

**Specifications for:  
Type III Ambulance – 146”L x 90”W x 68”HR  
2023 Chevrolet G-3500 Gas**

**Wyoming County Emergency Services  
151 North Main Street  
Warsaw, NY 14569**

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes

No

**AUTOMOTIVE EMERGENCY MEDICAL SERVICES AMBULANCE**  
**Type III Chevrolet G-3500 Gasoline - 146”L x 90”W x 68”HR Module**

**Table of Contents**

- 1.0 MANUFACTURER
- 2.0 CHASSIS
- 3.0 MODULE CONFIGURATION
- 4.0 MODULE CONSTRUCTION – GENERAL
- 5.0 FLOOR CONSTRUCTION
- 6.0 SIDE STRUCTURE
- 7.0 ROOF CONSTRUCTION
- 8.0 DOOR CONSTRUCTION
- 9.0 COMPARTMENT CONSTRUCTION & CONFIGURATION
- 10.0 CORROSION: Anti-electrolysis procedures
- 11.0 REAR BUMPER
- 12.0 BODY PROTECTION
- 13.0 CABINERY
- 14.0 CABINET CONFIGURATION
- 15.0 UPHOLSTERY
- 16.0 INTERIOR HARDWARE
- 17.0 OXYGEN, VACUUM SYSTEMS
- 18.0 ELECTRICAL SYSTEM - 12-Volt Direct Current
- 19.0 ELECTRICAL SYSTEM - 125-Volt Alternating Current
- 20.0 ENVIRONMENTAL
- 21.0 CONSOLES, SWITCH PANELS
- 22.0 VISUAL CONSPICUITY - EXTERIOR LIGHTING
- 23.0 AUDIBLE CONSPICUITY
- 24.0 INTERIOR LIGHTING
- 25.0 COMMUNICATIONS EQUIPMENT
- 26.0 PAINT, LETTERING, DECALS, MISCELLANEOUS
- 27.0 REFERENCES AND STANDARDS
- 28.0. ADDITIONAL EQUIPMENT

# Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies  
Exactly as Written

Yes No

## **SCOPE & GENERAL REQUIREMENTS**

This specification describes a commercial cutaway chassis with a transferable modular body converted into a Type III, 4x2 ambulance configuration as defined in the currently approved Federal Specification for Star-of-Life Ambulance KKK-A-1822 inclusive of all GSA change notice requirements. Unless otherwise specified, this vehicle shall be manufactured in accordance with these current requirements along with the design and safety requirements of the National Highway Traffic Administration and the U.S. Department of Transportation. Documentation shall be submitted with the bid that validates the manufacturer's current and full compliance with the current KKK-A-1822 requirements or submits proof of the manufacturer's intent to have this testing completed prior to delivery of the proposed new ambulance. The completed vehicle shall not be accepted if not in full compliance. The ambulance described herein shall be type and model tested to and in compliance with the National Truck Equipment Association's Ambulance Manufacturing Division, Standards 001 – 028 and all currently required SAE test requirements. Certifications must be current to manufacturer's most recent manufacturing/engineering design criteria.

The standard for the configuration and design of this ambulance exceeds the current KKK Federal Specification due to the requirements of this department. Manufacturers who are unwilling or unable to meet the requirements herein will not be considered.

The primary manufacturer shall submit proof that it is a 'member in good standing' with the Ambulance Manufacturers Division (AMD) of the National Truck Equipment Association (NTEA).

The purpose of these specifications is to provide a set of minimum general requirements and test parameters for the manufacture of an emergency medical care ambulance that meets the needs and desires of this agency. The bidder is responsible for understanding that this specification establishes the essential criteria for design, performance, equipment and appearance of the ambulance or rescue vehicle. This specification requires an all-aluminum modular exterior and interior wall structure. The compartment and cabinet sizes are critical, and changes will not be allowed. While it is not the intent of this specification to preclude any qualified bidder, it must be clear that any bidder deviating in any substantial manner from these specifications will be rejected as non-compliant.

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

The bidder is fully responsible for carefully reviewing every requirement of this specification and to respond by checking yes or no for compliance. Requirements in this bid that are not checked off with a Yes or No response will automatically be interpreted as non-compliant and incomplete. The bidder must include separate documentation clearly marked "Exceptions" that includes line-item references to the page number and category where any exception is taken. Written responses, in lieu of the required yes or no response will not be accepted. All

# Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies  
Exactly as Written

Yes No

“Yes” responses will be interpreted as an indication of strict compliance with the written requirements of these specifications. Incomplete or inconsistent bids will be rejected.

Bids taking total exception to these specifications or bids submitted for stock units not meeting these specifications will automatically be rejected.

All bid prices shall be complete and include warranty and delivery of the completed vehicle to the purchaser. Payment shall be made in accordance with the terms, and conditions of these specifications. Payment will be made upon delivery and acceptance of the vehicle(s) and equipment specified herein.

Bid prices shall be valid for 30 days from the date of the bid opening, or as otherwise specified in the bid proposal. Payment in full will be made as each unit is received, inspected and found to comply with these specifications. The vehicles(s) shall be free of damage and properly invoiced.

It is the intent of this bid document to make available to other entities, by mutual agreement with the successful bidder, the right to purchase the same or like equipment and or products, at the prices quoted, subject to regular price increases, for the period of the contract. Each bidder shall indicate in the bid proposal if the bidder will honor other entities’ orders, in accordance with contract terms and conditions. This procedure is sometimes identified as a “piggy-back” bid.

By submission of this signed bid response, the bidder certifies under penalty of perjury, that to the best of his/her knowledge that the pricing in this bid response has been prepared independently without collusion, consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such pricing with any other bidder or competitor. The bidder also acknowledges that the pricing quoted has not been discussed with or disclosed by the bidder prior to the opening of the bid, either directly or indirectly.

Company shall not be liable or responsible to Purchaser, or be deemed to have defaulted or breached these Standard Terms and Conditions, for any failure or delay in fulfilling or performing any of these Standard Terms and Conditions when and to the extent such failure or delay is caused by or results from acts or circumstances beyond the reasonable control of Company including, without limitation, acts of God, flood, fire, earthquake, explosion, governmental actions, war, invasion or hostilities, terrorist threats or acts, riot or other civil unrest, national emergency, revolution, insurrection, epidemic/pandemic, telecommunication breakdown, power outage, lockouts, strikes or other labor disputes (whether or not relating to either party's workforce), restraints or delays affecting carriers, inability or delay in obtaining chassis from an original equipment manufacturer or other supplies of adequate or suitable components or materials at reasonable prices.

## **1.0 MANUFACTURER**

1.1 Shall be a modified vehicle up fitter approved by the OEM chassis manufacturer whose chassis is used to complete this Specified vehicle. Additionally, the manufacturer shall hold current certification in the Ford Motor Company Qualified Vehicle Modifier Program, and shall submit a copy of the QVM certificate as part of the bid proposal. This certification

# Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies  
Exactly as Written

Yes	No
-----	----

ensures the integrity of the “conversion” of a vehicle into an ambulance regardless of chassis make.

1.2 Shall submit a copy of current certification of compliance with Federal Specification KKK-A-1822 for the type vehicle described herein, as prepared by an ISO/IEC 17025 certified, independent, third-party testing laboratory.

1.3 Shall carry not less than ten million dollars (\$10,000,000.00) in product liability insurance. The bidder's proposal packet shall include a copy of the ambulance manufacturer's current insurance certificate.

1.4 Shall employ full-time Parts personnel.

1.5 Shall employ a full-time Electrical Troubleshooter.

1.6 Shall employ a full-time Service/Warranty Representative.

1.7 Shall furnish custom Computer Aided Design (CAD) interior and exterior construction drawings specific to the vehicle to be produced under this Specification. Drawing dimensions must comply with AMD Standard 019- Measuring Guidelines: Cabinets and Compartments

The drawing package shall include the following:

1. Streetside Exterior Detail
2. Curbside Exterior Detail
3. Front & Rear Exterior Detail
4. Streetside Interior Detail
5. Curbside Interior Detail
6. Front & Rear Interior Detail
7. Overhead Floor Layout Detail
8. Overhead Ceiling Layout Detail

1.8 Shall furnish custom CAD electrical illustrations (including physical layouts of switch panels and electrical component mounts) and electrical schematics specific to the vehicle to be produced under this Specification.

1.9 Shall furnish proof of manufacturing complete ambulance packages for a minimum of 15 years.

1.10 The ambulance and the allied equipment required by this specification shall be the manufacturer's current commercial ambulance model of the type and class specified. The ambulance shall be complete with the required options and accessories as specified herein. Items will be furnished with such modifications as may be necessary and specified to enable the ambulance to function reliably and efficiently in a strenuous, sustained operation. The design of the vehicle and the specified options shall permit accessibility for servicing, replacement and adjustment of components and accessories with minimum disturbance to other components and systems. The term "heavy-duty" as used, shall describe equipment or items that are in excess of the usual quality or capacity that is normally supplied with standard production vehicles or components.

# Wyoming County Emergency Services - **BID SPECIFICATIONS**

**Bidder Complies  
Exactly as Written**

Yes	No
-----	----

1.11 This department requires that the manufacturer of the ambulance be a 100% American owned company. American owned defines the manufacturer as well as the majority equity owners of the manufacturer as US companies, individuals and/or stockholders.

The ambulance and the allied equipment required by this specification shall be the manufacturer's current commercial ambulance model of the type and class specified.

1.12 The bidder shall be obligated to provide an estimated delivery time from award of bid and a selection of flooring, upholstery and graphics design and colors for the customer to make the appropriate selections. These color selections shall become a part of the customer's order and the bidders manufacturing document.

1.13 The bidder's proposal packet shall include copies of all warranties listed in these following detailed specifications. The minimum acceptable required warranties are: Conversion Warranty, Electrical Warranty, Modular Structural Warranty and Paint Warranty. The bidder shall include a copy of these warranties within the proposal package. If the bidder does not include a copy of the warranties, the bid will automatically be rejected.

Manufacturer's Name: \_\_\_\_\_

Address: \_\_\_\_\_

Contact Person for Questions Regarding Bid: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Name of Authorized Agent: \_\_\_\_\_

Signature of Authorized Agent: \_\_\_\_\_

Date: \_\_\_\_\_

**SERVICE ABILITY FORM**

**Service Center Location:**

\_\_\_\_\_

Distance in miles (one way) from local service center Location to the Purchaser's Location is: \_\_\_\_\_ miles.

