the electrical distribution cabinet. The light must have a switch on the flange. In addition, the light comes with a standard connector for easy maintenance.

**FRONT BULKHEAD INTERIOR  
STORAGE CABINET**

**Bidder Complies YES \_\_\_ NO \_\_\_**

In the front bulkhead area must be a cabinet with (2) 1/2" acrylic doors with a Southco latch. Included are 2 shelves. An LED light must be mounted on the ceiling above the bulkhead storage cabinet. The light must have a switch on the flange.

**COUNTER TOP FRONT BULKHEAD**

**Bidder Complies YES \_\_\_ NO \_\_\_**

**CABINET:**

The counter surface on the front bulkhead cabinet must be covered with a Meganite counter top material. The counter must be permanently bonded and sized to cover the entire surface of the counter area. The counter top must have a 1" built-in lip around the entire perimeter for containment purposes. The edge of the counter top facing inboard must be a 1.5" radius. ABS or other plastic surfaces are not an acceptable substitution.

**RIGHT FRONT INTERIOR CABINET (Upper Section)**

**RIGHT FRONT UPPER COMPARTMENT HINGED DOORS:** Bidder Complies YES \_\_\_ NO \_\_\_

The right front upper inside access cabinet must incorporate double hinged 1/2" tinted acrylic transparent doors. The doors must have hinges that resist motion when moved to prevent doors from swinging freely when the vehicle is moving. The doors must also incorporate (1) Southco Polished Stainless Steel positive type locking latch in each hinged door. The cabinet must extend from the top of the inside outside portion of the right front to the ceiling of the vehicle. Includes (1) adjustable shelf.

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**RIGHT FRONT LOWER, IN/OUT ACCESS STORAGE COMPARTMENT:** Bidder Complies YES \_\_\_ NO \_\_\_

The interior right front storage cabinet of the vehicle must be designed to provide access from both the inside of the vehicle or through the exterior compartment door. The size of the compartment must align with the exterior height and width of the exterior compartment door area above the floor level of the vehicle. The width of the compartment from the inside must extend to the pass thru area to the cab. Approximate dimensions 39 3/4" high by 31 7/8" wide by 19" deep.

**RIGHT FRONT CABINET, ADJUSTABLE SHELVES:** Bidder Complies YES \_\_\_ NO \_\_\_

The right front inside/outside compartment must be equipped with three (3) adjustable shelves. The shelves must be fully adjustable within the inside area of the cabinet.

**RIGHT FRONT IN/OUT COMPARTMENT HINGED DOORS:** Bidder Complies YES \_\_\_ NO \_\_\_

The right front inside/outside access cabinet must incorporate double hinged 1/2" acrylic transparent doors. The doors must have hinges that resist motion when moved to prevent doors from swinging freely when the vehicle is moving. The doors must also incorporate (1) Southco Polished Stainless Steel positive type locking latch in each hinged door.

**RIGHT SIDE SQUAD BENCH**

**TWO PERSON SQUAD BENCH, CUSTOM INTERIOR RIGHT SIDE LAYOUT, "MEDIC IN MIND":** Bidder Complies YES \_\_\_ NO \_\_\_

A custom interior right side layout must be fabricated and installed. The layout must consist of a two person squad bench located over the rear wheel.

**SQUAD BENCH, TWO PERSON 2/3 LENGTH:** Bidder Complies YES \_\_\_ NO \_\_\_

A two person squad bench must be provided on the right side wall. It must have dimensions of approximately 60" long x 19" high x 20" deep. The squad bench must be bolted to reinforced members of the framework utilizing 7/16" high strength bolts. The storage area of the squad bench must be accessible by lifting the seat cushions. The inside area of the squad bench must be laminated with high pressure plastic laminates.

The bench must have upholstered padded 3" thick seat cushions. The seat cushions must be approximately 18" wide x 44" long. The lower cushion must be removable and easily cleaned or replaced if damaged. The cushions must be held to the platform with #8 screw type mechanical fasteners, which is permanently attached to the underside of the cushion and platform surface of the squad bench. The cushion/lid must be held open and closed by two (2) gas spring hold opens and hinged at the rear with full length piano hinges. The mounts for the gas spring must be installed into reinforced areas within the seat lid platform.

**SQUAD BENCH BACKREST, 2 PIECE:** Bidder Complies YES \_\_\_ NO \_\_\_

The right side backrest must be a two piece backrest, consisting of an upper and lower section. Both sections mounted horizontally, with one directly above the window and the second mounted just below the window. The backrest must match the squad bench cushion, and be mounted so that it can be easily removed.

**RECESSED STORAGE AT HEAD OF BENCH:** Bidder Complies YES \_\_\_ NO \_\_\_

Recessed storage must be provided at head of the squad bench. The stepwell area must be integrated into the head, (forward portion) of the squad bench thus providing a diamond plated, recessed storage area. The approximate dimensions of this recessed area must be 5"d x 12"w x 30"h.

**"D" BOTTLE STORAGE AT STEPWELL:** Bidder Complies YES \_\_\_ NO \_\_\_

The step well of the vehicle must be modified to extend under the squad bench. The recessed area must provide a storage location for two "D" size oxygen cylinders.

**RIGHT SIDE FORWARD BELOW** Bidder Complies YES \_\_\_ NO \_\_\_

**COUNTER LEVEL INTERIOR STORAGE:**

An interior storage cabinet must be located forward of the right side attendant seat and below counter level. It must be approximately 15 1/2" wide x 18" high x 21 3/4" deep.

**RIGHT SIDE FORWARD BELOW COUNTER STORAGE DRAWERS:** Bidder Complies YES \_\_\_ NO \_\_\_

A three (3) drawer storage cabinet must be installed below the counter area forward of the right side squad seat facing the seat area. Each drawer must be lined with ribbed rubber matting and have locking Southco latches.

**MEGANITE COUNTER TOP FRONT COUNTER AREA:** Bidder Complies YES \_\_\_ NO \_\_\_

The counter surface in the right side front must be covered with genuine "Silver Mist" color, Meganite counter top material. The Meganite must be permanently bonded and sized to cover the entire surface of the counter area. The counter top must be a flat style top surface. The edge of the counter top facing inboard must be a 1.5" radius. ABS or other plastic counter surfaces are not acceptable.

**SQUAD BENCH LID HOLD DOWN DEVICE:** Bidder Complies YES \_\_\_ NO \_\_\_

The lid of the squad bench must be equipped with a slam type positive closure device. This closure device must prevent opening of squad bench lid in the event of an accident. The release must be a stainless steel slam type Trimark paddle handle located on the outside surface of the squad bench, and incorporate a catch device on the underside of the lid.

**TIP-OUT TRASH BIN:** Bidder Complies YES \_\_\_ NO \_\_\_

A Tip-out trash bin must be provided under the squad bench cabinet, rear of wheel well. It must be custom built into the bench, provide a hinged tip-out door, and flush Southco Polished Stainless Steel latch to access a removable Rubbermaid plastic trash pail which is mounted to the door. Trash bin must tip into aisle toward the center of the vehicle. The trash bin must be designed to include an aluminum door laminated to match the interior cabinets. The trash bin must be a totally self-contained unit and be sealed on all sides to contain its contents during transit.

**TIP-OUT SHARPS CONTAINER:** Bidder Complies YES \_\_\_ NO \_\_\_

A Tip-out Sharps Container must be provided within the squad bench base cabinet. It must be custom built into the squad bench and provide a hinged tip out door and flush Southco Polished Stainless Steel latch to access a disposable 8 qt. Sharps Container.



**OVERHEAD STORAGE ABOVE SQUAD BENCH WITH SLIDING DOORS: Bidder Complies YES \_\_\_ NO \_\_\_**

A 10" overhead storage cabinet must be provided and installed in the area above the squad bench. The cabinet must have two (2) transparent sliding doors, and contain one adjustable shelf. The entire lower edge corner must be padded to prevent sharp corners. The area in the forward portion must incorporate three glove box holders. This cabinet is compliant with the KKK 43" headroom requirement.

**LEFT SIDE ATTENDANT SEAT: Bidder Complies YES \_\_\_ NO \_\_\_**

A left side attendant seat must be built into the left wall cabinets. It must incorporate a 24" wide x 20" deep seat area with a cushion which is 21" above the floor, a backrest, and a separate headrest. The seat must be designed for a single seating position. In order to prevent injury during vehicle motion both the forward and rear cabinets that are immediately adjacent to the left side attendant, seat must include full size padded head bumpers with a 1" thick padding. Designs which do not include this padding are unacceptable. All vertical surfaces to the front and rear of the seat cushion must be fully padded and wrap around the top of the counter to provide a full armrest.

**LEFT SIDE ATTENDANT SEAT BACKREST: Bidder Complies YES \_\_\_ NO \_\_\_**

A left side attendant seat must include a full height backrest cushion which extends from the seat to the ceiling. The backrest cushion must be approximately 2" thick.

**LEFT SIDE ATTENDANT SEAT, UNDER SEAT STORAGE: Bidder Complies YES \_\_\_ NO \_\_\_**

The underside of the left side attendant seat must be lined with a brushed aluminum pan and allow for full under seat storage. The seat cushion must be hinged in the rear and be held open and closed by a single gas spring device. The seat cushion must be equipped with a slam type positive stainless steel Trimark paddle latch.

**LIFE SUPPORT STATION**

**LIFE SUPPORT STATION/SWITCH PANEL: Bidder Complies YES \_\_\_ NO \_\_\_**

The rear Life Support control and switch panel must be mounted to the underside of the upper cabinet. The oxygen outlets must be mounted in the panel to provide use of a ball type flow meter with humidifier bottle attached. The entire panel must be hinged to provide full access of components for servicing. An adequate area must be provided alongside the switches for permanent built-in installation of two-way communications radio.

**SWITCH PANEL COVERING: Bidder Complies YES \_\_\_ NO \_\_\_**

The switch panel must be covered with padded vinyl covering which matches the upholstery in the vehicle. The padding must be 1/8" thick and glued in place prior to the installation of the custom made stitched vinyl cover.

**LIFE SUPPORT STATION STORAGE CABINET:** Bidder Complies YES \_\_\_ NO \_\_\_

A storage cabinet must be provided at the head of the Life Support Switch Panel. The lower portion of the storage cabinet must contain a CompX Model WS-ICKP-NARC locking narcotics box. The upper portion must have a small cabinet with a hinged transparent door with a Southco Polished Stainless Steel positive latch.

**LIFE SUPPORT STATION UPPER STORAGE CABINET WITH RESTOCKING LIFT-UP DOOR:** Bidder Complies YES \_\_\_ NO \_\_\_

A storage cabinet must be provided above the Life Support Control Panel. The rear most edge must have a 45 degree angled panel to eliminate any obstructive corners in the area of the Life Support Station working area. The rear surface must be covered with a padded head bumper surface. The storage cabinet must be provided with a full framed sliding transparent cabinet door which is also capable of lifting for full restocking access to the cabinet and one (1) adjustable shelf within the cabinet. The door must be held open with two gas springs and held closed with two positive slam latches. The frame must be made of a custom designed aluminum extrusion and held together with four (4) #10 mechanical fasteners in each corner; glued or epoxied construction is unacceptable. The entire lower edge must be padded to prevent sharp edges.

**MEGANITE COUNTER TOP FRONT COUNTER AREA:** Bidder Complies YES \_\_\_ NO \_\_\_

The counter surface in the front Life Support Station must be covered with "Silver Mist" color, genuine Meganite solid surface counter top material. The Meganite must be permanently bonded and sized to cover the entire surface of the counter area. The counter top must have a 1" built-in lip around the entire perimeter for containment purposes. The edge of the counter top facing inboard must be a 1.5" radius. ABS or other plastic counter surfaces are not acceptable.  
ALS Three (3) Drawer Storage Unit, Below L/S/S Counter

**LEFT SIDE BELOW COUNTER STORAGE DRAWERS:** Bidder Complies YES \_\_\_ NO \_\_\_

A three (3) drawer storage cabinet must be installed below the counter area forward of the left side attendant seat. Each drawer must be lined with ribbed rubber matting and have locking Southco latches.