Is this shop an authorized warranty center for the apparatus builder?

Is this shop owned and operated by the dealer of the ambulance being bid?

Is the Service Center enclosed and heated?

Number of full time Service Center Employees: \_\_\_\_\_

Number of fully equipped mobile service vehicles: \_\_\_\_\_

**Wyoming County Emergency Services - BID SPECIFICATIONS**

**Bidder Complies  
Exactly as Written**

**Yes      No**

**Is your shop equipped to handle the following repair work:**

Cab & Chassis Repairs:

Body Repairs:

Paint Work:

General Fabrication:

General Welding:

Frame & Spring Repairs:

Power Train Repairs:

Electronic Diagnostic and Repair:

**SERVICE CENTER REQUIREMENTS**

The Purchaser places a very high priority on service. All bidders shall therefore provide complete details, in writing with photos of their ability to service the apparatus proposed, including but not limited to the following:

1. Service facility: size, location, bays, paint and body capabilities, fabrication capabilities, lift capabilities, and other capabilities. Provide photos.
2. Mobile service vehicles: number and limitations. Provide photos.
3. Certified service employees: number of EVT and ASE certified technicians.
4. Service: hours of operation.
5. Emergency contact and service outside of regular business hours.
6. Parts volume at local service facility. Provide dollar amount and photos of local parts inventory.

The service ability section of these specifications will be a major factor in determining the successful bidder. Limited manpower does not allow for the apparatus to be taken to various places for repairs. It is the desire of the Purchaser that repairs to the apparatus that can be reasonably accomplished in the fire station shall be done so to reduce the out of service time of the apparatus.

The bidder's factory authorized service center shall have a minimum of two fully equipped service vehicles, which shall carry spare parts and repair equipment needed to work on the apparatus proposed.

The bidder's service center shall have a fully enclosed and heated facility which shall be located within **100** miles of the fire station where the apparatus proposed will be housed after delivery, and must be owned and operated by the agency selling the apparatus. This facility

# Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies  
Exactly as Written

Yes	No
-----	----

shall have adequate security to protect this Agency's equipment while undergoing necessary service or repair. The service center shall be certified by the apparatus builder and shall be able to provide body, paint, electrical, hydraulic, HVAC and chassis repairs. **NO EXCEPTIONS**

The local service center shall be available for an inspection by designated representatives of the purchaser prior to bid award.

**Outsourcing repairs of any type shall not be acceptable.** Certified technicians employed by the dealership representing the apparatus being proposed shall complete all repairs.

Proof of dealerships liability insurance with a minimum of five (5) million dollars coverage, workers compensation, EPA and DEC compliance, as well as current business certificates must be submitted upon request.

**There shall be no exception to the Service Ability section of these specifications.**

**BIDDERS AFFIDAVIT**

**Bidders Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

I, \_\_\_\_\_ as the authorized agent for \_\_\_\_\_ do hereby swear and affirm that the following information is true and that the proposal that our firm is submitting complies with all the General Instructions, Requirements, and Specifications contained in this Bid Package, except where indicated below.

1. The apparatus offered is manufactured in the United States of America:
2. The apparatus proposed is not a prototype:
3. The performance tests shall be performed in compliance with the specifications:
4. All pages of the General Instructions, Requirements, and Specifications have been received and reviewed:
5. All questionnaires and blanks have been completed and filled in:
6. Bidder complies with Specifications without Exception:
7. Bidder complies with Design Criteria:
8. Bidder has included Apparatus Drawings per Specifications:
9. Apparatus proposed complies with dimensional requirements:
10. The manufacturer provides a program for the familiarization for the purchaser:
11. The manufacturer meets the \$10,000,000.00 product liability insurance requirement:



Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

- 12. All specified warranties are included:
- 13. All proposed warranties are in compliance with specifications and term length:
- 14. The proposed apparatus and equipment new in all respects:
- 15. A complete copy of the bidder's detailed proposal is included:
- 16. A separate sheet of exceptions is attached:
- 17. Service Ability form completed and attached:
- 18. Dimensions of the proposed apparatus are as follows:

Module Headroom: 68"

Module Length: 146"

Module Width: 90"

**2.0 CHASSIS**

2.1 TYPE III AMBULANCE: The apparatus shall be a Type III, Class 1, 2-door, 2023 model year Chevrolet G-3500 Cutaway van with a transferable, modular ambulance body.

2.2 AMBULANCE PREPARATON PACKAGE: The chassis provided shall be equipped with an ambulance preparation package designed and installed by the O.E.M. The package shall be designed to meet the demands and duty cycles inherent in Emergency Medical Vehicles. The chassis shall be equipped with dual 770CCA OEM batteries.

2.3 THROTTLE – HIGH IDLE: An O.E.M. throttle control shall be provided. The throttle shall be programmed for charge protect. The throttle control module shall be located in the console base.

2.4 GROSS VEHICLE WEIGHT RATING (GVWR): The GVWR of the chassis supplied shall be at least 12,300 pounds.

2.5 FRONT AXLE WEIGHT RATING (GAWR-F): The GAWR-F shall be rated at no less than 4300 pounds.

2.6 REAR AXLE WEIGHT RATING (GAWR-R): The GAWR-R shall be rated at no less than 8600 pounds.

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

2.7 REAR AXLE TYPE AND RATIO: The axle type shall be limited slip differential with a 3.73 gear ratio.

2.8 ENGINE: A 6.6L Direct Injection V-8 gasoline engine rated at 401HP @ 5,200 rpm / 464 lb. ft. @ 4,000 rpms shall be provided. The engine performance shall comply with or exceed all applicable KKK-A-1822 and AMD Standards.

2.10 TRANSMISSION: A 6-speed automatic, heavy-duty electronically controlled with overdrive and tow/haul mode. Includes Cruise Grade Braking, Powertrain Grade Braking, and Tap-Up/Tap-Down Driver Shift Control (Requires (L8T) 6.6L gas V8 engine shall be provided.

2.11 BATTERIES/ALTERNATOR: Two OEM batteries shall be mounted to provide easy access for servicing. The batteries shall be at least 770 CCA each. The engine shall be equipped with a single 220-amp alternator.

2.12 BRAKES: 4-wheel anti-lock, power assisted hydraulic brakes shall be supplied by the O.E.M. The brakes shall be 4-wheel Disc type. The parking brake shall be an independent mechanical brake, provided by the O.E.M.

2.13 TIRES: All tires shall be identical make, tread type, size and load range. For aforementioned GVWR the tires shall be LT225/75R16E. A label with the recommended tire pressure shall be located above each wheel opening, unless specified otherwise by the purchaser. All tires shall be balanced per KKK-A-1822F 3.6.10.

2.14 STAINLESS-STEEL WHEEL INSERTS: Stainless-steel Wheel Inserts shall be installed. Both rear wheels shall have braided valve extenders installed. Wheel inserts shall not be attached to the wheels utilizing the OEM lug nuts.

2.15 MUD FLAPS: Heavy duty rubber Mud Flaps shall be provided behind the rear dual wheels.

2.16 SPARE TIRE: One (1) spare tire and wheel assembly shall be supplied. When the tire is to be carried on the unit, the tire hold down and O.E.M. jack and tire tools shall be provided with the spare.

2.17 OCCUPANT RESTRAINT SYSTEM: The front, forward facing cab seats shall be equipped with O.E.M. installed Type II lap and shoulder belt assemblies.

The seat belts shall have pre-tensioners built into the seatbelt assembly to take up belt slack during a frontal collision. The seat belt assemblies shall meet or exceed F.M.V.S.S. 208 and

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

209. Any transition trim panels installed in the cab shall not interfere with the swivel arc of the shoulder rings.

2.18 SUPPLEMENTAL RESTRAINT SYSTEM: An O.E.M. air bag shall be installed on the driver and passenger side. Permanent or quick release ambulance conversion components shall not interfere with air bag deployment. The air bags must be completely operational. Modifications by the secondary manufacturer are not acceptable.

2.19 FUEL TANK: The fuel capacity shall be at least 32 U.S. gallons. The fuel range shall be at least 250 miles per KKK-A-1822F 3.4.8.

2.20 CAB SEATS: O.E.M. High back, stain-resistant cloth covered bucket type seats shall be provided in the cab. The seats shall adjust forward and aft. Seat base must be O.E.M. After-market seats and/or bases are not acceptable due to certified requirements regarding S.R.S. (Air bag) deployment geometry. The seats shall have external moisture repellant in case of contact with blood or body fluids.

2.21 CAB STEREO: An O.E.M. AM/FM/CD in dash radio shall be included with the chassis.

2.22 MIRRORS: Dual Velvac 2020XG deluxe heated/remote controlled mirrors with built in convex mirror shall be provided. The chassis shall come with OEM installed option 8D8 prewire for the Velvac mirrors.

2.23 DOOR LOCKS: The cab doors shall have O.E.M. power door locks. The system shall include a remote keyless entry system with two key fobs. A momentary rocker type switch shall active (Lock/Unlock) both cab doors.

2.24 TRIM PACKAGE: The highest-level trim package shall be supplied from the O.E.M. The package shall include high quality chrome-like bright work on the grille face. Chrome plated steel bumper(s) shall also be supplied by the O.E.M. Argent or painted bumpers are not acceptable. The O.E.M. grille work shall remain O.E.M.

2.25 RUNNING BOARDS: Running boards shall be constructed of .125 aluminum diamond plate and provide "splash guard" components to protect the running board surfaces from front wheel wash. There shall be a punched star burst pattern for additional traction.

2.26 UNDERCOATING: Chassis and module shall be fully undercoated in accordance with the chassis manufacturer's guidelines.

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

2.27 WINDSHIELD SUN VISORS: OEM, stain resistant cloth covered sun visors shall be installed over the driver's and passenger's sides of the windshield.

2.28 ANTI-THEFT: The manufacturer shall install an OEM approved idle lock ignition security system for a Chevrolet G-3500 chassis. The activation button shall be located to the right side of the steering wheel.

2.29 BACK-UP CAMERA: The ambulance shall utilize an RVS back-up camera system with the Harness tied into an RVS rear-view mirror style display. The camera shall be an RVS-MV3-IR.

**3.0 MODULE CONFIGURATION**

3.1 OVER ALL LENGTH: The overall length of the vehicle shall not exceed two hundred fifty-seven inches (257"). The finished vehicle shall meet or exceed KKK-A-1822F 3.4.10.4 for Angle of Departure, Ramp Break Over and Angle of Approach.

3.2 MODULE LENGTH: The module length shall be at least one hundred forty-six (146") inches.

3.3 MODULE WIDTH: The module width shall comply with State requirements regarding width of vehicles permitted on its roads and highways. The module shall be ninety (90") inches wide, excluding lights and accessories. The rear wheels of the chassis shall not extend further than 2.5" from the vertical sidewall and be covered by fender flares as cited in Item 10.5 of this Specification.

3.4 PATIENT COMPARTMENT HEADROOM: The headroom within the module shall be sixty-eight (68") inches. The measurement shall be taken from the center of the patient compartment floor to the ceiling panel.

3.5 BULKHEAD CONFIGURATION: The bulkhead wall shall be open only by an 18"W x 15"H pass-thru opening. There shall be a sliding Lexan window of at least 200 square inches of viewing area. The window shall be transparent and shatterproof.

3.6 SPARE TIRE STORAGE: Unless otherwise specified, a full size, fully inflated spare tire matching the wheels and tires mounted on the chassis shall be shipped loose. An O.E.M. jack and tire tools shall also be provided and shipped loose.

**4.0 MODULE CONSTRUCTION**

The ambulance body shall be all aluminum. The body sheet shall be reinforced with structural members designed to resist deflection and penetration and withstand conditions as

# Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies  
Exactly as Written

Yes	No
-----	----

per the current Federal Specification KKK-A-1822 and SAE J3057. Additionally, the modular body and structural and add on components shall be tested and in full compliance with SAE J3027, SAE J3026, SAE J2917, SAE J2956, SAE J3102. The OEM ambulance manufacturer, not an outside vendor, shall manufacture the body structure. This Agency will not accept bids from ambulance manufacturers that sub-contract the manufacture the ambulance body being bid.

**4.1 BODY STRUCTURE ALLOY:** The side, roof, front and rear sheets shall be derived from .090 thick 5052-H-32 Aluminum sheet. The roof sheet shall be one piece, from roof rail to roof rail. The side, roof and floor structure and structural shapes shall be 6005A-T61 extruded structural aluminum. The ambulance supplier represented in this bid is required to be the manufacturer of the modular body: this agency will not accept bids from ambulance manufacturers that sub-contract the ambulance body build process to an alternate supplier.

All frame and structural members shall be MIG (metal inert gas shielded) welded together to form a "roll cage" type structure. No rivets, screws, adhesive or other mechanical fasteners shall be used for the attachment of any structural or frame member used to form this critical structure.

**4.2 BODY WARRANTY:** The body shall carry a 15-year warranty following the date of delivery to the end user. The warranty shall cover repairs or replacement of body elements or components that fail due to structural defects in materials and workmanship. "Lifetime Warranties" shall not be acceptable, unless the protection coverage is clearly specified and attached in its entirety, with the bid. Hollow, no content and/or unclear "Lifetime Warranties" are not acceptable.

**4.3 BODY PANEL MANUFACTURE:** Each body panel, front wall, rear wall, two side walls, and roof panel, shall be manufactured utilizing .090" aluminum sheet, 2"x2"x.125" and 1"x2"x.125" 6005A-T61 extruded structural aluminum framework with voids between the tubular structure filled with 2" thick block polystyrene and covered with .125" laminated Luan. These panel components shall be integrated utilizing high strength adhesives. The aluminum sheet shall be attached to the wall structure with a Methacrylate adhesive with at shear and tensile strength of approximately 2,215 psi and a tensile modulus of 157,090 psi. The block foam and ply shall be attached with a urethane adhesive with a minimum tensile strength of 300 psi. The entire assembly shall be vacuum cured to form a solid, penetration resistant composite body panel. In no case shall screws, rivets, VHB tape or any other mechanical fasteners be used to attach the skin to these structural members.

The four vertical corners shall be configured so that the actual corner wall extrusions overlap allowing the wall sections to have full, vertical seam welds outside. This offset will also allow for the four vertical corners to be stitch-welded in 5" – 6" increments every 5" along the full vertical contact point inside.

Similarly, the four sidewall structures at the roofline shall be full seam welded around the entire horizontal perimeter of the roof and stitch-welded in 5"-6" increments every 5" around the full horizontal perimeter inside. Four full-welded vertical corner seams and four full-welded horizontal roof seams shall be covered with .090" extruded aluminum, radius corner

# Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies  
Exactly as Written

Yes No

extrusion welded at the corner caps and bonded with Lords 406-17 acrylic adhesive creating an integrated corner support column. The cast aluminum corner caps shall be seam-welded in place. All exterior body holes for lighting or other appliances shall be routed, drilled or punched prior to prime and paint process to assure complete coverage of raw metal and to reduce the possibility of paint breaks and resulting corrosion.

**4.4 MODULE INSULATION:** The insulation material installed in the walls and ceiling shall be 2" thick, 1-lb. high density block foam insulation. The material shall be cut so that it fits securely between the structural wall members and will be installed with a full urethane coating along both sides of the material to provide a permanent bond between the outer wall skin and the interior liner. The front, side, rear and roof wall panels will be filled providing full wall insulation.

Additionally, the wheel wells shall be insulated on the interior with a three-part, self-adhesive, radiant barrier material designed for extreme temperature protection and on the exterior with a two-part spray in place, adhesive foam for acoustical/thermal insulation. The underside of the side entry step well shall also be insulated with the two-part spray in place, adhesive foam.

**4.5 WELD QUALITY:** All welds within the modular body shall meet American Welding Society codes for structural and sheet welding. All weld sites shall be cleaned prior to welding. All welds shall be free of cracks, cavitation, oxidation and foreign substances. All MIG welds shall be shielded with Argon, during the process.

## **5.0 FLOOR STRUCTURE**

**5.1 FLOOR MEMBERS:** The floor shall be at the lowest level permitted by clearances and shall meet the floor height requirements of the current KKK-A-1822 standards. The lateral and longitudinal floor structure shall consist of 2" x 2" x .250" 6061-T6 primary structural members and 2" x 2" x .125" and 1" x 2" x .125" 6005A-T61 secondary structural aluminum tubing. The finished assembly shall be securely welded to the wall structures and exterior compartments. There shall be .50" aluminum plates welded into the floor structure to facilitate mounting of the Technician's seat base and cot retention hardware. The floor weight bearing capability shall be compliant with AMD Standard 020- Floor Distributed Load Test, S4.3 Bariatric Load.

**5.2 MOISTURE BARRIER:** Over the floor substructure there shall be applied a moisture barrier of .060" aluminum skin. This skin shall be attached to the floor structure by a full bed application of a high-performance elastomeric adhesive/sealant. This adhesive bed shall be adequate to eliminate any material vibration and to completely seal the patient compartment from fumes and moisture penetrating the interior.

**5.3 CARBON MONOXIDE PROTECTION:** To prevent carbon monoxide penetration into the patient compartment, it is imperative that the entire underside of the modular body be sealed. All hollow corner structural members shall be sealed with either expansion foam or

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

sealed metal plates. This completed vehicle shall be compliant with AMD Standard 007-Patient Compartment Carbon Monoxide Test.

**6.0 SIDE STRUCTURE**

6.1 SHEET: The skin covering the front, sides, and rear walls shall be a .090" single aluminum sheet with an alloy and temper strength of 5052 H32 for strength, ease of welding, and corrosion resistance. Modular bodies fabricated from "multi-piece" front, rear or side skins are not acceptable to this agency.

These panel components shall be integrated utilizing high strength adhesives. The aluminum sheet shall be attached to the wall structure with a Methacrylate adhesive with at shear and tensile strength of approximately 2,215 psi and a tensile modulus of 157,090 psi. The material shall be applied full length to every structural member prior to assembly. The block foam and ply shall be attached with a urethane adhesive with a minimum tensile strength of 300 psi. The entire assembly shall be vacuum cured to form a solid, penetration resistant composite body panel. In no case shall screws, rivets, VHB tape or any other mechanical fasteners be used to attach the skin to these structural members.

6.2 SIDE STRUCTURAL MEMBERS: The side assembly shall be reinforced vertically with extruded square aluminum structural tubing a minimum of sixteen (16) inch centers. These structural members shall be 2" x 2" x .125" 6005A-T61 structural aluminum tubing. To minimize the possibility of the extrusion bending, twisting or suffering other deformation when stressed, the extrusion shall be designed that each boxed formed corner extrusion on the sides, front, rear, and roof overlap the opposing extrusion, thus allowing for full length vertical welds on the entire outside of the body and interval welds on the inside of the body. There shall be .50" aluminum plates welded into the curbside and streetside walls structure to facilitate the mounting of a PRO4 4-point harness restraint system. Each harness restraint system/seating position along the curbside or streetside wall shall be pull tested to 6,000 pounds and passed SAE J3026 Dynamic testing. These structures shall be MIG welded together to form the body's roll cage and corner impact protection.

6.3 CORNER SIDEWALL ASSEMBLY: The four full-welded vertical corner seams and four full-welded horizontal roof seams shall be covered with .125" extruded aluminum, radius corner extrusion bonded with Lord's 406-17 acrylic adhesive with a tensile strength of 4,650 psi and an elastic modulus of 130,000 psi creating an integrated corner support column. The cast aluminum corner caps shall be seam-welded in place. All exterior body holes for lighting or other appliances shall be routed, drilled or punched prior to prime and paint process to assure complete coverage of raw metal on edges of holes.

**7.0 ROOF STRUCTURE**

7.1 PERIMETER EXTRUSIONS: The roof's substructure assembly shall consist of perimeter extrusions, lateral roof bows, and interconnecting corner caps.

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

7.2 ROOF SHEET: The roof skin shall be .090" and will have an alloy and temper strength of 5052 H32. The skin shall be attached to the perimeter and lateral roof bows with a high strength structural Methacrylate adhesive with a tensile strength with a minimum 2,150 PSI and a tensile modulus of at least 157,090 PSI. The material shall be applied full length to every structural member prior to assembly and then cured in a vacuum bonding process to provide even and consistent adhesion of the roof skin to the structural extrusions. The use of screws, rivets, VHB tape or other mechanical fasteners be used to attach the skin to the lateral roof bows.