**LEFT REAR INTERIOR CABINET UPPER WITH RESTOCKING LIFT-UP** Bidder Complies YES \_\_\_ NO \_\_\_

**DOOR:**

A storage cabinet must be provided in the upper left rear corner of the body. The cabinet must have sliding transparent doors and one (1) adjustable shelf. The interior cabinet must be provided with a full framed sliding transparent cabinet door which is also capable of lifting for full restocking access to the cabinet. The door must be held open with two gas springs and held closed with two positive slam latches. The frame must be made of a custom designed aluminum extrusion and held together with four (4) #10 mechanical fasteners in each corner; glued or epoxied construction is unacceptable. The entire lower edge corner must be padded to prevent sharp corners.

**MEGANITE COUNTER TOP REAR COUNTER AREA: Bidder Complies YES \_\_\_ NO \_\_\_**

The counter surface in the rear counter area must be covered with "Silver Mist" colored, genuine Meganite counter top material. The Meganite must be permanently bonded and sized to cover the entire surface of the counter area. The counter top must have a 1" built-in lip around the entire perimeter for containment purposes. The edge of the counter top facing inboard must be a 1.5" radius. ABS or other plastic surfaces are not an acceptable substitution.

**TIP-OUT SHARPS CONTAINER: Bidder Complies YES \_\_\_ NO \_\_\_**

A Tip-out Sharps Container must be provided below the counter level rearward of the left side attendant seat. It must be custom built into the cabinet and provide a hinged tip out door and Southco Polished Stainless Steel latch to access an 8 qt. disposable Sharps Container. Right Rear In/out to Compartment "E"

**RIGHT REAR INTERIOR CABINET: Bidder Complies YES \_\_\_ NO \_\_\_**

Inside access must be provided to right side rear exterior compartment "E". A 1/2" hinged acrylic door with polished stainless steel Southco latch must be provided.

**CLEAR TRANSPARENT DOORS: Bidder Complies YES \_\_\_ NO \_\_\_**

All transparent doors where specified in this specification must have clear 1/4" Lexan sliding doors. All sliding doors must be installed in double, anodized aluminum tracks with Standard Products rubber flocked inserts to prevent movement and inadvertent sliding. Hinged transparent doors when specified will be provided as 1/2" clear Acrylic and must include a stainless steel locking Southco positive closure latches.

**FULL LENGTH HANDLES ON TRANSPARENT DOORS: Bidder Complies YES \_\_\_ NO \_\_\_**

All sliding doors must have anodized aluminum full length pull handles installed on the leading outside edge of the door. An anodized trim must be installed on the edge of the following side of

the door for a finished appearance. The use of finger holes or screw on cabinet handles is unacceptable.

**POSITIVE CLOSURE DEVICES ON HINGED DOORS:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

All hinged doors must be equipped with a positive closure device such as a polished stainless steel Southco slam latch. Magnet or roller type catches are unacceptable hardware for this application. The use of positive latching types of hardware will prevent inadvertent opening when in motion.

Unistrut, interior cabinet shelves, "Mini"

**UNISTRUT SHELVING STANDARDS, INTERIOR CABINET SHELVES:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The interior cabinets of the vehicle must be provided with Unistrut shelving standards. The standards must be aluminum with the approximate dimensions of 3/8" by 1" wide. The Unistrut must be securely fastened to the interior of the cabinets with #10 threaded fasteners.

**INTERIOR ENTRANCE DOORS** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

All entrance door panels must be mounted with machine screw threaded fasteners which are installed with thread locking, Loc-Tite material.

**INTERIOR ENTRANCE DOOR PANELS:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The inside surface of the right side and rear entrance doors must have three (3) sections. The upper must be an aluminum panel covered with high pressure plastic laminates which matches the interior cabinets. The center area which covers the door hardware must be a padded vinyl section and the lower panel must be a single piece of polished aluminum diamond plate, to act as a wear surface. The panels must be held in place with threaded mechanical fasteners and be removable for servicing of door hardware.

**SIDE ENTRANCE DOOR HEAD BUMPER:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

A cushioned, matching vinyl covered "bump protection" head bumper must be mounted in the interior of the side entrance door area. It must be designed to provide both onward and upward contact protection.

**REAR ENTRANCE DOOR HEAD BUMPER:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

A cushioned, matching vinyl covered "bump protection" head bumper must be mounted in the interior above the Rear entrance doors. It must be designed to provide both onward and upward contact protection.

## **INTERIOR GRAB RAILS**

**GRAB RAIL RETENTION:** Bidder Complies YES  NO

All ceiling grab rails installed in the ambulance must meet the requirements of the A.M.D grab rail retention test. Test documentation must be provided upon request.

**72" CEILING GRAB RAIL, OVER SQUAD BENCH:** Bidder Complies YES  NO

A satin finish stainless steel grab rail must be installed in the ceiling over the squad bench. It must be 72" long x 1 1/4" in diameter with welded stanchions every 24". It must have fully radiused ends to eliminate a head injury hazard. The use of grab rails which do not have fully welded construction is unacceptable. The grab rail must be bolted directly to the structure members of the ceiling framework.

Grab rail, 72", s/steel, over cot

**72" CEILING GRAB RAIL OVER COT:** Bidder Complies YES  NO

A satin finish stainless steel grab rail must be installed in the ceiling over the cot. It must be 72" long x 1 1/4" in diameter with welded stanchions every 24". It must have fully radiused ends to eliminate a head injury hazard. The use of grab rails which do not have fully welded construction is unacceptable. The grab rail must be bolted directly to the structure members of the ceiling frame work.

**18" STAINLESS STEEL GRAB HANDLE:** Bidder Complies YES  NO

One (1) "L" shaped satin finish stainless steel grab handle must be installed on the custom squad bench cabinet. The grab rail will be mounted facing the step area. Each must be fabricated from 1 1/4" diameter tube and have radiused ends, which match the overhead grab rail.

**18" STAINLESS STEEL GRAB HANDLES NEAR REAR DOORS:** Bidder Complies YES  NO

One (1) 18" satin finish stainless steel grab handle must be installed on the interior, near each rear entrance door. Each must be fabricated from 1 1/4" diameter tube and have radiused ends, which match the over-head grab rail.

**12" STAINLESS STEEL GRAB** Bidder Complies YES  NO

**HANDLES ON REAR DOORS:**

One (1) 12" satin finish stainless steel grab handle must be installed on the interior of each rear entrance door. Each must be fabricated from 1 1/4" diameter tube and have radiused ends, which match the over-head grab rail.

**SIDE ENTRANCE DOOR GRAB RAIL, Bidder Complies YES \_\_\_ NO \_\_\_  
45 DEGREE:**

The side entrance door must be equipped with a custom built 45 degree grab handle which extends from under the door window in the horizontal plane and then diagonally to the lower outside corner of the door. The grab rail must be fabricated from satin finish stainless steel 1 1/4" diameter tube with fully welded construction. The grab handle must be bolted directly to the structural members with the door with the use 1/4-20 threaded fasteners.

**SEAT BELTS**

**SEAT BELTS, SQUAD BENCH: Bidder Complies YES \_\_\_ NO \_\_\_**

Two (2) sets of lap seat belts must be installed for persons seated on the squad bench. All seat belts must have enclosed male automatic locking retractors with push button releases and fixed female buckles. All seat belts and seat belt mounts must be tested to F.M.V.S.S. 210 and Federal Specifications KKK-A-1822. Documentation must be available upon request.

**SEAT BELT, REAR FACING ATTENDANT SEAT: Bidder Complies YES \_\_\_ NO \_\_\_**

One (1) lap seat belt must be installed at the rear facing attendant seat. The seat belt must have enclosed male automatic locking retractor with a push button release and a fixed female buckle. The seat belt and seat belt mount must be tested to F.M.V.S.S. 210 and Federal Specifications KKK-A-1822. Documentation must be available upon request.

**SEAT BELT, LEFT SIDE ATTENDANT SEAT: Bidder Complies YES \_\_\_ NO \_\_\_**

One (1) Seat belt must be installed at the left side attendant seat. The seat belt must have an enclosed male automatic locking retractor with a push button release and a fixed female buckle. The seat belt and seat belt mount must be tested to F.M.V.S.S. 210 and Federal Specifications KKK-A-1822. Documentation must be available upon request.

**MOUNTING OF STRYKER POWER LOAD SYSTEM Bidder Complies YES \_\_\_ NO \_\_\_**

A Stryker Power Load Stretcher Mount will be supplied and installed by the manufacturer.

**RECESSED DUAL IV HOLDER, OVER COT: Bidder Complies YES \_\_\_ NO \_\_\_**

One (1) Cast Products Rubber "Recessed" dual IV holder must be installed in the ceiling over cot. The holder must be bolted to reinforcing plates located within the ceiling and include a Velcro strap for securing IV during transport.

**RECESSED DUAL IV HOLDER, OVER SQUAD BENCH:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

One (1) Cast Products Rubber "Recessed" dual IV holder must be installed in the ceiling over squad bench. The holder must be bolted to reinforcing plates located within the ceiling and include a Velcro strap for securing IV during transport.

**RECESSED DUAL IV HOLDER, RACEWAY:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

One (1) Cast Products Rubber "Recessed" dual IV holder(s) must be installed within the center raceway near the foot end of the stretcher. The holder must be bolted to reinforcing plates located within the ceiling and include a Velcro strap for securing IV during transport.

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#### **INTERIOR SURFACE FINISHES AND COLORS**

**CEILING PANEL:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The ceiling panel of the ambulance must be high impact thermoplastic panel laminated to a 1/4" subpanel. The entire assembly must be bolted directly to the ceiling structural framework. The panel must be the fire retardant grade. All components (Including Lights, IV Holders and Grab Rails) mounted to the ceiling must be mounted to the structural frame work of the ceiling. Under no circumstances must anything be mounted to the ceiling panel only. The ceiling panel must be attached to the vehicle framework without the use of visible hardware.

**INTERIOR COLORS:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The interior color of the upper laminated cabinets must be Fashion Grey with a high gloss finish. The interior color of the lower laminated cabinets must be Cloud Nebula with a high gloss finish.

**HEAD BUMPERS:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

Vinyl padded head bumpers must be installed in areas where head injury can occur. One (1) located at the rear door, one (1) at the side door and one (1) at the cab to body door. Full padding must be provided around the cabinets on the left side attendant seat area.

**HEAVY DUTY UPHOLSTERY, SEAMLESS:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

All upholstery used in the vehicle must be a High Quality Automotive Grade Vinyl Upholstery. All upholstery must be seamless flat upholstery utilizing minimal stitching on the outside corners. All material must meet the requirements of FMVSS 302. Upholstery Color: Bright Blue

**ATTENDANT SEAT, EVS WITH 3 POINT HARNESS, ABS BACK, SWIVEL, SEWN VINYL, BLUE:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be provided with an EVS brand, model 17703 rear facing swivel attendant seat. The seat must include a three point harness, ABS seat back and be mounted on an EVS brand, model SB-8 swivel base. Seat must have forward and back adjustment, and swivel to eight positions. All seats and seat installations must be tested and certified to meet FMVSS standards. It must be covered in sewn blue upholstery to match the balance of the vinyl in the vehicle.

**INTERIOR FLOORING FINISH :** Bidder Complies YES \_\_\_ NO \_\_\_

Commercial Quality LONSEAL Mfg Loncoin II Flecks flooring must be installed. It must be applied over a prepared Polymer floor surface, with all seams filler patched, to eliminate holes or bubbles in the flooring surface. Color must be onyx black #150..

**ROLL-UP FLOORING 3":** Bidder Complies YES \_\_\_ NO \_\_\_

The flooring on both the left side wall and right side squad bench must incorporate a three inch roll-up section of the vinyl flooring material. The flooring material must be finished with an anodized aluminum trim. The trim must be secured in place with mechanical fasteners and have a tapered top surface to prevent accumulation of dirt and foreign material. The underside must be designed in such a way to prevent infiltration behind the trim. This is required to eliminate the possibility of foreign liquid material from becoming trapped behind the flooring where it cannot be disinfected.

#### **DRIVERS CAB CONSOLE**

**CAB CONSOLE, TYPE I LOWER:** Bidder Complies YES \_\_\_ NO \_\_\_

An individually custom designed Radio and Siren Console must be provided and mounted to the floor of the cab. It must be equipped with a removable lid for access when servicing. The Console must follow the contours of the floor to minimize its protrusion. The console must be covered with a 1/4" padded black vinyl to match interior. All switches and controls must be within easy reach of both the driver and passenger.

**CUT & MOUNT (2) RADIOS IN CONSOLE:** Bidder Complies YES \_\_\_ NO \_\_\_



The ambulance manufacturer must provide two (2) custom fit cutouts and mounting of the customer supplied Radio heads, in the Radio /Siren Cab Console, including the required mounting brackets for customer supplied radio components. This must not include any routing of wiring or technical installation of radio equipment.

**MAP BOX:** **Bidder Complies** YES \_\_\_ NO \_\_\_

A map box must be fabricated and installed behind the cab console. The box must be fabricated and laminated to match the interior cabinets in the ambulance. The map box must also include two 3/16" removable lexan dividers, which divides the area into a maximum of three sections.

**"FASTEN SEAT BELT" AND "NO SMOKING" SIGNS:** **Bidder Complies** YES \_\_\_ NO \_\_\_

Two (2) large face "No Smoking" signs and one (1) Fasten Seat Belt sign must be installed in the patient compartment of the ambulance.

### **OXYGEN AND ASPIRATION SYSTEMS**

**OXYGEN SYSTEM:** **Bidder Complies** YES \_\_\_ NO \_\_\_

The Oxygen delivery system must consist of a permanent mount DOT approved Medical Oxygen Cylinder. The oxygen line from the cylinder to the distribution outlets must be oxygen cleaned, high pressure electrically conductive, "Green" hose with swaged fittings. All fittings and hardware used must be Medical Oxygen Quality and cleaned for oxygen use.

All oxygen hose must be encased in high temperature protective loom to avoid chafing and physical damage. All fittings must be completely accessible for service or inspection without the removal of any cabinets or wall panels. The entire system must be installed, inspected, tested and labeled per the requirements of Federal Specifications KKK-A-1822. The oxygen storage cylinder must be accessible through a transparent door for manual on/off control of the main valve and to visually monitor the tank pressure on the regulator gauge. The oxygen, vacuum and air systems in the vehicle must be compatible with OHIO equipment unless otherwise specified.

**DUAL OXYGEN OUTLET:** **Bidder Complies** YES \_\_\_ NO \_\_\_

One (1) Amico AMIZTH0202 dual oxygen outlet must be flush mounted within the Life Support Station panel. The distance from the primary patient to the Life Support Station must not exceed 35" per the requirements of KKK-A-1822.

**SINGLE OXYGEN OUTLET RIGHT SIDE WALL:** **Bidder Complies** YES \_\_\_ NO \_\_\_

One (1) single Amico AMIZTH0101 oxygen outlet must be provided on the right side of the ambulance in the right side wall above the squad backrest, below the overhead cabinet (if present) the outlet must be built in flush and not protrude more than 1" beyond the wall.

**CEILING MOUNTED OXYGEN  
OUTLET, REAR:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

An Amico AMIZTH0101 oxygen outlet must be installed in the rear ceiling raceway 9" off the rear doors 6" off the rear head bumper. The outlet must be near flush in the ducted climate control center wire raceway and not protrude more than 1/2" below the ceiling panel.

**OXYGEN SHUT OFF SOLENOID:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

An Amico AMIZTH0120 electric powered oxygen shut off solenoid must be installed and mounted on the output of the oxygen bottle regulator. It must be controlled by a switch located at the rear Life Support Panel. The solenoid must be approved for medical oxygen use and be equipped with a manual override valve (in the event the electric solenoid may fail to open the valve). An electrical rectifier must be installed in the circuit to prevent voltage spikes from entering the electrical system.

**ELECTRIC SUCTION/ASPIRATION  
SYSTEM:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

The vehicle must be equipped with a permanently installed Suction/Aspiration System. The system must be equipped with a high volume Thomas electric suction pump certified for use in all states, with a 30 liter per minute flow rate. The pump must be activated from a relay controlled circuit and switch, on the Life Support switch panel. The pump must be mounted in an enclosed compartment using rubber isolators to minimize any noise and vibration when in use. The pump must be connected to an onboard collection bottle permanently attached to the counter near the primary patient. The connecting hose must be fiber reinforced medical hose and loomed to prevent chafing. The entire system must be tested and meet the criteria of KKK-A-1822. Test Documentation must be available upon request. As with the oxygen delivery system all fittings and lines must be accessible for inspection and service without the removal of cabinets or walls.

**SSCOR DISPOSABLE COLLECTION  
SYSTEM:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

On Board suction must be provided with a SSCOR disposable system. System must include SSCOR wall mounted white faced, regulator and disposable Bemis collection bottle mounted in stainless steel bracket mounted on wall per customer location. The Collection Bottle location is to be 11" to the bottom of the bracke

**VACUUM OUTLET:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

One (1) Amico AMIZTH01035 vacuum outlet with adapter must be provided and flush mounted within the Life Support panel.

**OXYGEN PRESSURE GAUGE, TANK**

**Bidder Complies YES \_\_\_ NO \_\_\_**

**PRESSURE:**

An oxygen pressure gauge; 2" analog dial for tank pressure must be installed in the Life Support Station area of the vehicle. The gauge must be full scale type for Medical oxygen use. It must be connected to the main oxygen cylinder with a high pressure (3,000 PSI working pressure) Parflex flexible line with high pressure fittings. (Braided stainless steel is not acceptable). The actual location of the gauge must be determined by the selection of the upper storage cabinet.

**OXYGEN BOTTLE MOUNT, UNIVERSAL MOUNT:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be equipped with a mount for an "M" or "H" oxygen cylinder within compartment "A". The mount must be an approved Ziamatic Model QR-MV, oxygen bottle retention system for an "M" or "H" size bottle. The mounting bracket must be securely bolted to two Uni-Strut tracks welded to the vehicle framework. The entire mounting system must be tested to the requirements of AMD-003; oxygen tank retention system. Test Documentation must be provided upon request. The use of mounting brackets other than Ziamatic brand is unacceptable.

**LARGE TANK OXYGEN REGULATOR:** Bidder Complies YES \_\_\_ NO \_\_\_

One (1) Model #12-001540 (aka 1633-2), large tank oxygen bottle regulator must be provided and installed.

**OXYGEN CYLINDER WRENCH:** Bidder Complies YES \_\_\_ NO \_\_\_

An oxygen cylinder wrench must be permanently attached to the wall of the oxygen compartment in a custom wrench holder. There must be a permanent lanyard attachment to both the wrench and the compartment, designed to prevent loss of the wrench.

**ELECTRICAL SYSTEMS**

**LIFETIME ELECTRICAL SYSTEM WARRANTY** Bidder Complies YES \_\_\_ NO \_\_\_

Manufacturer will warranty to original purchaser that the supplied electrical equipment as listed below are sound and free of all defects of both materials and workmanship, for the life of the vehicle or 100,000 miles whichever occurs first. This electrical equipment includes body door post switches, all wire terminals and crimps, main vehicle wiring harness and battery harness cables, relays, switches, automatic/manual reset circuit breakers, voltmeter, ammeter, battery disconnect switches, solenoids, all terminal strips, manufacturer installed electrical connections and power distribution panel. Warranty transferable subject to inspection by manufacturer. Bidder must include statement of warranty policy with bid.

**ELECTRICAL 12 VOLT:****Bidder Complies** YES \_\_\_ NO \_\_\_

The entire 12 volt Electrical System must comply with the recommended standards and practices per FMVSS, Federal Specifications KKK-A-1822 & SAE where applicable.

**Electrical system provided by the ambulance Manufacturer must have 100,000 mile Electrical Warranty.**

The entire 12 volt DC Electrical System must incorporate GXL High Temperature Copper wire. Each wire must be color coded with function imprinted every four inches for immediate identification. All exposed wiring must be covered with Packard Flec or equal, black with gray stripe, convoluted loom with minimum of 300 degree F. Temperature rating. Loom with a lower temperature rating is cause for rejection. Large Heyco type or rubber insulators must be used where wires pass through sheet metal or structural members. All circuits must be protected with circuit breakers suitable to the circuit demand. Any wire carrying a load to an appliance in the 12 volt Electrical System must be 16 gauge wire minimum.

Electrical System must consist of five main wiring harnesses which terminate at the Electrical Distribution Panel. Distribution Panel must be centrally located with connections resulting through 45 pin Connectors. Harnesses must include:

- (1) Rear body, referred to as Harness #1 (standards: dome, fluorescent, floods, vent, compt. lights/ switches)
- (1) Rear body, referred to as Harness #2 (flashing lights, air compressors, cancel switches, options)
- (1) Rear switch panel, referred to as Harness #3
- (1) Front console, referred to as Harness #4
- (1) Cab/ chassis/ under-hood, referred to as Harness #6

All Electrical components must be mounted using a "plug in" type assembly which affords speedy replacement of failed components. The entire unit must be housed in a readily accessible maintenance cabinet built into front wall of the personnel compartment. Attached to inside of door must be complete documentation of 12 volt Electrical System. The use of exterior compartment mounted electrical distribution panel is unacceptable. The main power distribution panel must consist of a plug-in modular system which includes locations for 42 plug-in circuit breakers and 60 plug-in relays, as standard equipment. This type of system is utilized to have standard circuit configuration while remaining totally flexible for custom circuits when required. All circuits must consist of plug-in relays and plug-in circuit breakers only. The use of diodes, rectifiers, heat sinks, or other than automotive type relays is unacceptable.

**CIRCUIT BREAKERS:****Bidder Complies** YES \_\_\_ NO \_\_\_

All circuit breakers 30 amp or less, must be plug in Manual and or Auto Reset type. All circuits which require greater capacity must utilize a Cooper Electric or equal 40 or 50 amp "MAXI-AMP" manual or auto reset circuit breaker, dependent on electrical application.

**RELAYS:****Bidder Complies** YES \_\_\_ NO \_\_\_

Devices being switched with loads in excess of one (1) amp (12 watt) must be accomplished through Potter & Brumfield or equal, 40 amp SPDT 12 volt automotive relay switching devices. All relays used in the panel must be of the same type to insure complete compatibility and ease of re-placement. Relays must be controlled through a ground signal from all switches, including door post switches. All relays must be plugged into the modular panel assembly including the 70 amp power relays where required. All relay circuits utilizing the SPDT relays and SPST 70 amp relay must include internal suppression to eliminate voltage spikes in the electrical system.

**GROUNDING:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

All Modular Bodies must be grounded to the vehicle chassis with two (2) 0 GA braided, tinned copper grounding straps Circular copper conductors (battery cables) must not be used. These ground straps meet requirements of both KKK-1822-F and Ford QVM Bulletin Q-18.

Each appliance (i.e. lights, fans) must be grounded to the body structure in close proximity to its location or by a ground harness as required. The ground must be equivalent to its feed wire size and be minimized in length. Each ground attached directly to the vehicle structure must use machine screws with star washers or ring terminals with serrated ring to insure a positive contact at all times.

All Body harnesses must be contained within the body. Harnesses must not run on the underside exterior of the body. Under hood harness must be protected within high temperature convoluted loom. All connections exposed to the elements, or under hood, must be made within "waterproof" heat shrink connections. This type of connection must also be used on all heavy duty battery cables. All battery cables, both positive and ground must be machine crimped and fully soldered prior to addition of waterproof heat shrink tubing. Any exposed connections not in heat shrink and battery connections not soldered must be rejected. All Electrical Systems must include three (3) spare relays and spares of the correct size circuit breakers utilized, must be mounted within the Electrical Distribution Panel.