7.3 ROOF BOWS: The lateral roof bows shall be 2" x 2" x .125" primary and 1" x 2" x .125" 6005A-T61 secondary extruded structural aluminum tubing. These structures shall be MIG welded together to form the body's "roll cage". These structural members shall be located so that the roof skin is supported on a minimum "center" distance of 14 inches. The roof bows shall interconnect with the roof side rails and be continuously welded at all contact points. In no case shall a lateral roof bow have free span of more than 42 inches. There shall be eleven (11) .125" aluminum plates welded into the roof structure to facilitate mounting of the patient compartment dome lights. There shall also be .250" aluminum plates welded into the roof structure to facilitate mounting of the overhead grab rail and a cargo net at the head of the squad bench. There shall be 1" x 2" x .125" tubing welded into the roof structure to provide secure mounting support for four CPI model 2008 folding IV hanger.

7.4 ROOF CORNERS: The roof rail extrusions shall be welded together along the roof bow mating walls at the corners. In addition, the outer surfaces of the roof rail extrusions shall be continuously M.I.G. welded to cast aluminum corner castings. The castings shall have integral flanges behind the weld sites to interlock the joint. These extrusions shall be attached and sealed along their entire length with a high strength acrylic adhesive, Lord 406-17 or equivalent.

**8.0 DOOR STRUCTURE**

8.1 DOOR SKIN: The door skin shall be .090 thick 5052-H32 aluminum sheet CNC cut and formed to create a robust, crevice free environment to mirror the mating surface of the door jamb extrusions and to provide optimum paint adhesion and corrosion resistance. The formed edges shall not have elongation cracks due to forming but shall have edges uniformly rounded for strength and aesthetic appeal. The forming process will produce a door with an integral surface for mounting a pliable air core rubberized neoprene gasket around the full perimeter of the door that will seat and seal against the mating surface on the door jamb. Each door shall have a one-inch finished hole to be fitted with a black plastic, snap-in plug. The purpose of this hole, located in the door edge adjacent to the paddle handle, shall be to provide easy access to the paddle handle internal mechanism for periodic lubrication. The CNC process will provide the cut-out for windows, latches, door panel mounting holes and hinge mounting points all machined into the finished raw door. The CNC cut fold and weld process provides a guaranteed consistent tolerance within 1/5,000th of an inch, which yields a finished product that is consistently repeatable and easily replaceable in the event of damage.



Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies  
Exactly as Written

Yes No

8.2 DOOR PANELS: The inside door panels shall be made of .090" aluminum sheet laminated to match the interior of the unit. The lower approximate ¼ of the panel surface shall have a smooth aluminum kick panel installed to protect the lower portion of the door. Exposed, raw, sheared, unfinished sheet-metal edges are not acceptable. The panels shall be fastened to the door with Phillips head stainless-steel, #10-32 machine screws with rubber washers to assist in cushioning the impact of door. There shall be a 10" x 20" aluminum diamond plate kick panel installed along the lower edge of each door.

8.3 DOOR JAMB: The door jamb shall be an extruded aluminum extrusion measuring approximately 2.725" x 3" x .1875" wall thickness to accommodate rigid fastening of compartment door components. The corners of the extruded door jamb shall be CNC mitered, fixture fit and welded full perimeter to hold the door opening square. The mounting and access points for the Nader pins, hinges and cage nuts shall be CNC routed for precision and repetitive consistency. The door jamb shall have a full perimeter flange that shall be secured to the body side skin with 3M panel bond adhesive rated at no less than 2,150PSI. The jamb shall also be secured with ¼" x 20 Type "F" self-tapping, stainless-steel sheet metal screws installed around the full perimeter of the framed door opening into the wall structure that is welded into place around the door opening in the side wall structure. The jamb shall be CNC to accommodate the consistent placement of the TriMark cage nuts used to mount the Nader pins and for consistently locating the door hinge.

8.4 HINGE: All doors shall have stainless-steel, continuous, piano hinges. The pin diameter shall be .250" and staked into place to prevent drifting out of the hinge leaves. The knuckle lengths shall be 1". Alternating mounting slots shall be incorporated in the hinge to facilitate fine adjustment. The hinge attachment bolts shall be ¼" x 20 x 1" long stainless-steel Type F pan head screws. The screws shall be spaced 4 inches apart on each leaf for the full length of the hinge. The tapping points along the door and jamb shall be designed in and CNC placed for consistently repetitive production and ease of replacement. The hinges for each individual door shall be identically cut for all common door heights and the CNC process used to fabricate the door and jamb shall insure that all the door components are easily replaceable and interchangeable.

8.5 LATCHES: All exterior door latches shall be TriMark two stage, rotary type latches with and OEM installed emergency release mechanism that meet FMVSS 206 requirements for door locks and door retention components. The latches shall be through bolted to the door with 5/16 UNC countersink, machine type bolts and lock nuts that comply with the latch manufactures requirements. All entry doors shall have two rotary latches per door. To assure uniform latch timing and functional door reliability, only straight, 3/16" diameter rods shall connect the latches to the handle. All latch timing shall be set at the handle site. Other than at the latch site, bends in door latch rods are NOT acceptable.

The Nader pins for each door latch shall be installed through the door jamb into TriMark cage nut assemblies designed to be through bolted into the door jamb extrusion with grade 8 machine type bolts per the manufacturer's requirements. The cage nut assembly will support the mounting nut should the Nader pin need to be removed for maintenance or service.

# Wyoming County Emergency Services - **BID SPECIFICATIONS**

**Bidder Complies  
Exactly as Written**

**Yes      No**

All single, short compartment doors shall have one rotary latch. All double doors or tall compartment doors shall have two rotary latches per door. All Nader pins shall be headed to prevent the door(s) from opening under impact.

The upper and lower rotary latches on each patient compartment entry door shall be equipped with an emergency release cable with an accessible handle secured to the interior door panel. The emergency release is for use in the event of an accident or paddle handle failure and can be used to open any of the individual entry doors.

**8.6 EXTERIOR HANDLES:** TriMark powder coated black finished, free floating exterior paddle handles shall be provided to open all doors. Blind fasteners shall be used to fasten the handles to the door. Exposed fasteners to the outside are unacceptable for security reasons. Paddle handles shall have an isolation gasket between the paddle body and the door skin. All door skin surfaces shall be CNC cut to produce a uniform fit and shall be painted prior to installation of the hardware. The handle shall be long enough to accommodate four gloved fingers for door actuation. All paddles on single doors and leading double doors shall be locking type and keyed the same. Trailing doors shall have non-locking paddle handles mounted on the interior door panel. The inner side of all exterior handles shall have a strip of 3M Safety Grip material installed to provide a slip resistant surface in bad weather. When locked, the paddle handle shall “float” to prevent unnecessary pressure being applied which may damage the handle and function as a signal that the handle is locked.

The rotary latches for each door shall be fit with metal rods, individually clipped to both the latches and the paddle handles. The rods shall be designed to be adjustable; however, they will be secured when adjusted so that they cannot voluntarily move. The door latching assemblies shall be fully tested to comply with FMVSS 206 requirements including 30G testing, no exceptions. A copy of the testing certificate validating the door system and testing shall be provided with the bid.

**8.7 INTERIOR HANDLES:** TriMark powder coated black interior paddle handles shall be supplied on all module entry doors. A Lock/Unlock lever shall be installed and be clearly marked Lock/Unlock. As a safety feature, the interior paddle handles on the curbside and rear entry doors shall be capable of unlocking and opening the door without switching the Lock/Unlock lever. The interior handles shall be chrome plated.

**8.8 WINDOWS:** All entry doors shall be equipped with an upper window. The curbside entry door shall have a fixed pane window with a nominal area of 320 square inches. The rear access doors shall each have a fixed pane window with a nominal area of 320 square inches. All windows shall have anodized frames and blind inner mounting ring screws, fastened from the inside. The exterior portion of the frame shall have a full perimeter seal mated against the door skin. All glass shall be tinted safety glass compliant with FMVSS 205.

**8.9 DOOR CHECKS:** All compartment doors and the curbside entry doors shall be equipped with a heavy-duty gas strut door check (hold open). The gas strut shall keep

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

positive pressure on the door in the open and closed position. Door check brackets shall bolt through an overhead structure to provide a solid attachment to the doorframe and through a .250" support plate welded into the door. All doors shall open 90 to 110 degrees, unless otherwise specified by the end user.

Rear access doors shall open at least 150 degrees. The door checks shall be 2-piece, heavy-duty, cast aluminum, grabber type. The door shall have a 1/2" thick cast aluminum loop that plunges into a positive rubber/cast aluminum socket mounted on the body. Each component of the door checks shall be insulated from the skin with a rubber gasket. Each door-check component shall be rigidly mounted on the door or body with 1/4" x 20 x 1" stainless-steel machine screws through .250" plates permanently mounted behind the skin to stabilize the grabber.

8.10 ENTRY DOOR ASSIST HANDLES: All entry doors shall be equipped with two-point, 1.25" diameter stainless-steel, and "ergonomic-style" grab handles to aid in door closure and entry assistance. The handles shall run horizontally, directly above the inside door handle. The door handles shall be fastened directly to the horizontal door structure that is welded into the door assembly.

8.11 DRIP RAILS: A drip rail shall be provided over each compartment to prevent water roll off from spilling into the opened compartment door. Drip rails shall be attached with double-sided adhesive tape for ease of replacement. Full height compartments shall be exempt because the perimeter roof rail drip rails cover these compartments.

**9.0 COMPARTMENT STRUCTURE & CONFIGURATION**

9.1 MATERIALS: All exterior compartment walls, back and floor shall be constructed of smooth aluminum and coated with a rubberized polyurethane coating, Herculiner or equivalent. The ceilings and floor components shall be CNC cut, formed and welded to provide overlapping joints. The floors and ceilings are both welded and seam sealed as necessary to the walls and back prior to applying the rubberized coating. The compartment shall be designed so that the floor to the compartment will be below the lower edge of the doorjamb.