**12V - 110 VOLT CIRCUIT** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_  
**SCHEMATIC DOCUMENTATION:**

All harnesses, relays, circuit breaker terminal junction points and circuits must be drawn on individual 8 1/2 x 11 size drawings. Each individual circuit must be on (1) drawing, for ease of troubleshooting. A single drawing overall schematic is unacceptable. All electrical systems must be designed for each vehicle. Generic or similar drawings are cause for rejection of vehicle. All schematics must include only what circuits are provided in the proposed vehicle.

**ELECTRICAL ANALYSIS:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

Proper balance of the electrical system output and vehicle draw is critical in the design of all emergency vehicles. Vehicle proposed must be provided with a detailed electrical analysis generated by the manufacturer of the ambulance and specific to this proposed vehicle and specific electrical equipment requested. General statements will not be acceptable.

**DOOR POST SWITCHES ENTRANCE AND COMPARTMENT DOORS:** Bidder Complies YES \_\_\_ NO \_\_\_

Sealed door post switches must be installed in all entrance and compartment doors. All switches must be sealed from the elements to prevent moisture damage and to prolong service life. The switches must be warranted for lifetime of vehicle. All door post switches must activate the grounds of relays only. Under no circumstances must the door post switch carry more than 140 milliamp of electrical current.

**IGNITION ACTIVATED, MODULE DISCONNECT :** Bidder Complies YES \_\_\_ NO \_\_\_

A high current disconnect device must be installed per the requirements of KKK-A-1822 to power all ambulance vehicle conversion and modular body functions. The device must be activated by the chassis ignition signal, and must have a 5 minute off delay for module functions when the chassis ignition switch is turned off.

**WATERPROOF DEUTSCH TYPE CONNECTORS:** Bidder Complies YES \_\_\_ NO \_\_\_

Electrical connectors used on added circuits of less than 20 Amps under the chassis hood and the chassis fenders must be high quality, waterproof Deutsch type. Unsealed connectors in these areas are unacceptable. Sockets and pins must be machined type. Stamped contacts are unacceptable.

**VOLTMETER:** Bidder Complies YES \_\_\_ NO \_\_\_

An analog type voltmeter must be installed within easy view of driver. The voltmeter must be circuit breaker protected. The use of digital voltmeters is unacceptable due to its difficulty to read at a glance. The voltmeter must be tied to the battery side of the master disconnect switch to allow a constant reading on the voltmeter when the switch is off.

**LOW VOLTAGE ALARM:** Bidder Complies YES \_\_\_ NO \_\_\_

A Low Voltage System with a dual indicator light green/red must be installed in the driver's console. The Green indicates voltage system is above 11.8 volts. The Red must indicate when system voltage drops below 11.8 volts for more than 2 minutes and vehicle needs to reduce load. At that time an audible alarm will sound. The alarm will be provided with a cancel switch to momentary silence the alarm. The red light will remain on both the switch legend and the indicator until the system returns to 12.8 volts or above.

**SWITCHES:** Bidder Complies YES \_\_\_ NO \_\_\_

All switches must be 12 volt two (2) or (3) position heavy duty Carling Contura X, Full size, Euro-Look Rocker switches, with a black matte finish. Small rocker switches or push style

switches are not acceptable substitution. Each switch must have an integral pilot light which must activate in the "On" position, including the Horn/Siren switch. The only switches that must not have a pilot light are momentary switches, where they are not available. No switch must carry more than one (1) Amp of power, (12 watts). For ease of service and supporting a lifetime electrical warranty, all switches must have a plug in connector on the bottom of the switch contacts.

All switches must be mounted in a custom designed one piece panel for each vehicle. The switch panel must be backlit Light Emitting Diode lighting behind the individual switch legends. The switch panels must be finished in a black matte finish. All custom legends must be made of matte black Lexan inserts with translucent lettering to designate each function. When complete, the surface of the panel must have a look of a homogeneous surface without the need for white legends which appear to be an added on feature. Due to the superior backlighting of the LED, no exception is allowed. All switch circuits must be designed for the life of the vehicle.

**BATTERY "ON" INDICATOR:** Bidder Complies YES \_\_\_ NO \_\_\_

A Master battery "On" indicator must be installed on the driver's console of vehicle. The indicator must be a minimum of 1/2" in diameter and glow whenever the batteries are connected to the system.

**DOOR OPEN INDICATOR LIGHT:** Bidder Complies YES \_\_\_ NO \_\_\_

A Red indicator light must be installed in the drivers switch console to indicate that an entrance door is ajar. The light will activate whenever the master battery disconnect switch is activated and an entrance door is opened. The indicator must be a minimum of 1/2" in diameter. The door open indicator must be relay controlled and the door post switches must activate the relay.

**COMPARTMENT OPEN INDICATOR LIGHT:** Bidder Complies YES \_\_\_ NO \_\_\_

An Amber indicator light must be installed in the drivers switch console to indicate that a compartment door is ajar. The light will activate whenever the master battery disconnect switch is activated and a compartment door is opened. The indicator must be a minimum of 1/2" in diameter. The compartment open indicators must be relay controlled and the door post switches must activate the relay.

**AUDIBLE DOOR/COMPARTMENT OPEN ALARM:** Bidder Complies YES \_\_\_ NO \_\_\_

A high decibel, electronic beeper alarm must be installed and activate, when a module entrance door or compartment door is opened. The alarm must sound only when the vehicle is placed in drive or reverse and be independent of the door open/compartment open warning lights in the console. The warning lights must activate anytime an entrance or compartment door is opened.

**PARKING BRAKE ALARM AND** Bidder Complies YES \_\_\_ NO \_\_\_

**INDICATOR:**

The vehicle must be equipped with a Dual-Mode alarm that will sound when the vehicles shift lever is in Neutral and the Parking Brake is not applied. Secondly the alarm will sound when the vehicle gear selector is in reverse or a forward drive gear and the Parking Brake is applied. The alarm must include an indicator light in the drivers console and an audible alarm that will sound when the condition exists when the vehicle is in the run mode and when the emergency sequencer switch is on.

**ELECTRONIC THROTTLE:** Bidder Complies YES \_\_\_ NO \_\_\_

The OEM Chassis must be equipped with an electronic throttle device which is specifically designed for use with this emergency vehicle. The throttle must activate under the following conditions: Parking brake set, engine running, and vehicle in park. The throttle must not activate whenever vehicle is in a transmission drive position or when the vehicle service brake is applied, or accelerator pedal is depressed.

**BACK-UP ALARM WITH DISABLE SWITCH:** Bidder Complies YES \_\_\_ NO \_\_\_

An ECCO 610N with 97 dB rating backup alarm must be installed under the rear step area of the vehicle. The backup alarm must have encapsulated electronics and no exposed terminals- all connections must be water tight. The back-up alarm must be activated any time the vehicle is shifted into reverse gear. A relay controlled momentary cancel switch must be installed in the drivers console to disable the backup alarm when it may not be required. The circuitry must be designed to allow the alarm to be reset automatically and function the very next time the vehicle is placed in reverse. On-Off type switch is not acceptable.

**UNITY SPOTLIGHT, WITH (UNMOUNTED) BRACKET:** Bidder Complies YES \_\_\_ NO \_\_\_

A hard wired Unity Handheld Spotlight must be provided. The light must have a 5" 100,000 CP bulb with a momentary "ON" switch located on the handle. A custom designed aluminum bracket must be fabricated to hold the light when not in use. The bracket must be plastic dipped to protect the bulb surface and light from vibration. The bracket must be supplied for the customer to mount. Lights installed with hooks or no holders are unacceptable.

**LOAD MANAGER/ SEQUENCER:** Bidder Complies YES \_\_\_ NO \_\_\_

A combination Load Manager/Sequencer must be installed in the driver's console. The Load Manager must automatically shed load to maintain balance between alternator output and draw, by turning predetermined functions to the off position. The Load Manager must include an override emergency bypass switch in the main electrical panel. The sequencer function turns the emergency lighting on, one at a time in a predetermined order, and turns them off in reverse order.



**AIR HORN ACTIVATION SWITCH:** Bidder Complies YES \_\_\_ NO \_\_\_

The air horn electric solenoid must be activated by a momentary switch labeled "Air Horn" located in the driver's console of the cab. Only electric operated systems are permitted, a Mechanical Air Valve is unacceptable

**ENTRANCE DOOR POWER DOOR LOCK SWITCHES:** Bidder Complies YES \_\_\_ NO \_\_\_

The power door lock mechanisms must be controlled by the OEM door switches.

**REMOTE KEYLESS ENTRY:** Bidder Complies YES \_\_\_ NO \_\_\_

The power door lock switch located on the drivers' and passengers' side cab doors must be wired to activate the power lock/unlock function of the ambulance body entrance doors (and compartment doors when power feature is specified). The switch must be tied to the battery side of the master disconnect switch and function whenever depressed.

In addition to the cab door control of the power door locks, a remote keyless entry system must be installed. The system must lock and unlock the cab and ambulance doors as specified above. The vehicle must be delivered with two remote keyless entry devices and programmed to operate with the vehicle. The remote device must be capable of being attached to the key ring of the vehicle.

**POWER DOOR LOCKS OVERRIDE SWITCH:** Bidder Complies YES \_\_\_ NO \_\_\_

A concealed emergency override switch must be provided and located behind the grille.

## **EMERGENCY WARNING SYSTEMS**

**HEADLIGHT FLASHER:** Bidder Complies YES \_\_\_ NO \_\_\_

A Sound Off, Inc., headlight flasher must be installed to alternately flash the vehicles high beam lights. The unit must be hermetically sealed solid state unit controlled by a single pole lighted switch in the driver's console. The circuit must be relay controlled. The unit must be installed per manufacturer's recommendations and must not affect the vehicles lighting system. The unit must be disabled when the headlight switch is on. The headlight flasher must be set to the "Powerpulse", fast wig-wag pattern, flashing at 180 flashes per minute.

**LIGHTED HORN/SIREN SWITCH:** Bidder Complies YES \_\_\_ NO \_\_\_

A switch must be installed in the drivers console to select between OEM Horn ring function of the vehicle Horn or Horn ring activation of the Siren. The switch must have a lighted indicator and control a SPST relay located within the electrical distribution cabinet. A relay controlled

circuit is required to eliminate any potential voltage drop problems due to high amperage draw of the OEM Horns.

**ELECTRONIC SIREN, WHELEN 295HFSC9, DUAL-TONE:** Bidder Complies YES \_\_\_ NO \_\_\_

A Whelen Engineering Company Model 295HFSC9 dual tone 200 watt Siren with removable microphone must be provided and installed flush in the driver's console. The siren must include standard siren tones, radio repeat, public address, wail, yelp, and air horn. The siren operates in dual or mono modes. The siren must be backlit for night operation and include a removable microphone. Siren must be a remote siren amplifier and include self-diagnostics to warn the driver about a potential problem with the siren.

**THRU- BUMPER MOUNTED SPEAKER SYSTEM:** Bidder Complies YES \_\_\_ NO \_\_\_

The front bumper of the vehicle must be equipped with two (2) Cast Products Model SAD/P #4318 speaker assemblies. The speakers must be mounted in the front bumper and not require the chrome bumper to be cut or modified. The speaker assemblies must include two (2) high efficiency 100 watt speaker drivers.

**FLASHING LIGHTS, GRILL:** Bidder Complies YES \_\_\_ NO \_\_\_

Two (2) lights must be placed in the grille of the vehicle in flange housings. The lights must be located in the lower portion of the grille area, set a minimum of 18" apart. The lights must be Whelen M9 LED, Red with a Clear lens cover.

A PowerArc model M90SM-Wc light is to be supplied and mounted on the center of the front grille. It can be switched to come on with the front random flashers (F2, F3, F5, and F6).

**LED FLASHING WARNING LIGHTS, INTERSECTION:** Bidder Complies YES \_\_\_ NO \_\_\_

The front fender of the vehicle must be equipped with two (2) LED flashing warning lights, one on each side, as far forward as possible. All lights must include integrated metalized flange chrome housing, designed for this fixture. Cast aluminum housings are unacceptable. The lights must be Whelen M7 Super LED, Red with a Clear lens cover.

**WHELEN DIRECTIONAL, AMBER ARROW LIGHTS, FRONT:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be equipped with Whelen M9 Series Super-LED Amber Arrow lights with clear lenses. The vehicle must include (2) Light assemblies located on the upper area of the front body. All lights must include metalized flange chrome housing, designed for this fixture.

**INDEPENDENT FLASH w/ ALTERNATING FLASHER –** Bidder Complies YES \_\_\_ NO \_\_\_

**PRIMARY/SECONDARY:**

An Electronic Flasher must be installed to power primary LED flashing lights. The flasher must have (2) alternating outputs. The circuit must be powered by an independent 50 Amp rated auto reset circuit breaker and the flasher must contain internal short circuit protection. All Body and cab warning light internal flash patterns will be programmed to the pattern specified further in this document. The Flashing lights must be considered compliant with KKK recognized alternate flash patterns. Primary is all warning lights on, secondary mode will shut down all lower level lights (beltline and below).

All upper module lights are to flash in the KKK pattern, except for the F2,F3,F5, and F6 lights, they can flash randomly. The rear lights at window level are to flash in a rapid "X" pattern, independent of the KKK flasher.

**WHELEN M9 SERIES LIGHT, FLANGES:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

All Whelen M9 vehicle lights must be equipped with a Whelen M9FC Chrome flange.

**WHELEN SUPER-LED FLASHING WARNING LIGHT, FRONT, UPPER LEFT:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the front, upper left portion of the body. All lights must include metalized flange chrome housing, designed for this fixture. The Light must be Red with a clear lens cover.

**WHELEN SUPER-LED FLASHING WARNING LIGHT, FRONT, UPPER LEFT:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the front, upper left portion of the body, and located inboard of the outermost flashing light. All lights must include metalized flange chrome housing, designed for this fixture. The Light must be a vertical split light, Red/ White with a clear lens cover.

**WHELEN SUPER-LED FLASHING WARNING LIGHT, FRONT, UPPER LEFT:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the front, upper left portion of the body, located just outboard of the center flashing light. All lights must include metalized flange chrome housing, designed for this fixture. The Light must be Red with a clear lens cover.

**WHELEN SUPER-LED FLASHING  
WARNING LIGHT, FRONT, UPPER  
LEFT:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the front, upper center of the body. All lights must include metalized flange chrome housing, designed for this fixture. The Light must be White with a clear lens cover.

**WHELEN SUPER-LED FLASHING  
WARNING LIGHT, FRONT, UPPER  
LEFT:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the front, upper right portion of the body, located just outboard of the center flashing light. All lights must include metalized flange chrome housing, designed for this fixture. The Light must be Red with a clear lens cover.

**WHELEN SUPER-LED FLASHING  
WARNING LIGHT, FRONT, UPPER  
LEFT:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the front, upper right portion of the body, located inboard of the outermost flashing light. All lights must include metalized flange chrome housing, designed for this fixture. The Light must be a horizontal split light, Red/White with a clear lens cover.

**WHELEN SUPER-LED FLASHING  
WARNING LIGHT, FRONT, UPPER  
LEFT:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the front, upper right portion of the body. All lights must include metalized flange chrome housing, designed for this fixture. The Light must be Red with a clear lens cover.

**WHELEN SUPER-LED FLASHING  
WARNING LIGHT, UPPER LEFT SIDE,  
FORWARD:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the left side, upper left, forward portion of the body. All lights must include metalized flange chrome housing, designed for this fixture. The Light must be Red with a clear lens cover.

**WHELEN SUPER-LED FLASHING WARNING LIGHT, UPPER LEFT SIDE, AFT:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the left side, upper aft portion of the body. All lights must include metalized flange chrome housing, designed for this fixture. The Light must be Red with a clear lens cover.

**WHELEN SUPER-LED FLASHING WARNING LIGHT, UPPER RIGHT SIDE, FORWARD:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the right side, upper forward portion of the body. All lights must include metalized flange chrome housing, designed for this fixture. The Light must be Red with a clear lens cover.

**WHELEN SUPER-LED FLASHING WARNING LIGHT, UPPER RIGHT SIDE, AFT:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the right side, upper aft portion of the body. All lights must include metalized flange chrome housing, designed for this fixture. The Light must be Red with a clear lens cover.

**WHELEN SUPER-LED FLASHING WARNING LIGHT, REAR, UPPER LEFT:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the rear, upper left portion of the body. All lights must include metalized flange chrome housing, designed for this fixture. The Light must be Red with a clear lens cover.

**WHELEN SUPER-LED FLASHING WARNING LIGHT, REAR, UPPER CENTER:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the rear, upper Center of the body. All lights must include metalized flange chrome housing, designed for this fixture. The light must be Amber with a clear lens cover.

**WHELEN SUPER-LED FLASHING  
WARNING LIGHT, REAR, UPPER  
RIGHT:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

The vehicle must be equipped with a Whelen M9 Series Super-LED warning light. The vehicle must include one (1) light assembly on the rear, upper right portion of the body. All lights must include metalized flange chrome housing, designed for this fixture. The light must be Red with a clear lens cover.

**WHELEN SUPER-LED FLASHING  
WARNING LIGHT, WINDOW LEVEL,  
REAR, LEFT PANEL:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

The vehicle must be equipped with a Whelen M9 Super-LED warning light. The vehicle must include one (1) light assembly on the Rear left panel. The light is situated so when the back door is open, the light must be visible through the upper portion of the door window. All lights must include metalized flange chrome housing, designed for this fixture. The light must be Red with a clear lens cover.

**WHELEN SUPER-LED FLASHING  
WARNING LIGHT, WINDOW LEVEL,  
REAR, LEFT PANEL:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

The vehicle must be equipped with a Whelen M9 Super-LED warning light. The vehicle must include one (1) light assembly on the Rear left panel. The light is situated so when the back door is open, the light must be visible through the Lower portion of the door window. All lights must include metalized flange chrome housing, designed for this fixture. The light must be Amber with a clear lens cover.

**WHELEN SUPER-LED FLASHING  
WARNING LIGHT, WINDOW LEVEL,  
REAR, RIGHT PANEL:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

The vehicle must be equipped with a Whelen M9 Super-LED warning light. The vehicle must include one (1) light assembly on the Rear right panel. The light is situated so when the back door is open, the light must be visible through the upper portion of the door window. All lights must include metalized flange chrome housing, designed for this fixture. The light must be Red with a clear lens cover.

**WHELEN SUPER-LED FLASHING  
WARNING LIGHT, WINDOW LEVEL,  
REAR, RIGHT PANEL:**

**Bidder Complies YES \_\_\_ NO \_\_\_**

The vehicle must be equipped with a Whelen M9 Super-LED warning light. The vehicle must include one (1) light assembly on the Rear right panel. The light is situated so when the back door is open, the light must be visible through the lower portion of the door window. All lights

must include metalized flange chrome housing, designed for this fixture. The light must be Amber with a clear lens cover.

**WHELEN LED FLASHING WARNING LIGHTS, OVER REAR WHEEL:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be equipped with M7 Whelen LED, Mini-Size flashing warning lights. Two lights must be provided, one over each rear wheel area. Red/White Split Color with clear Lens. The lights must incorporate integrated metalized flange chrome housing. Cast aluminum or other flanges are unacceptable.

### EXTERIOR VEHICLE LIGHTS AND EQUIPMENT

**WHELEN LED VEHICLE TAIL LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be equipped with two (2) Whelen M6 Super LED red stop/tail lights. The lights must be located on the lower outboard corners of each side of the rear of the vehicle. The body must be designed in such a way to eliminate the lights from being exposed to the elements from the backside.

**VEHICLE BACK-UP LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be equipped with two Whelen M6 Super LED, rear backup lights, one each side on the inboard side of the lower panel. The lights must operate any time the vehicle is placed in reverse. The light must include integrated metalized chrome housing. The body must be designed in such a way to eliminate the lights from being exposed to the elements from the backside.

**WHELEN LED POPULATED AMBER DIRECTIONAL LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

A pair of Whelen M9 Super LED amber arrow directional signal lights must be installed on the rear of the vehicle directly above the stop/tail and back-up lights. The lights must include integrated metalized chrome flange housing on each fixture.

**MARKER/CLEARANCE LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

LED Marker and Clearance lights must be installed on the front rear and both sides of the body to meet all Federal lighting requirements FMVSS 108.

**LOWER FLASHING MARKER LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

Two (2) Lower marker clearance lights must be installed on each side at the belt line area of the vehicle, one front, and one rear. The lights must be wired to the side directional lights and activate any time the vehicles directional switch is activated. The marker clearance light must also include an integrated reflex reflector into the lens.

**REAR EMERGENCY FLASHING LIGHTS, BRAKE LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

The two rear red flashing warning lights located at the rear, window level portion of the body, must be activated whenever the vehicles service brake is applied and the red flashing warning lights are on. These lights must be activated through a transfer relay circuit which under no circumstances must they be powered by the vehicles stop lamp switch only. The stop lamp switch must power the coil of the transfer relay only.

**RUNING BOARD LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

Whelen TIR3 Lights must be installed on the running board risers.

#### **EXTERIOR 12 VOLT FLOOD LIGHTS**

**WHELEN BROW LIGHT:** Bidder Complies YES \_\_\_ NO \_\_\_

A Whelen Model PFP2 is to be brow mounted on the cab roof, and switched separately.

**WHELEN SIDE M9, LED SCENE LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

Two (2) Whelen M9 Series Super LED Scene lights must be installed two (2) on the left upper side of the vehicle. The scene lights must include metalized chrome flange housings specifically designed for each light. Cast aluminum housings are unacceptable.

**WHELEN SIDE M9, LED SCENE LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

Two (2) Whelen M9 Series Super LED Scene lights must be installed two (2) on the Right upper side of the vehicle. The scene lights must include metalized chrome flange housings specifically designed for each light. Cast aluminum housings are unacceptable.

**WHELEN SIDE M9, LED SCENE LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

Two (2) Whelen M9 Series Super LED Scene lights must be installed on the upper rear of the vehicle, above the rear entrance doors. The scene lights must include metalized chrome flange housings specifically designed for each light. Cast aluminum housings are unacceptable.

**RIGHT SIDE SCENE LIGHT,** Bidder Complies YES \_\_\_ NO \_\_\_



**CONTROL:**

The right side scene lights of the vehicle must be controlled by two modes. The first mode of operation is the right side scene lights must function from the relay controlled circuit and lighted switch located in the driver's console. The second mode is the scene lights must be activated when the right side entrance door is opened. All circuits must be relay controlled. No load current must pass through the door post switch.

**LEFT SIDE SCENE LIGHT, CONTROL:** Bidder Complies YES \_\_\_ NO \_\_\_

The left side scene lights of the vehicle must function by the relay controlled circuit activated by the left scene lighted switch in the driver's console.

**REAR SCENE LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

The rear scene lights must automatically activate when the rear door is opened or when the vehicle is placed in reverse. All scene light circuits must be relay controlled.

**REAR SCENE LIGHT SWITCH:** Bidder Complies YES \_\_\_ NO \_\_\_

The rear scene lights mounted on the rear of the vehicle must be controlled "on/off" by a single pole lighted switch located in the driver's console. The rear scene light switch must override both backup function and the scene lights "on" with the door open function, and must not be affected by those circuits.

**RIGHT SIDE SCENE LIGHT CANCEL SWITCH:** Bidder Complies YES \_\_\_ NO \_\_\_

A right side scene light cancel switch must be installed directly inside the side entrance door. The switch must be mounted within the interior wall or cabinet. The switch must be a single pole momentary switch. The circuit must automatically turn off the right side scene lights and the step well light with a single touch of the switch. The circuit must automatically re-arm itself the next time the side entrance door is opened. The circuit must be relay controlled. The use of a manual cancelling door post switch is unacceptable substitution.