9.2 COMPARTMENT CONFIGURATION: The exterior compartments on this vehicle shall be as follows:

9.2.1 Compartment #1: The Streetside front compartment will be designated as the Oxygen Storage compartment. The compartment dimensions will be approximately 13.75"W x 63.75"H x 13.5"D with a single door held open by a rubber door grabber. The compartment will be coated with a rubberized polyurethane coating to both reduce transfer of noise to the patient compartment interior and to facilitate cleaning.

A universal cylinder retention bracket suitable for an "M" tank shall be provided to secure a vertically stored cylinder. The retention bracket shall be

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

through bolted to the compartment wall backed by 1/2" aluminum plate with four 3/8-16 grade 8 bolts with grade 8 nuts. The retention bracket shall be powdercoated steel and remain rust free for the life of the ambulance. The oxygen cylinder shall be attached to the bracket with three (3) spring-buckle, webbed retention straps. The retention bracket and mounting structure shall be tested and in full compliance with SAE J-3043 requirements.

9.2.2 Compartment #2: The Streetside middle compartment will be designated as a stair chair storage compartment. The compartment dimensions will be approximately 30.75"W x 34.75"H x 13.75"D with a single hinged door held open by a single gas strut. The interior of the compartment will be coated with a rubberized polyurethane coating to both reduce transfer of noise to the patient compartment interior and to facilitate cleaning.

This compartment shall have 5" drop floor to accommodate the storage of a stair chair.

9.2.3 Compartment #3: The Streetside rear compartment will be designated as a backboard storage compartment. The compartment dimensions will be approximately 13.675"W x 76.75"H x 17.5"D with a single hinged door. The interior of the compartment will be coated with a rubberized polyurethane coating to both reduce transfer of noise to the patient compartment interior and to facilitate cleaning.

This compartment shall have two equipment straps for backboard retention.

9.2.4 Compartment #4/5: The Curbside front compartment will be designated as access to the ALS cabinet (#4) in the upper portion of the compartment with a sealed battery access storage area (#5) below. There will be a single access door to provide technicians with full access to equipment stored on the lower and middle interior cabinets without lifting or pulling equipment over any extrusion separating the upper and lower compartment sections. The door will be held open by a rubber grabber. The battery compartment dimensions will be approximately 15.5"W x 18"H x 15"D. The interior of the battery storage compartment will be coated with a rubberized polyurethane coating and will be vented below the chassis floor line. The ALS compartment access area will be approximately 18"W x 58"H.

9.3 VENTILATION: All exterior compartments shall have louvered, automotive style ventilation to the exterior, underside of the vehicle. The oxygen cylinder compartment shall be louvered through the door with a minimum of 9 square inches of free-vented area in compliance with KKK-A-1822F, 3.11.3 as well as the underbody ventilation.

9.4 STEP WELL: An intermediate, full depth step to the patient compartment floor shall be provided at the curbside entry door. The step well shall include a smooth aluminum plate step body with a Dri-Deck insert step and rubberized polyurethane walls. The step insert shall provide a step surface that is flush with the lower jamb of the side entry door. The step shall have a tread dimension of not less than 10 inches. The step well shall be illuminated by

# Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies  
Exactly as Written

Yes No

an LED light head located on the forward wall of the step well. There will be a formed stainless-steel threshold trim installed around the upper edge of the step well. The threshold will be installed with a high strength sealant adhesive to eliminate the need for mounting screw penetrations and to provide a permanent full perimeter seal. 3M safety step material shall be installed along the top of the threshold to provide a slip resistant surface.

## **10.0 ANTI-CORROSION/ELECTROLYSIS**

10.1 EXTERIOR FASTENERS: Dissimilar metal contact is known to cause corrosion at fastener sites. All exterior device fasteners, especially light fasteners, shall not contact the painted aluminum surface. All fasteners that are NOT aluminum or plastic bodied are considered Dissimilar. Each hole drilled after the prime and paint process shall be treated with an Electrolysis Corrosion Control compound prior to installation of the mounting screws. All mounting screws shall be stainless steel and shall be coated with the Electrolysis Corrosion Control compound prior to installation.

## **11.0 REAR BUMPER**

11.1 FRAMING: The rear step bumper shall meet or exceed current KKK-A-1822 requirement 3.9.6 and be compliant with AMD Standard 018. The bumper shall be a minimum 1/8" welded tubular steel frame with a 1/4" flange designed to be bolted directly to the chassis frame without cutting, drilling or welding. The frame shall be bolted with a minimum four 1/2" steel bolts, washers and nylon lock washers on each side. In addition, the bumper will be configured so that the bottom of the bumper shall be mounted below the body skirt-line. The steel bumper frame shall be powder coated black for a durable, corrosive resistant finish.

11.2 CENTER STEP: A flip up step shall be provided to facilitate access to the patient compartment floor loading and unloading the stretcher. The step shall be as wide as the rear access door jamb. The step shall have a grip strut surface for aggressive traction. Snow and ice shall not compromise the level of traction on the center step. A stainless-steel piano hinge shall have a staked in, 1/4" diameter pin, 1" knuckles and Type-F 1/4"x 20 stainless-steel bolts every four inches.

11.3 OUTER BUMPER PODS: The step bumper shall have an aesthetically pleasing appearance. The outer bumper pods shall be polished aluminum diamond plate. The outer corners shall be rounded to eliminate sharp corners around the working area. Each pod shall have a heavy-duty rubber rear dock bumper attached to further protect the bumper.

## **12.0 BODY PROTECTION**

12.1 FRONT OF BODY: The front of the body shall have 12" high protection plates made of aluminum diamond plate fitted between the contour of the cab and the corner posts. The corner posts shall also have 12" high formed diamond plate protection panels.

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

12.2 REAR OF BODY: An aluminum diamond plate kick panel shall run from rear corner post to corner post and house a recessed, cast aluminum, license plate holder. The kick panel shall be 12" in height and shall extend downward from below the rear doorjamb to the bottom edge of the body. The corner posts shall have 12" high formed diamond plate protection panels.

12.3 LOWER BODY RUB RAILS: The entire skirt-line of the body, forward and aft of the rear wheels shall have extruded aluminum "C" channel skirt rails to protect the edge of the lower body. Each rail shall be chamfered 45 degrees at each end. The rails shall be mounted with .250" x 20 stainless steel, counter sunk machine screws with a 3/16" neoprene spacer between the rail and the body. There will be a 3/4" reflective stripe installed down the center of the rail so that the hardware shall not have exposed fasteners when viewed from the standing position.

12.4 REAR ENTRY DOOR THRESHOLD: At the rear entry doors, a full width, formed, stainless-steel jamb protection plate shall be provided to prevent the cot frames from chipping the body paint. The threshold shall extend in a single piece from 6" inside the rear door opening along the surface edge down to 1/2" below the bottom of the lower edge of the doorjamb. The threshold will be mounted with a sealant/ adhesive to eliminate the need for screws and to provide a sealed edge at the floor level. 3M Safety Walk materials will be installed along the full width of the threshold step surface to provide a safe, slip resistant step area.

12.5 SIDE ENTRY DOOR STEPWELL/THRESHOLD: A rubberized urethane coated, smooth aluminum dual step shall be installed at the side entry door. The threshold transition between the side entry step well and the patient compartment floor shall be formed, bright aluminum diamond plate. The threshold shall have a high-quality anti-skid material applied in full width strips to provide a slip resistant step into the patient compartment.

12.6 COMPARTMENT THRESHOLD TRIM: There will be formed stainless-steel threshold trim installed around the upper edge of all the exterior compartment doors. The threshold will be installed with a high strength sealant adhesive to eliminate the need for mounting screw penetrations and to provide a permanent full perimeter seal.

12.7 MODULE FENDER FLARES: The rear fender flares shall be extruded rubber. The fender flares shall be through bolted around the wheel well opening with 1/4"-20 stainless-steel pan head bolts coated with an anti-corrosion chemical.

**13.0 CABINetry**

13.1 SUBSTRATES: The interior cabinets and components shall be constructed of high quality, domestic, A-C grade plywood. The exposed layers shall be hardwood on both sides of the sheet. The layers shall be free of voids between layers. Cabinet interiors shall be

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

made from 3/8" or 1/2" thick, 5-ply plywood determined by the application for each. Bench lids, doors and the primary cabinet fascia shall be made from 3/4" thick, 7-ply plywood.

13.2 CABINET INTERIOR FINISH: Cabinet interior shall be laminated with white colored, high impact, abrasion resistant laminate. The contact adhesive shall be a high bond contact adhesive, specifically designed to bond plastic laminates to wood. Painted cabinet interiors are not acceptable. The interior corners of the cabinets shall be sealed to prevent contamination and to facilitate cleaning.

13.3 FLOOR AND SUBSTRATE: The sub floor of the module shall be 3/4" thick, 7-ply, exterior grade, A-C plywood. The vinyl floor covering shall be a Lonseal solid vinyl material.

The Lonseal flooring shall be Lonplate II Gunmetal 424.

13.4 LAMINATE: A high impact, phenol backed, high impact, and abrasion resistant laminate shall be used. The laminate shall be selected from the ambulance manufacturer's samples. The material shall be standard grade. This material as well as all interior components shall meet or exceed F.M.V.S.S. #302 (Burn Rate of Interior Components).

The laminate color shall be high-gloss white.

13.5 CABINET ASSEMBLY: To maximize fastener bite, cabinet substrate parts shall be stapled with pneumatic fired equipment. The length of the fastener shall be at least 2.25 times the thickness of the material being pierced. Staples shall be placed on two-inch intervals along the corner joints. In addition to staples, the entire cabinet assembly must be screwed together with a minimum #8 screw size and a length not less than 2.25 times the thickness of the pierced substrate. Screw heads shall be counter-sink type and driven flush. Cabinet fascia shall be CNC cut or drop cut to eliminate the use of cleats or stick built components. The use of stick built components to create cabinet components will not be acceptable.

13.6 CABINET TRIM: All trim throughout the interior conversion shall be anodized aluminum or formed stainless steel. All exposed corners within the patient compartment shall have either padded or rounded corners. Excess adhesive-sealant shall be removed. Intermittent placement of screws is not acceptable due to cleaning difficulty inherent in screw head design.

13.7 FIT AND FINISH: Mitered joints throughout the interior conversion shall have a gap-less, hairline fit. Openings and misalignments at the corners are not acceptable. Misapplied trim to cover manufacturing mistakes is not an acceptable solution to poor design and/or workmanship. Doors shall be warp free. Sliding Lexan door assemblies shall be scratch free and all edges shall be smooth and free of saw marks and sharp edges. Cabinet to cabinet joints shall not require welting to create a finished/well-fit look. Cabinets shall fit tightly against the ceiling without the use of vinyl covered trim pieces to cover the seam between

# Wyoming County Emergency Services - BID SPECIFICATIONS

Bidder Complies  
Exactly as Written

Yes No

cabinets and ceiling. The fine line seam between the cabinets and the ceiling will be sealed with a flexible, permanent sealant/adhesive.

13.8 FUNCTION: Doors and drawers shall fit the opening. Flush fitting doors shall have even door to opening spacing around the perimeter. All doors shall open and close without binding. Drawers shall slide in and out freely, without drag. All drawers shall be mounted on side mounted, full-extension drawer slides, rated at no less than 100 pounds per pair. All hinged wood-core doors shall have positive latches.

13.9 SLIDING POLYCARBONATE DOORS: All interior cabinets requiring the sliding, transparent polycarbonate door assembly shall have a mitered, anodized aluminum frame. The polycarbonate material shall be 1/4" thick.

Each sliding door shall be fitted with an anodized, full height extruded aluminum door handle. The door pull extrusion shall also reinforce the ends of the doors. The door track/frame extrusion shall incorporate a flocked natural rubber track insert to prevent the doors from sliding free during transit. All extrusions shall be anodized.

13.10 HINGED ACRYLIC DOORS: All interior cabinets requiring a hinged, transparent door assembly shall have a 1/2" smoked acrylic door with either a full-length stainless-steel piano hinge or a combination of Southco constant torque hinges and a latch to secure each door.

## 14.0 CABINET CONFIGURATION

14.1 STREET SIDE: The cabinet configuration and design shall provide a product that has been tested and is in full compliance with the current KKK-A-1822, AMD and SAE test requirements. The primary configuration of the streetside main wall will include a CPR seat. The cabinets shall be easily accessible over the primary cot. The cabinet configuration and dimensions shall be described as follows:

14.1.1 Cabinet "A1" shall be located at the upper rear of the streetside wall. The cabinet shall have sliding Polycarbonate doors, and shall measure approximately 10"H x 24.5"W x 15"D.

14.1.2 Cabinet "A2" shall be located at the mid-level rear of the streetside wall. The cabinet shall have sliding Polycarbonate doors and one (1) adjustable shelf. Cabinet A2 shall measure approximately 22.5"H x 31.75"W x 15"D.

14.1.3 Cabinet "A3" shall be located at the low-level rear of the streetside wall. The cabinet shall have sliding Polycarbonate doors and one (1) adjustable shelf. Cabinet A3 shall measure approximately 22.5"H x 31.75"W x 15"D.

14.1.4 Cabinet "C1" shall be located above the extended, main action area, just right of the "A1" cabinet. The cabinet shall have sliding Polycarbonate doors and shall include one (1) adjustable shelf. The cabinet shall measure approximately 17"H x 30"W x 15"D.



Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

14.1.4 Cabinet "C2" shall be located above the extended, main action area, just right of the "C1" cabinet. The cabinet shall have sliding Polycarbonate doors and shall include one (1) adjustable shelf. The cabinet shall measure approximately 17"H x 30"W x 15"D.

14.1.5 Cabinet "F" shall be located below the extended, main action area, just right of the "A3" cabinet. The cabinet shall have sliding Polycarbonate doors and shall include one (1) adjustable shelf. The cabinet shall measure approximately 16.25"H x 31"W x 15"D.

14.2 CURB SIDE: A two position squad bench shall be installed. Two sets of EVS V-4 four-point belts shall be supplied. The belts shall restrain two seated occupants or one secondary patient, on a back board. All seat belts and anchorages shall comply with F.M.V.S.S. 209 and 210. A padded back and head rest shall be supplied for all seated personnel along the squad bench. The cabinet configuration and dimensions shall comply with the drawings attached. Squad bench lid shall utilize gas struts as support when opened and shall have a positive paddle latch to hold the lid in the closed position.

Located in the forward section of the squad bench shall be a separate storage area for sharps and waste containers. Access to these containers shall be through a flip up Polycarbonate lid – red in color and marked with the "BIOHAZARD" symbol.

14.3 GLOVE BOX STORAGE: Curbside overhead glove box storage for three boxes shall be located above the side entry door. The storage box will have a hinged cover with oval access openings for and there shall be a positive latch located at each end of the cover plate. The cabinet shall have a 1" high-density foam cushion pad located across the bottom for head protection when entering or leaving the vehicle.

14.4 SQUAD BENCH NET: A removable retention cargo net shall be mounted at the head of the squad bench, mounted to tapping plates in the floor, wall, and ceiling.

14.5 RIGHT FRONT CABINET: The right front cabinet is hereinafter known as "ALS Cabinet". The ALS cabinet shall be finished in color-keyed laminate. The cabinet shall be configured for ease of access from either the interior or the exterior of the ambulance unless otherwise stated below.

14.4.1 The upper cabinet configuration shall house the HVAC and return air filter. There shall be a removable air distribution panel and a separate return air grille with HEPA air filter.

14.4.2 The upper intermediate cabinet shall measure 26.5"H x 23.5"W x 20.5"D, and shall be configured with dual hinged acrylic doors with Eberhart paddle handles with two-point latches. The right door shall be locking, and the left door shall have a center stop plate so it can't be opened with the right door is shut. There shall be one (1) adjustable shelf.

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

14.4.3 The lower cabinet shall measure 14.75”H x 23.5”W x 20.5”D, and shall have a bottom-hinged solid door with a LifeDefender push to close latch and LifeDefender lock.

14.5 BULKHEAD CABINETRY: The upper bulkhead cabinets shall include an electrical cabinet and a storage cabinet above the walk-through. The electrical cabinet shall be equipped with a ¾” solid wood door hinged on the right-hand side, with (2) louvered vents and a locking flip latch. The storage cabinet shall be equipped with a ¾” solid wood door hinged on the left-hand side and a LifeDefender push to close latch and LifeDefender lock.

14.6 ACTION AREA COUNTERTOP: The countertop surfaces shall be color coordinated laminate material. The edge of the action area shall have a lip to prevent items from sliding to the floor. The action area shall be extended, starting from the front bulkhead to the rear “A1-3” cabinets will hereinafter be called the EMSP Action Area. It shall be approximately 65”W.

A steel mounting plate shall be installed below the rear section of the countertop for the later mounting of a heart monitor bracket.

14.7 TECHNICIAN’S SEAT: The Technician’s seat shall be an EVS 1880 steel-framed, high-back contoured style captain’s chair with a V-4 four-point belt and child safety feature. The seat shall match the other upholstery within the patient compartment. The seat base shall be a black, powder coated storage base. The Technician’s seat shall be fastened with Grade 8 fasteners through the top of the seat base that is secured with Grade 8 fasteners through the floor and through 1/2” aluminum mounting plates with flat washers and Grade 8 nylon locking nuts. The technician’s seat and seat base shall comply with FMVSS 207/210.

14.8 PASS-THRU CABINETS: Located to the left of and below the pass-thru of the module behind the Technician’s Seat shall be two additional storage cabinets. These cabinets shall each be as follows:

14.8.1 Upper cabinet “D” shall be the cabinet left of the pass-thru. It will be approximately 23.5”H x 6.75”W x 16.25”D. The cabinet will have a single hinged solid door with a LifeDefender push to close latch. This cabinet shall be configured for general storage.

14.8.2 Below the pass-thru shall be an electrical overflow cabinet, which will house the inverter. It shall have a louvered door and a thumb-latch.

14.9 OCCUPANT HEAD CLEARANCE ZONES: All designated occupant seating positions in the vehicle described in the Specification shall be in compliance with AMD Standard 025-Measuring Guidelines: Occupant Head Clearance Zones.

14.10 I.V. HANGERS: There shall be two (2) flush-mount, CPI Model #2008 IV hangers mounted, (1) at the torso area over the cot, and (1) at the torso area over the squad bench.

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

They shall be mounted so that in the event of a forward collision, the IV hanger will fold up upon impact.

**15.0 UPHOLSTERY**

15.1 UPHOLSTERY MATERIALS: All padding and upholstered seating shall be covered in vacuum formed vinyl. Sewn, exposed seams in the seat covers and cushions are not acceptable.

The color of the upholstery shall be Cobalt Blue.

15.2 SEAT / BACKREST CORE MATERIAL: The foam shall meet Federal Specification KKK-A-1822F 3.11.4. All seating and trim materials shall meet or exceed FMVSS 302-Flammability of Interior Materials.

**16.0 INTERIOR HARDWARE**

16.1 OVERHEAD ASSIST RAIL: There shall be one (1) assist rail mounted in the ceiling area of the patient compartment. This rail shall be naturally accessible to assist working technicians in maintaining their balance. The rails shall meet or exceed Federal Specification current KKK-A-1822 requirement and comply with AMD Standard 008- Patient Compartment Grab Rail Static Load Test. The rails shall be 1.25" diameter, 100% brushed stainless-steel radius formed at each end and 72" long. The assist rails shall be mounted with 1/4" x 20 stainless-steel machine screws tapped into 1/4" plates welded into the ceiling structure. The rail shall be located over the primary patient.

16.2 ENTRY DOOR ASSIST RAILS: This rail shall be naturally accessible to assist working technicians entering and exiting the vehicle. The rail shall meet or exceed Federal Specification KKK-A-1822F. The rail shall be 1.25" diameter, 100% brushed stainless-steel radius formed at each end and 14" long. The assist rail shall be mounted with 1/4" x 20 stainless-steel machine screws tapped into 1/4" plates welded into the door support structure. The rail shall be horizontally located just below the window level on each entry door.

16.3 REAR WALL ASSIST RAIL: There shall be a knurled 12" brushed stainless steel assist rail with a 30\* offset mounted vertically on the wall inside primary rear entry door to assist with entering and exiting the unit. The rail will be bolted through the wall with 1/4" x 20 machine screws and into tapping plates.