**REAR SCENE LIGHT CANCEL SWITCH:** Bidder Complies YES \_\_\_ NO \_\_\_

A scene light cancel switch must be installed directly inside the rear entrance door. The switch must be mounted within the cabinet adjacent to the door. The switch must be a single pole momentary switch. The circuit must automatically turn off the flood lights with a single touch of the switch. The circuit must automatically re-arm itself the next time the rear entrance doors are opened. The circuit must be relay controlled. The use of a manual cancelling door post switch is an unacceptable substitution.

**REAR SIDE FLOOD LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

The left and right, rear side, flood lights must activate when the vehicle is placed in reverse. The lights must illuminate to provide better side illumination when backing up the vehicle during periods of darkness. The circuit must be relay controlled, without the use of voltage reducing diodes or rectifiers. All flood and reverse circuits must function independently when the vehicle is not in reverse.

**CLIMATE CONTROL SYSTEM:**                      **Bidder Complies**    **YES**\_\_\_\_ **NO**\_\_\_\_

The Ambulance Climate Control System in the chassis must only function when the vehicle is in the run mode. This must be done to reduce the electrical load on the vehicle when the engine is not running.

**FLOW-THRU VENTILATION:**                      **Bidder Complies**    **YES**\_\_\_\_ **NO**\_\_\_\_

A high volume power exhaust ventilation system must be installed on the left rear side panel of the vehicle. It must consist of a 280 CFM, (2) speed blower motor, connected to a welded aluminum, transfer plenum. This plenum is directly connected to a set of dual closeable intake vents mounted in the face of the interior rear corner cabinet. On the exterior, a Cast Products polished aluminum cowl vent with an internal, rubber back flow flap must be installed on the exterior of the modular body. The cowl vent must be installed using a EPDM 40 to 60 durometer rubber gasket. Single speed blowers or blowers with resistor type speed control are unacceptable. Installations which produce excessive noise due to vibration must be cause for rejection.

**12V AIR CONDITIONING CONDENSER:**                      **Bidder Complies**    **YES**\_\_\_\_ **NO**\_\_\_\_

The vehicle must be equipped with a body 12 volt air conditioning condenser. The air conditioning condenser must be added to provide refrigerant cooling for the auxiliary compressor added for the body. The condenser must be fan cooled by a condenser mounted 12 volt cooling fan. The fan must be relay controlled and only be activated when the rear air conditioner unit is activated. The cooling rating of the condenser must be 40,000 BTU, and the air flow rate must be 2,800 CFM.

**DUCTED HEATER AND AIR CONDITIONING SYSTEM:**                      **Bidder Complies**    **YES**\_\_\_\_ **NO**\_\_\_\_

The unit must have a minimum capacity of 38,000 BTU Air Conditioner and 60,000 BTU Heat operating with 12 volt power. The unit will have a high performance 650 CFM Brushless blower fan with a five (5) year warranty. A receiver-dryer must also be installed on the evaporator case to remove moisture from the refrigerant system. The climate control unit must be permanently attached to the double ductwork system running full length of the ceiling of the vehicle. Each duct must be fully contoured with approximate dimensions of 5" wide and not protrude more than 2 3/4" from the ceiling. In addition each duct must have four (4) equally spaced from front to rear, fully adjustable 4-way adjustable louvers with shut off feature at each register. The duct work must be covered with a fully padded vinyl covering and incorporate the vehicles drop down

wire raceway cover in the center. The heater/air conditioner unit must be located in the front of the vehicle centered above the cab to body pass through. An air cleaner filter must be installed in the return air grille located in the underside of the cabinet.

The climate control unit must include a twin air return system. One mounted high and one mounted low for full air re-circulation. In addition the entire climate control unit must be double insulated first by the standard body insulation and secondly by a fully encompassing 5/16" thick reflective insulation. The reflective insulation must also extend the full length of the raceway duct, front wall and ceiling of the climate control cabinet. All heater hoses provided must be OEM style EPDM rubber type. The use of lesser quality hose or silicone hose is an unacceptable substitution. The systems heater must include an electric 2-way, internally piloted, normally closed solenoid valve which only opens when the heater unit is "On" and when the vehicle is running. The heater shut off valve must also include an emergency shut off switch located within the rear power distribution panel. All Air Conditioner hoses must be Goodyear Galaxy Type 4890. Barrier type hose must be unacceptable.

No exceptions or deviations to this system will be allowed due to its superior air distribution system and low noise characteristics. An exception will be cause for rejection of bid. Bidder/manufacturer must provide proof that this is an operating climate control system, offered as a standard component in their emergency vehicle production. Prototype systems are not acceptable. A user list of vehicles utilizing this system must be provided with the bid.

**ELECTRONIC DIGITAL DISPLAY                      Bidder Complies    YES \_\_\_\_\_ NO \_\_\_\_\_**  
**THERMOSTAT CONTROL:**

A digital electronic Climate Control thermostat must be used to monitor and control both air conditioning and heating in the rear patient compartment. The following features are included:

- A 1/2" backlit digital display, which displays both ambient and set temperatures. Ambient readout is displayed by default.
- Temperature adjustment is 50° F to 99° F or 10° C to 37° C.
- Seven (7) fan speeds standard. Three (3) and Five (5) speed options also available.
- The fan speed is easily controlled by using the color coded tactile up or down arrows.
- Manual mode and two (2) Automatic operation modes which maintain  $\pm 2^\circ$  ambient temperature from the set point.
- In Auto 1 mode the fan speeds must be automatically increased or decreased depending on the temperature differential in the vehicle. Fan speeds are also manually selectable.
- In Auto 2 mode the fan speeds must be automatically increased or decreased depending on the temperature differential in the vehicle. Fan speeds are NOT manually selectable.
- LED Indicators- Auto-Light Blue, A/C-Blue, Heat-Red
- Operation must be activated by chassis ignition with two (2) start-up modes available:
  - "PA" mode- Thermostat turns on using settings from the last use, including the 'OFF' condition.
  - "PL" mode- Thermostat turns on in Auto 1 mode with a set temperature of 72° regardless of previous settings.

- The thermostat unit temperature probe must be located mid-level in the patient compartment.
- An additional control panel and remote fan speed switch are available.

The use of spring or bimetallic household thermostat is unacceptable. Only automotive type units must be used.

**AUXILIARY COOLANT PUMP CLIMATE Bidder Complies YES \_\_\_ NO \_\_\_  
CONTROL SYSTEM:**

A Gorman-Rupp (GRI) auxiliary coolant pump with brushless motor must be installed to increase coolant flow to the rear heater core. The pump must be sized to provide required heat to rear unit, while not reducing the effective heat in the vehicle cab. A motorized hot water/coolant valve is part of this system to shut off the flow of hot water when not using heat. The pump and valve must be controlled by the vehicle climate control system thermostat. The pump and valve must be located in a protected location in a body compartment and easily serviceable if required.

**INTERIOR AND COMPARTMENT UTILITY LIGHTING**

**DOME LIGHTING: Bidder Complies YES \_\_\_ NO \_\_\_**

Six (6) Code 3 Vital Vio dome lights must be equally spaced down both sides of the ceiling. Each light must include the High/Low intensity feature. The lights must be relay controlled and have a lighted double throw switch in the rear Life Support panel. All lights to be mounted to vehicle frame work, not to ceiling panel material.

**DOME LIGHTS WITH DOOR OPEN: Bidder Complies YES \_\_\_ NO \_\_\_**

The dome lights mounted in the ceiling of the vehicle must be activated to the high intensity position when the personnel entrance doors are open. The circuit must be relay controlled and the dome light current must not be controlled by the door post switch.

**EXTERIOR COMPARTMENT LED STRIP Bidder Complies YES \_\_\_ NO \_\_\_  
LIGHTING:**

All exterior compartments must be provided with LED adhesive backed strip lights. Each compartment must have the lights installed on both the left and right vertical side of the compartment. Lights must be mounted on angled brackets for maximum illumination into the compartment. The compartment lights must be controlled by an automatic door post switch in each door. The compartment open indication light must activate anytime any compartment door is opened. The door post switch must activate the compartment lighting relays. The door post switch must not carry the current of the compartment lights.

**WHELEN LED STRIP-LITE Right Front, Bidder Complies YES \_\_\_ NO \_\_\_  
In/Out:**

An indirect light located in the Right front In/Out compartment area. The light must be a Whelen Level 3 intensity LED Strip light. The light will be controlled by the opening and closing of compartment doors.

**LSS LED PANEL LIGHT:** Bidder Complies YES \_\_\_ NO \_\_\_

An indirect light located above the Life Support Station counter must be used to illuminate the action area. The light must be a Heavy Duty LED panel light and be switched by a switch on the side of the light as well as from the rear switch panel. The rear panel light switch must also activate the light in the oxygen storage compartment.

**12 VOLT TECNIQ LED PATINET PROCEDURE LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

The ceiling of the ambulance must be equipped with two (2) TecNiq 42 LED light fixtures, mounted in the ceiling wire raceway. The lights must be located directly over the center position of the stretcher. The lights must be controlled by a separate relay controlled circuit and switch in the rear switch panel.

**STEPWELL LIGHT:** Bidder Complies YES \_\_\_ NO \_\_\_

An independent, recessed LED step well light must be provided in the rear side of the diamond plate step well and be automatically activated whenever the side entrance door is open. The exterior must be protected from weather and damage. All connections must be weatherproof, sealed connectors.

**12 VOLT TECNIQ LED LIGHTS:** Bidder Complies YES \_\_\_ NO \_\_\_

Four (4) 17", 42 LED fixtures must be installed and equally spaced in between the (6) dome lights. The fixtures must have reinforced housings with a plastic diffuser which locks in place. The lights must be relay controlled and switched by a lighted single pole switch in the rear Life Support switch panel. All lights must be mounted to the vehicle ceiling structural members and not to the ceiling panel material alone.

**ROUND DOME LIGHTS "ON" WITH SHORELINE :** Bidder Complies YES \_\_\_ NO \_\_\_

When the vehicle exterior power source is connected and the vehicle is being powered by the vehicles 12 volt battery charger, all six (6) Code 3 Vital Vio dome lights should be activated in the high intensity mode.

**DUAL DOME LIGHT SWITCHES:** Bidder Complies YES \_\_\_ NO \_\_\_

Per the requirements of KKK-A-1822, two independent dome light circuits with two independent switches must be provided to control two banks of (3) dome lights each. The switches must be marked in the Life Support panel as left dome light and right dome light. Each switch must power the low mode of the fixtures independently.

**12 VOLT MEDICAL OUTLET:** Bidder Complies YES \_\_\_ NO \_\_\_

One (1) 12 volt Power Point outlet must be provided. The outlet must be circuit breaker protected and provide a source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch. The outlet must be located at the Life Support Station.

**12 VOLT MEDICAL OUTLET:** Bidder Complies YES \_\_\_ NO \_\_\_

One (1) 12 volt Power Point outlet must be provided. The outlet must be circuit breaker protected and provide a source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch. The outlet must be located in the right front in/out access compartment.

**12 VOLT MEDICAL OUTLET:** Bidder Complies YES \_\_\_ NO \_\_\_

One (1) 12 volt Power Point outlet must be provided to charge 12 volt equipment. The outlet must be circuit breaker protected and provide a source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch. The outlet must be located in the right front upper compartment.

**12 VOLT MEDICAL OUTLET:** Bidder Complies YES \_\_\_ NO \_\_\_

One (1) 12 volt Power Point outlet must be provided. The outlet must be circuit breaker protected and provide a source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch. The outlet must be located on the left rear wall of the vehicle.

**12 VOLT MEDICAL OUTLET:** Bidder Complies YES \_\_\_ NO \_\_\_

One (1) 12 volt Power Point outlet must be provided. The outlet must be circuit breaker protected and provide a source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch. The outlet must be located above the cabinet at the head of the squad bench.

**12 VOLT MEDICAL OUTLET:** Bidder Complies YES \_\_\_ NO \_\_\_

One (1) 12 volt Power Point outlet must be provided. The outlet must be circuit breaker protected and provide a source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch. The outlet must be located on the passenger side of the cab console.