16.4 SIDE ENTRY ASSIST RAIL: There shall be a knurled 12" brushed stainless steel assist rail with a 30\* offset mounted vertically on the wall at the head of the squad bench just inside the side entry door to assist with entering and exiting the unit. The rail will be bolted through the wall with 1/4" x 20 machine screws and into tapping plates.

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

16.5 STRYKER POWER LOAD SYSTEM: The bidder shall install a new Stryker Power Load system in the floor, offset towards the streetside wall.

**17.0 OXYGEN, VACUUM SYSTEMS**

17.1 MAIN OXYGEN SUPPLY: Accommodation shall be made to carry and secure one (1) "M"-sized oxygen cylinder. The cylinder and its universal retention components shall be located in the streetside front exterior compartment as specified in 9.3 of this Specification.

The Oxygen System shall also include a 50 PSI, pre-set Oxygen Regulator.

The retention bracket shall be positioned so that the cylinder's main valve and regulator are visible through a Lexan viewing window in the forward end of the EMSP Action Area.

17.2 OXYGEN OUTLETS: Four (4) oxygen outlets shall be provided:

Two (2) Oxygen outlets shall be provided in the EMSP Action Area panel. The outlet latches shall be Ohio style, quick connects.

One (1) Oxygen outlet shall be located on the ceiling over the head of the patient. The outlet latch shall be Ohio style, quick-connect.

One (1) Oxygen outlet shall be located on the wall above the forward section of the squad bench. Outlet latch shall be Ohio style, quick-connect.

17.3 OXYGEN HOSES: All oxygen system service hoses, fittings and devices shall be made of non-ferrous materials. Hoses used to pipe Medical Oxygen shall be ¼" inside diameter with an abrasion resistant, green colored, electrically conductive outer jacket. All hoses, connectors and outlets shall withstand a system test pressure of 200-PSI test as prescribed in Federal Specification KKK-A-1822F 4.4.1 and AMD Standard 015- Ambulance Main Oxygen System Test. Each ambulance shall be tested. "Type Testing/Certification" is not acceptable.

17.4 VACUUM (SUCTION) SYSTEM: A 12-Volt DC electric vacuum pump shall be installed in the upper left-hand corner of compartment #2. The system shall meet performance guidelines set forth by Federal Specification KKK-A-1822 requirement 3.12.2 and AMD Standard 021- Aspirator System Test, Primary Patient. An SSCOR vacuum regulator and gauge panel shall be installed in the action area control panel. The vacuum regulator shall control the vacuum pressure delivered to a collection system with a disposable collection canister. The Vacuum gauge shall not be mounted on the collection canister but on the Action Area wall as an integral part of the vacuum control panel and be hard plumbed to the electric vacuum pump. Each ambulance shall be tested. "Type Testing/Certification" is not acceptable.

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

17.5 PORTABLE OXYGEN CYLINDER BRACKETS: Two (2) CPI OA1201-D-1 crash stable strapless portable oxygen cylinder brackets shall be supplied and mounted against the ALS cabinet in the pass-thru, 5"H from the floor to aid in cleaning.

**18.0 ELECTRICAL SYSTEM – 12-Volt Direct Current**

The 12 VDC Electrical system installed in this vehicle must comply with AMD Standard 005-12-Volt DC Electrical System Test. This electrical System shall be covered under the manufacturer’s Warranty for a period of 72 months (6 yrs.) or 72,000 miles which ever shall occur first. The electrical system relays, breakers and control modules shall be located on the upper bulkhead wall behind the technician’s seat in a cabinet with a locking door.

18.1 BODY GROUNDING: A minimum of (2) two 2" wide braided ground straps shall be bolted through the chassis frame and the floor structure of the modular body. The bolts shall be 3/8" diameter. A flat washer shall be provided under the head of the bolt, over the strap lug and an internal tooth lock washer shall be installed under the lug to preclude loosening. Chassis frames with asphalt/wax coating or E-coating shall have grounding sites prepared by lightly grinding or sanding the coating away to reveal raw metal.

18.2 GENERAL GROUNDS: To comply with federal specification KKK-A-1822F 3.7.12 plus enhance ground quality and reduce trouble shooting time, all devices wired within the ambulance conversion shall be centrally grounded on a ground bar located in the Electrical Cabinet. The ground bar is grounded to the chassis frame by a 2AWG cable and attached in the same manner as the braided body ground cables. Each device shall have a separate ground wire routed to a central buss bar then grounded via fine strand cable to the module body.

18.3 12 VOLT WIRE: All wires within the ambulance harnesses shall meet Federal Specification KKK-A-1822F 3.7.2 and 3.7.2.1. All wire insulation shall be GXL cross-linked polyethylene.

Permanent wire identification and wire function shall be stamped on 4" centers along the full length of the wire. Wire conductors shall be stranded copper. Single strand copper conductors are not acceptable due to vibration concerns and stiffness which promotes loosening of the terminals.

18.4 WIRE PROTECTION: All wire within the conversion shall be protected and run in split convoluted loom with a melting temperature of 300 degrees Fahrenheit. All wire harnesses shall be clamped and routed to eliminate possibility of damage due to cut/chaffed wire. Grommets made of rubber or plastic shall be used where harnesses pass through metal or wood. Large holes and irregular shaped wire passages shall use automotive edge trim to protect the wire conduit/loom. Wire harnesses shall be neatly clamped into protective routing areas away from heat sources, unfriendly edges or moving devices.

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

18.5 **CIRCUIT BREAKERS:** All conversion 12VDC circuits shall be protected by non-proprietary, manual reset, circuit breakers. The trip value for the breaker shall not exceed 80% of the amperage rating of the weakest component in the circuit. Branch circuit wire sizes shall be rated 125% of the expected load per KKK-A-1822F 3.7.2.1.

18.6 **12-VOLT DC OUTLETS:** Three (3) 12-volt DC, 20 Ampere, cigarette style outlets shall be supplied in the following locations:

- One (1) in the action area
- One (1) in the upper section of the ALS cabinet

Each outlet shall be separately protected and shall be electrically isolated from other electrical functions on the vehicle. The outlets shall be wired per Federal Specification KKK-A-1822F 3.7.7.3.

18.7 **DUAL 2-AMP USB OUTLET:** There shall be a dual Vanner 2-amp USB charging receptacle mounted next to the 12-volt DC receptacle on the action area wall.

18.8 **STEALTH UNLOCK SWITCH:** A stealth door unlock switch shall be hidden in the grille of the cab.

18.9 **POWER DOOR LOCKS:** All module entry and compartment doors shall have power door locks and shall be wired to the OEM door lock system. There shall be a lock/unlock switch at the side and rear entry doors.

**19.0 ELECTRICAL SYSTEM - 125-Volt Alternating Current**

19.1 The 125-Volt AC Electrical System described in this Specification shall comply with AMD Standard 009- 125-Volt AC Electrical Systems Test. This electrical System shall be covered under the manufacturer’s Warranty for a period of 72 months (6 yrs) or 72,000 miles which ever shall occur first.

19.2 **PRIMARY SHORELINE INLET:** A 125-volt, 20-amp Kussmaul Super Auto-eject shoreline inlet shall be provided on the module streetside, positioned forward of the streetside front compartment. The inlet shall be yellow in color and shall be mounted on a removable stainless-steel plate for servicing.

An indicator light shall be included to alert users when positive connection has been made.

This inlet shall supply power to all interior 125-volt outlets. The inlet shall be grounded to keep continuity with the G.F.I. breaker in the building in which the vehicle is housed or where it is most frequently connected to shore power. The inlet shall have a spring-loaded, weatherproof cover. The inlet must be a “male” plug configuration to accommodate the

# Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies  
Exactly as Written

Yes	No
-----	----

“female” plug on the shoreline cord. A permanent, aluminized vinyl label, stating voltage and amperage shall be located above the inlet in compliance with KKK-A-1822F 3.7.8, 3.7.8.1.

19.3 **INVERTER:** A Vanner LSC12-2000, 2000-watt pure sine wave inverter with an integrated battery charger and a built-in GFI shall be installed in a vented cabinet below the action area. The inverter shall be remote controlled by a switch in the rear panel.

The inverter shall be wired to the 125-volt outlets, and shall have an internal transfer switch to switch off of shore power when the ignition is engaged.

19.5 **125-Volt AC OUTLETS:** Three (3) 125-volt AC, hospital grade, straight blade outlets shall be provided in the following locations:

- One (1) in the forward section of the action area
- One (1) in the rearward section of the action area
- One (1) in the upper section of the ALS cabinet

The outlets must be grounded and protected by a G.F.I. (Ground Fault Interrupter) breaker. The outlets must illuminate a green indicator light when power is applied to the outlet.

**20.0 ENVIRONMENTAL**

20.1 **REAR AIR CONDITIONING:** The design of the environmental system is to provide optimal air flow and distribution of conditioned air to the module interior. Conditioned air shall be discharged from one vent area and shall be distributed through five vents evenly spaced across the face of the upper section of the ALS cabinet. The module shall have an additional, self-contained A/C evaporator unit complete with dual blower, brushless PWM motor driven, high output fans. The fans shall provide up to seven variable speeds and shall contain a 720 CFM fan. The A/C unit shall also incorporate a hot water heater core for heat. All heater hoses shall be 3/4 inch QVM approved Nomex for improved circulation. Hot water flow shall be controlled by one (1) vacuum actuated inline water valves. All A/C fittings shall be ferruled, banded, or snap ring type.

The valves shall operate with the heater/defrost controls. The unit shall be rated at least 32,000 British Thermal Units (BTU) in A/C Mode and 36,000 BTU in Heater Mode. The Vehicle A/C – Heater system must meet or exceed federal specification KKK-A-1822F 3.13.1 thru 3.13.3 and must be compliant with AMD Standards 011- Equipment Temperature Test, 012- Interior Climate Control Test.

20.2 **REAR AC CONTROLS:** The digital thermostat control switch shall be located in the action area. The thermostat shall control the On/Off function, temperature control and fan speed.

20.3 **HVAC SYSTEM INSTALLATION & WARRANTY:** The auxiliary heating and air conditioning system shall be installed in the ambulance at the ambulance manufacturer’s

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

facilities by technicians employed by the manufacturer of the HVAC equipment. Said technicians shall document the installation on forms provided by the HVAC manufacturer and on forms required by the ambulance manufacturer. Warranty on the installation of, and the equipment content and performance of the equipment, shall be the sole responsibility of the HVAC manufacturer.