**5VDC DUAL USB:** Bidder Complies YES \_\_\_ NO \_\_\_

One Kussmaul 091-219, Dual 5VDC USB must be installed in the cab console.

**ANTENNA:** Bidder Complies YES \_\_\_ NO \_\_\_

A Coaxial Antenna lead must be prewired from a location in the wire raceway to the location of the two-way communication radios. The antenna lead in the roof must include a connector soldered to end of cable for install of two-way communication radio antenna.

**ANTENNA LEADS:** Bidder Complies YES \_\_\_ NO \_\_\_

Two (2) coaxial cable antenna leads, with base and cap, must be installed on the cab roof. They must run from the cab roof to the cab console.

**RADIO POWER LEAD:** Bidder Complies YES \_\_\_ NO \_\_\_

A 10 gauge constant power positive lead and 10 gauge ground must be provided with 30 amp circuit protection located in the rear Life Support Panel.

**RADIO POWER LEADS:** Bidder Complies YES \_\_\_ NO \_\_\_

A 10 gauge constant power positive lead and 10 gauge ground must be provided with 30 amp circuit protection. They must terminate in the cab console.

**RADIO POWER LEADS:** Bidder Complies YES \_\_\_ NO \_\_\_

An 8 gauge constant power positive lead and 8 gauge ground must be provided with 40 amp circuit protection. They must terminate in the cab console.

**COLOR BACK-UP CAMERA / MONITOR SYSTEM:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be equipped with an Audiovox Backup Camera / Monitor with Audio System. The camera and Monitor must be capable of transmitting a full color display. The cameras must be mounted on the back of the vehicle and include a waterproof switch for mirror or normal image. The camera must be capable of 110 degrees of horizontal image and 90 degree of vertical image. The monitor must be mounted on a 4" pivot pedestal from the cab ceiling between cab sun visors. The monitor must be a 7 inch full color LCD display screen. The monitor must be connected by a shielded cable to minimize interference.

The Back-up Camera system must automatically activate every time the vehicle is shifted into the reverse gear provided the control switch is set to the standby mode. Continuous monitoring is provided when the control switch is set to the manual mode, and not dependent on the reverse gear selection.

**REAR STEREO SPEAKERS:** Bidder Complies YES \_\_\_ NO \_\_\_

Two (2) low-profile, flush mounted, AM-FM Stereo Radio Speakers must be installed in the ceiling in the forward portion of the vehicle. The speakers must be spaced with other equipment provided, (1) each side. The speakers must be connected to the stereo radio within the cab dashboard. A "Volume Control" rheostat must be provided in the rear switch panel to allow speakers to operate independent of front speakers.

**PREWIRED STREAM-LITE LIGHT BOXES:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must be pre-wired for hand-held portable lights. The light boxes must be tied to the 12 volt constant circuit located within the vehicle. The 12 volt circuit must be properly labeled and circuit breaker protected at the battery source.

**INTELLITEC CLOCK W/SWEEP SECOND HAND:** Bidder Complies YES \_\_\_ NO \_\_\_

An Intellitec digital clock with sweep second hand and elapsed timer must be installed on the face of the angled 45 degree cabinet above the LSS area. The clock must be powered by a constant, protected, 12 volt source directly from the batteries.

The clock must have a 4-digit display to allow for easy viewing when seated in any position in the rear of the ambulance. The clock is 6.75 x 4.75 x 1.25 mounted in a 6" x 5" panel cut out using 4 screws.

**REAR SUSPENSION LOWERING SWITCH:** Bidder Complies YES \_\_\_ NO \_\_\_

The rear suspension system must be capable of lowering the height of the rear floor by the use of an electric dump solenoid. The solenoid must be activated when the left rear door is opened. An on/off override switch must be located just inside the left rear door to control the function of the suspension dump with the door. The suspension must rise to the ride position when the door is closed regardless of the switch position.

**115 VOLT AC ELECTRICAL:** Bidder Complies YES \_\_\_ NO \_\_\_

The vehicle must include a 115 volt AC Electrical system separate and distinct from the vehicles 12 volt electrical system. The entire system must be designed and tested to meet the requirements of the NFPA National Electrical Code (NEC) where applicable and use the balance of the NEC for general practices and procedures associated with high voltage 115/230 volt AC Electrical wiring and devices. The vehicle must also meet and be tested to all requirements of AMD standard 009. Test Documentation and verification must be provided upon request.

**115 VOLT ELECTRICAL SCHEMATICS:** Bidder Complies YES \_\_\_ NO \_\_\_



A complete wiring schematic must be provided which indicates the systems entire 115 volt Electrical System. The schematic must be done in the same format as the 12 volt wiring schematics and be provided upon delivery of the vehicle.

**115 VOLT WIRING:** Bidder Complies YES \_\_\_ NO \_\_\_

All wiring must be three (3) conductors, 10 GA or 12 GA minimum stranded copper cable as required by the circuit requirements. All conductors must have a 105 degree Celsius rated insulation, with tinned conductors rated at 600 volt. All cable wiring must be encased in high temperature protective loom where exposed.

**KUSSMAUL "SUPER AUTO-EJECT" SHORELINE:** Bidder Complies YES \_\_\_ NO \_\_\_

A 20 Amp Kussmaul "Super Auto-Eject" Shoreline Male Motor Base Model 091-55-20-120 must be installed on the left side of the body over compartment "B". The Shoreline must be waterproof type with spring loaded gasketed cover. The Shoreline must be wired to the junction circuit breaker box located within the power distribution panel compartment. The Shoreline auto-eject solenoid must be connected to the starter solenoid of the vehicle and only be activated when the key is in the start mode. The Shoreline must be equipped with a matching female connector designed for use with the auto-eject shoreline and shipped loose with the vehicle.

**SHORELINE POWER / BATTERY CHARGER INDICATOR LIGHTS;** Bidder Complies YES \_\_\_ NO \_\_\_

Dual operation indicator lights must be provided to indicate both live power of the shoreline and battery charger "charging". This must be located at the shoreline input connector. The "Live Power Shoreline" indicator must be a "rounded" 3/8" LED amber indicator and the "Battery Charger" indicator must be a "rounded" 3/8" green LED. The 115 volt indicator must indicate power has reached the interior outlets, not just the shoreline.

**115 VOLT POWER DISTRIBUTION BOX:** Bidder Complies YES \_\_\_ NO \_\_\_

A 115 volt power distribution box must be installed in the vehicles main electrical cabinet. The distribution box must consist of an enclosure with a 20 amp magnetic type circuit breaker installed. The circuit breaker must power duplex receptacles also mounted within the distribution box. All wiring and circuits provided must be sized for a 20 amp capacity, 12 gauge conductor minimum.

**ENGINE BLOCK HEATER:** Bidder Complies YES \_\_\_ NO \_\_\_

The Block Heater must be powered by the exterior shoreline power of the vehicle. A 115 volt Electrical conductor encased in high temperature loom must be routed to the engine compartment and have a quick connect Waterproof Connector on the end to plug into the engine block heater.

**ENGINE BLOCK "SHUT-OFF" SWITCH: Bidder Complies YES \_\_\_ NO \_\_\_**

A 115 volt AC toggle switch, 15 amp rated, must be located with the area of the electrical compartment to disconnect the engine block heater from the shoreline input feed. The wiring must be done in accordance with NFPA, NEC applicable codes.

**115 VOLT GFCI RECEPTACLE INTERIOR: Bidder Complies YES \_\_\_ NO \_\_\_**

115 volt AC Duplex Ground Fault Circuit Interrupter receptacle must be installed in the vehicle for protection of personnel. The GFCI must be "Lighted" duplex type. The Green light within the outlet must glow when live power is at the outlet, and extinguish to indicate when the GFCI is tripped. All other outlets within the vehicle must be wired downstream, and be GFCI protected. The location of the GFCI must be as follows, one (1) located on the back wall of the Life Support Station.

**115 VOLT OUTLET INTERIOR: Bidder Complies YES \_\_\_ NO \_\_\_**

115 volt AC Duplex Electrical outlet must be installed in the vehicle. The outlets must be "Lighted" hospital grade duplex type. The Neon light within the outlet must glow when live power is at the outlet. All outlets within the vehicle must be GFCI protected. The location of the outlet must be as follows, one (1) located on the left rear wall of the vehicle.

**115 VOLT OUTLET INTERIOR: Bidder Complies YES \_\_\_ NO \_\_\_**

115 volt AC Duplex Electrical outlet must be installed in the vehicle. The outlets must be "Lighted" hospital grade duplex type. The Neon light within the outlet must glow when live power is at the outlet. All outlets within the vehicle must be GFCI protected. The location of the outlet must be as follows, one (1) located in the right front compartment.

**115 VOLT OUTLET INTERIOR: Bidder Complies YES \_\_\_ NO \_\_\_**

115 volt AC Duplex Electrical outlet must be installed in the vehicle. The outlets must be "Lighted" hospital grade duplex type. The Neon light within the outlet must glow when live power is at the outlet. All outlets within the vehicle must be GFI protected. The location of the outlet must be as follows, one (1) located in the right front upper compartment.

**115 VOLT OUTLETS INTERIOR: Bidder Complies YES \_\_\_ NO \_\_\_**

115 volt AC Duplex Electrical outlet must be installed in the vehicle. The outlets must be "Lighted" duplex type. The Neon light within the outlet must glow when live power is at the outlet. All outlets within the vehicle must be GFI protected. The location of the outlet must be as follows, one (1) located above the cabinet at the head of the squad bench.

**1050 WATT INVERTER / 55 AMP  
CHARGER:**

**Bidder Complies** YES \_\_\_ NO \_\_\_

A Vanner Model 20-1050 CUL, 1050 watt inverter must be installed in the rear electrical equipment cabinet of the vehicle. The inverter must have a built in transfer switch to power equipment from both the shoreline or vehicle power. The unit must also include a 55 amp battery charger built into the unit. All battery leads to inverter must be powered by a 2 GA SXL battery cable, minimum, directly from the battery side of the vehicles master disconnect switch.

**VEHICLE PAINTING**

**PAINTING PROCESS:**

**Bidder Complies** YES \_\_\_ NO \_\_\_

The entire modular body must be prepared and painted using the Akzo Nobel Sikkens Paint System. Sikkens products will be used exclusively, and the use of other incompatible products will be cause for rejection of the bidders' response.

**REQUIRED PAINT PROCEDURES:**

**I. Surface Cleaning**

**Bidder Complies** YES \_\_\_ NO \_\_\_

2. The vehicle module will be inspected for excess fuser, weld slag, and caulking. All such contaminants will be removed prior to prepping for paint.
3. The module will be surface cleaned with Sikkens OTO Degreaser utilizing the "2-Towel" method. One towel will be used to apply the product (saturate and scrub the surface area being cleaned), and one towel will be used to physically dry the area. All proper HS&E practices will be followed.
4. The surface cleaner will not be allowed to evaporate by working small areas.
5. Both towels will be replaced as they become dirty.
6. Inspect the module body during the cleaning process for any surface defects of irregularities.
7. The bottom of the module body, the doors, and door openings are to be sealed with a 3M sealant/adhesive to fill all gaps and seams to protect against moisture being trapped, and to help protect against corrosion.

**II. Polyester Repairs**

**Bidder Complies** YES \_\_\_ NO \_\_\_

1. All areas requiring body work must be ground down with 36 grit and feather edged with 80 grit DA.
2. All areas with body work must be filled with Evercoat Z-grip body filler.

3. All body work must be sanded with 80 grit and finished with 180 grit sandpaper.
4. Evercoat Eurosoft glazing putty is applied over any body filler to fill any pin holes and minor waves.
5. The glazing putty is to be finish sanded and feather edged with 180 grit sandpaper prior to paint.
6. Sand/abrade all areas that require the application of LV260 epoxy primer with 180 grit.
7. Thoroughly clean and degrease with Sikkens OTO Surface cleaner.
8. Apply Auto Prep Pre-Treatment Wipes to all bare metal or aluminum surfaces extending slightly into the polyester repaired areas and extending far enough on to the substrate to allow the LV260 epoxy primer to be applied inside the Auto Prep Pre-Treatment Wipe area.
9. All body work is to be primed with LV260 epoxy primer, and final sanded with 320 grit sandpaper.
10. All edges of the module body, doors, and door openings are to be rounded for maximum paint mils.
11. All body work requires a Quality Assurance inspection to check for pin holes, gaps, scratches, and blemishes. All edges are to be rounded, and all sealant is to be sanded before epoxy primer application.

**III. Surface Preparation --- Brightener Process**

**Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_**

1. Fully rinse module with D.I. water.
2. Mix 35 Oz. Brightener to 500 oz D.I. water.
3. Apply Brightener solution from the top of the module working down while scrubbing with a brush to insure complete surface contact and mechanical cleaning.
4. Allow approximately 5 minutes dwell time on the surface.
5. Rinse thoroughly with D.I. water. Water must "sheet" cleanly over the aluminum surface. If required, repeat process.

**IV. Surface Preparation --- Application of Gardobond 4707**

**Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_**

1. Mix 300 milliliters of Gardobond 4707 to 2 gallons of D.I. water.
2. Apply Gardobond solution starting at the top of the module and working down using approved spray equipment while maintaining at least 50 % overlap application process.
3. Allow 5 minute dwell time on the surface.
4. Rinse thoroughly with D.I. water.
5. Blow off excess water with air blower concentrating on recessed areas and seams.
6. Blow off and bake dry in spray booth (140 degrees for 45 minutes), and recheck for residual water.
7. Tack and proceed with painting process.

**V. Door Preparation**

**Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_**

1. Follow same procedures as for exterior module body preparation.
2. Inner doors must be coated in designated areas with "cavity wax" after finish process has been completed.

**VI. Surface Preparation for Small Repairs**

**Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_**

1. Surface clean substrate utilizing Sikkens OTO surface cleaner as per recommended process.
2. Prepare surface using aluminum P-180 grit DA or 3M0774 Red scuff pads.
3. Final surface clean with Sikkens OTO Surface Cleaner as per recommended process.
4. Apply AutoPrep Pre-Treatment wipes as per recommended process utilizing a "double wipe" method with a 50-75% overlap.
5. Allow one minute dwell time for solution to react with base metal.
6. When completely flashed off, proceed with Sikkens High Build Surfacer Gray.
7. Do not apply any type of polyester products over AutoPrep Pre-Treatment Wipes.

**VII. E-Coat Application Process**

**Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_**

1. Mix LV260 Primer EP at 3:1+10% ratio utilizing the #9 Sikkens measuring stick.
  - a. 3 parts LV260 Sealer

- b. 1 part LV260 Hardener
  - c. 10% (of the A-component) reducer slow
2. Apply one single flowing coat while maintaining a 50 to 75% overlap and a distance of 6 to 8 inches.
  3. Adjust fan pattern and atomizing air pressure to minimize texture and overspray.

**VII. Undercoat Painting Process-LV 650 Sealer**      Bidder Complies    YES \_\_\_\_\_ NO \_\_\_\_\_

1. Mix Autocoat LV 650 Sealer at 5:1:1 ratio utilizing the #23 Sikkens measuring stick.
  - d. 5 parts LV Sealer
  - e. 1 part LV 650 Hardener
  - f. 1 part LV 650 Reducers
2. Apply one single flowing coat while maintaining a 50 to 75% overlap and a distance of 6 to 8 inches.
3. Adjust fan pattern and atomizing air pressure to minimize texture and overspray.
4. Use SATA RP 1.0-1.1 equipment for best results.

**IX. Auto Base Plus Color Mixing Process**      Bidder Complies    YES \_\_\_\_\_ NO \_\_\_\_\_

1. Mix Auto Base Plus at 100:5 with LV 650 Hardener utilizing the #14 Sikkens measuring stick. Stir mixture completely.
2. Mix 100 parts of above combination with 80 parts Sikkens HP Reducers.
3. Solvent selection should be slow enough to provide good flow and melt in characteristics.

**X. Application of Auto Base Plus Colors**      Bidder Complies    YES \_\_\_\_\_ NO \_\_\_\_\_

1. For solid colors, apply 2 single coats allowing 5 to 7 minutes flash-off between each coat.
2. For metallic colors, apply 2 single coats at approximately 6 inches from the module allowing 5 to 7 minutes flash-off between each coat. Even out the metallic pattern an orientation coat after the second coat has flashed off completely.

**XI. Autocoat LV650 Clear Coat Mixing Process**      Bidder Complies    YES \_\_\_\_\_ NO \_\_\_\_\_

1. Mix Autocoat LV650 Clear Coat at a ratio of 5:2:2

- g. 5 parts LV650 Clear
- h. 2 parts LV650 Hardener
- i. 2 parts LV650 Reducer

2. Once it is mixed, Autocoat LV650 Clear has a pot life of 1.5 hours at 70 degrees F.

**XII. Application of Autocoat LV650 Clear** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_  
**Coat**

- 1. Apply three full wet coats allowing a 5 to 10 minute flash off period between each coat.
- 2. Adjust fan pattern and atomizing air pressure to minimize texture and overspray.
- 3. Force drying of Autocoat LV650 Clear
  - j. Allow 10 to 15 minute flash in booth after application of second coat.
  - k. Bake at 140F for 45 minutes.
  - l. Allow a 10 minute cool down in booth.
  - m. Air dry for approximately 8 hours at 70F prior to any polish or detailing.

**XIII. Sikkens System Dry Film Build** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_  
**Requirements**

- 1. High Build Surfacer Gray---2.0 to 2.7 mils per coat. ( not included in total film build calculation)
- 2. E Coat---LV260 Primer EP---One coat at 1.0 to 1.5 mils per coat.
- 3. Primer Sealer---LV650---One coat at 1.0 to 1.4 mils per coat.
- 4. Base Coat--- Autobase Plus---Two to three coats at 0.3 to 0.4 mils per coat.
- 5. Clear Coat---LV650 Clear---Three coats at 0.9 to 1.1 mils per coat.
- 6. Total Dry Film Build System range---5.7 to 7.4 mils.
- 7. Total Dry Film Build System after detail/polish---4.7 to 6.4 mils.

**PAINT CORROSION PROTECTION:** Bidder Complies YES \_\_\_\_\_ NO \_\_\_\_\_

All exterior fastener locations that penetrate the paint on the modular body are to be treated with Electrolysis Corrosion Kontrol (ECK). Every external fastener hole must have ECK brushed into and around the hole for full coverage. The perimeter of the hole must be covered with a minimum of .5 diameter of ECK. This is to protect the head of the fastener from touching the painted surface. All applications of ECK are to take place before component mounting. The

fasteners that are included in this process are for the following components: Lights, hinges, diamond plate panels, entrance and compartment door panels, fuel fill, license plate holder, shoreline, vent covers, rain gutters, rub rails, fenderettes and door grabbers. Additional items that are mounted to the painted body will also be included. When an item is cut into the body causing an unpainted edge, the unpainted edge must be completely coated with ECK prior to component mounting.

**TEN YEAR PAINT WARRANTY**                      **Bidder Complies**    **YES**\_\_\_\_ **NO**\_\_\_\_

The manufacturer will warranty to original purchaser that the Paint is free from specific paint defects for 10 years from date the vehicle is delivered. Manufacturer will warranty 100% labor & materials for the following defects: coating system integrity, coating adhesion and UV related degradation, gloss retention and color retention, cracking or checking of the paint film, and delaminating from the substrate or intercoat. The manufacturer will warranty materials and labor to repair defects resulting from dissimilar metals and crevice corrosion for a period of 5 years, or 60,000 miles from date of delivery. The bidder must include statement of warranty policy with bid.

**PAINT ADHESION TESTING:**                      **Bidder Complies**    **YES**\_\_\_\_ **NO**\_\_\_\_

The manufacturer must utilize a customized paint adhesion testing procedure to insure and verify that proper bonding of the coatings to the substrate surface, has taken place. This test is performed on an intentional, sacrificial test surface just prior to the final polish stage. The coatings are cross hatch cut down to the substrate on multiple areas of the test surface. An adhesion tape of Permacel 99 (or the equivalent) is bonded and then removed to verify the permanent bond of the coatings. Each test surface panel is dated, logged and saved. The performed adhesion test is designed to exceed the ASTM spec D 3359, "Standard Test Method for Measuring Adhesion by Tape Test".

**MODULAR BODY PAINT COLOR:**                      **Bidder Complies**    **YES**\_\_\_\_ **NO**\_\_\_\_

The entire modular body will be Red. The paint code number for the required color will be NAV 2785.

**CAB PAINT :**    **Bidder Complies**    **YES**\_\_\_\_ **NO**\_\_\_\_

The cab color must remain OEM manufacturer's Cab color as specified in the chassis spec portion of this document.

**LETTERING, STRIPING, AND GRAPHICS:**                      **Bidder Complies**    **YES**\_\_\_\_ **NO**\_\_\_\_

The completed vehicle will be lettered, striped, and have all graphics applied to meet KKK regulations, and to match the current first-line rescue units that are operating for the Warwick Fire Department.



**VINYL REFLECTIVE STRIPE IN C-CHANNEL RUB RAILS:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

A 1 -1/2" wide red vinyl reflective stripe must be installed within the inner cove of the "C" Channel Rub-Rails.

**VISION SHIELD BODY WINDOWS:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

All body window must be covered with Vision Shield. The windows on the rear doors must have gold SOLs.

**COMMUNICATION RADIO EQUIPMENT WITH MOUNTING:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

The bidder must include providing and installing two-way radio equipment in the vehicle. The price should include remote mount installation, programming, and any additional connectors and cables necessary to make the radio operational. The required radio is a Motorola APX 7500 Multi-Band Mid-Power Mobile Radio (M30TSS9PW1AN) to include the following items:

- Palm Microphone, GCAI water resistant
- Remote mount cable, 30ft
- Astro digital CAI operation
- Remote mount mid-power
- 7/800 MHZ primary band
- VHF MP secondary band
- 3 yr SFS lite
- Enable dual band operation
- Smartzone operation APX
- Speaker, 15 watt, water resistant
- APX 05 Control head
- APX control head software
- 3db Gain Low-Profile antenna, 762-870 MHz
- 3bd Gain VHF Wideband antenna, 136-174 MHz
- P25 trunking software
- DVRS MSU activation
- SW key supplemental data

**RUBBER MUD FLAPS:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

Rubber mud flaps must be provided behind the rear wheels of the vehicle. They must be Heavy Duty Truck type and bolted to the inner fender liners of the modular body, behind the rear tires.

**FRONT AND REAR END ALIGNMENT:**

**Bidder Complies** YES \_\_\_\_\_ NO \_\_\_\_\_

The Chassis must be checked and adjusted for proper front and rear alignment after the ambulance body is mounted and the vehicle is ready for delivery.

**EQUIPMENT:** **Bidder Complies** YES \_\_\_ NO \_\_\_

Two (2) 5 lb. Fire Extinguishers, ABC must be provided and installed per customer's requirements. Included will be (2) #862 Amerex Mounts.

**DEFIBRILLATOR BRACKET:** **Bidder Complies** YES \_\_\_ NO \_\_\_

An NCE H7000 Swivel Bracket for Life Pak 12/15 which has been certified to SAE J3043 must be provided and installed per customer's requirements.

**ZICO QUICK RELEASE BOTTLE BRACKETS:** **Bidder Complies** YES \_\_\_ NO \_\_\_

(4) Zico, Quick Release Strapless "D" Bottle Bracket Model QR-D-2 must be provided and installed. Two will be located in the recessed stepwell area, and two will be located within Compartment "A"

**PREP, CLEAN, AND DETAIL VEHICLE:** **Bidder Complies** YES \_\_\_ NO \_\_\_

The new vehicle must be cleaned and detailed both inside and out, for final delivery.

**FILL FUEL TANK:** **Bidder Complies** YES \_\_\_ NO \_\_\_

The fuel tank must be filled at the time of vehicle delivery.

**END OF SPECIFICATIONS**