**21.0 CONSOLES, SWITCH PANELS**

21.1 CAB CONSOLE: The ambulance conversion control console shall be ergonomically designed, fully formed and welded .125" 5052-H32 aluminum console and adapter to the match the contour of the engine cover. Sharp and other unfriendly edges shall be rounded. The body of the console shall be powder coated with a textured, black finish. The console shall be tested and secured in a manner to meet the requirements of SAE J3043. It shall also provide ease of accessibility for maintenance and service and to minimize engine repair access and time. The console shall include an electronic siren, the driver's switch panel, two cup-holder positions, a map pocket and area for mounting radios with a removable cover for mounting radios.

21.2 SWITCH PANEL, CAB CONSOLE: A switch panel made from a thick, translucent, acrylic sheet shall be installed on the outboard wall of the Action Area. The panel shall be coated with a black colored, rigid plastic film that evenly disperses label and indicator illumination. All switches and controls shall have illuminated legends indication function and status. The Switch Panel shall have the following minimum controls and indicators:

1. Compartment Open indicator
2. Battery On indicator
3. Door Open indicator
4. MASTER Emergency Switch, red bezel
5. Primary/Secondary Mode Switch
6. Siren/Horn Switch
7. Left Flood Switch
8. Rear Flood Switch
9. Right Flood Switch
10. Back-Up Alarm Switch
11. Spare switch positions
12. Digital Volt/Amp Meter
13. Module Disconnect Switch

21.3 SWITCH PANEL, ACTION AREA: A switch panel made from a thick, translucent, acrylic sheet shall be installed on the outboard wall of the Action Area. The panel shall be coated with a black colored, rigid plastic film that evenly disperses label and indicator illumination. All switches and controls shall have illuminated legends indication function and status. The Switch Panel shall have the following minimum controls and indicators:

1. Dome Lights, Streetside Switch (Hi/Lo)
2. Dome Lights, Curbside Switch (Hi/Lo)
3. Vacuum System Switch, red bezel



Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

- 4. Exhaust Vent Switch
- 5. Inverter (if equipped)
- 7. Thermostat
- 8. Module Disconnect Switch

21.4 MODULE DISCONNECT SWITCH: Two (2) three-way module power disconnect switches shall be installed, one (1) in the cab control panel, and one (1) in the action area control panel. This will allow the module power to be activated from the patient compartment.

**22.0 VISUAL CONSPICUITY - EXTERIOR LIGHTING**

22.1 WARNING LIGHTS: The warning light system shall meet or exceed KKK-A-1822F as demonstrated with the documentation provided by the lighting manufacturer. The warning lights shall be configured like, and flash in compliance with, KKK-A-1822F 3.8.2.1, and Table 1.

22.2 DUAL MODE FLASHERS: A dual mode Primary/Secondary flasher shall be provided for the vehicle emergency warning light system as required in KKK-A-1822F. Lights shall be configured as depicted in the attached drawings and as described below:

22.2.1 WARNING LIGHTS - FRONT WALL: The front wall shall be configured with seven (7) Whelen 900 series Super LED warning lights mounted on the front of the body. From left to right, the LED colors shall be RED / WHITE / RED / WHITE / RED / WHITE / RED. The lenses shall be clear.

22.2.2 WARNING LIGHTS - DRIVER SIDE: There shall be two (2) RED Whelen 900 series Super LED warning lights mounted on the driver side of the module; one (1) in the upper forward and one (1) in the upper rearward corners of the module. The lenses shall be clear.

22.2.3 WARNING LIGHTS - PASSENGER SIDE: There shall be two (2) RED Whelen 900 series Super LED warning lights mounted on the passenger side of the module; one (1) in the upper forward and one (1) in the upper rearward corners of the module. The lenses shall be clear.

22.2.4 WARNING LIGHTS – REAR UPPER: The ambulance shall be equipped with two (2) Whelen 900 series outer and one (1) Whelen 700 series center Super LED warning lights positioned on the upper module rear wall. The lights will be configured as follows: RED / Load / AMBER / Load / RED. The lenses shall be clear.

The red warning lights shall be wired to function as brake lights when not in emergency mode.

22.2.5 WARNING LIGHTS – REAR WINDOW LEVEL: This unit shall be equipped with two (2) Whelen 900 series Super LED warning lights mounted on the rear of the module

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

set to show through the both of the rear door windows when the rear doors are open. The left light shall be BLUE, and the right light shall be RED. The lenses shall be clear.

22.2.6 GRILLE LIGHTS: This unit shall be equipped with two (2) RED Whelen LINZ6 Series Super LED warning lights mounted on the upper cross bar of the OEM grille in compliance with the OEM chassis manufacturer's guidelines and the lighting requirements of KKK-A-1822F. These LEDs shall function in the primary mode only. The lenses shall be clear.

22.2.7 INTERSECTION LIGHTS – CAB: This unit shall be equipped with (2) Whelen LINZ6 Red LED warning lights mounted in the forward area of the chassis front fenders in compliance with the OEM chassis manufacturer's guidelines and the lighting requirements of KKK-A-1822F. These warning lights shall function in the primary mode only. The lenses shall be clear.

22.3 TAIL LIGHTS: The tail light configuration shall be Whelen 600 Series LED Tail/Brake, LED turn signals, and LED back-up lights installed on either side of the rear entry doors. These lights shall be stacked vertically above the diamond plate rear kick plate in the order presented above.

22.4 SCENE LIGHTS: Two Whelen LED 900 series lights shall be provided on each side of the module. The curbside lights shall come on when the curbside entry door is opened.

The streetside and curbside scene lights may be turned ON/OFF with (2) two separate, right and left scene rocker switches located on the cab console switch panel. There will be a momentary disconnect switch located at the side entry door for disabling the curbside scene lights during the daylight hours.

22.5 LOAD LIGHTS: Two Whelen LED 700 series load lights shall illuminate the rear of the module. Both rear lights shall come on with the opening of the leading rear access door. These rear load lights will also activate when the vehicle transmission is placed in reverse or when the rear load switch in the cab console switch panel is activated. There will be a momentary disconnect switch located on the wall at the curb side rear entry door for disabling the load lights during the daylight hours.

22.6 WARNING / SCENE / TAIL LIGHT BEZELS: All Whelen warning, scene, and tail-lights shall have chrome Whelen bezels.

22.7 I.C.C. LIGHTS: 3/4" round LED clearance lights shall be provided per FMVSS and D.O.T. Standards. The lights shall indicate the height and width of the vehicle and define the vehicle centerline. These lights will be mounted on the uppermost margins of the front and rear body. The lights shall be mounted in rubber grommets and the mounting location for each light shall be prepared prior to the paint process to reduce the possibility of paint break and resulting corrosion. Drilling or tapping through a painted body shall not be acceptable.

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

There shall be five (5) amber clearance lights (TecNiq LED model S34-AC09-1) forward facing and five (5) red clearance lights (TecNiq LED model S34-RC09-1) rear facing. Additionally, there shall be two (2) matching amber D.O.T. marker/directional lights mounted one (1) each side of the module on the rear corner extrusions and two (2) matching red D.O.T. marker lights mounted one (1) each side of the module on the rear corner extrusions. The D.O.T. marker lights shall be located approximately 48" above ground level.

22.8 LICENSE PLATE LIGHT: The license plate holder shall be a cast aluminum housing that is near flush mounted on the rear of the module. The housing shall be mounted in the lower diamond plate kick panel below the street side B/T/T lighting. There shall be two (2) LED lights installed to provide illumination to the license plate with the chassis park light circuit on.

22.9 PERIMETER LIGHTING CERTIFICATION: To assure that the exterior work lighting is adequate to perform EMS functions in a variety of settings which may require exterior illumination, the Scene and Load lights installed on this vehicle shall comply with AMD Standard 024- Perimeter Illumination Test.

22.10 COMPARTMENT LIGHTING: The compartments shall be illuminated with near flush mount LED Compartment lights. The lights shall function each time the compartment door is opened and extinguish when the door is closed. The lights shall be as follows:

- Compartment #1 – one (1) on ceiling
- Compartment #2 – two (2) on side walls
- Compartment #3 – one (1) on ceiling
- Compartment #4/5 – two (2) on side walls

**23.0 AUDIBLE CONSPICUITY**

23.1 ELECTRONIC SIREN: The ambulance shall be equipped with an ignition powered Whelen 295SLSA1 200 watt siren mounted in the engine cover console.

There shall be a set of CPI polished cast aluminum 100 watt speakers mounted through the bumper on the outboard ends. The siren speakers shall not block airflow into the grille per the OEM chassis manufacturer’s guidelines. The siren and speakers shall meet or exceed KKK-A-1822F 3.14.4 and be compliant with AMD Standard 023- Siren Performance Test and AMD Standard 006- Patient Compartment Sound Level Test.

23.2 BACK UP ALARM: The apparatus shall include a minimum 97 decibel back up alarm device. The alarm shall be automatically activated by shifting the vehicle transmission into reverse. The backup alarm shall include a rocker type cut-off switch located in the cab console Switch Panel. The alarm device shall be provided as required in KKK-A-1822F 3.15.2 and shall be compliant with SAE Standard J994.

# Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies  
Exactly as Written

Yes No

## **24.0 INTERIOR LIGHTING**

24.1 ACTION AREA LIGHTING: A 12-volt LED light shall be provided directly over the forward, street side work surface. A near flush, 16-inch type fixture shall be provided. The light shall have an On-Off rocker switch on the rear action area control panel.

24.2 STEPWELL ILLUMINATION: A 12 VDC LED light shall illuminate the curbside step well per Federal Specification KKK-A-1822F 3.10.12. This light shall function upon opening the Curbside Entry Door and extinguish when the door is closed.

24.3 PATIENT COMPARTMENT DOME LIGHTS: The patient compartment shall have eight (8) dual intensity Whelen 8" round LED dome lights in the ceiling. The domes centers shall be installed in two (2) light banks with (4) streetside overhead and (4) curbside overhead. Each bank of lights shall be individually controlled Hi/Off/Low and the configuration shall meet current KKK-A-1822 requirements 3.8.4, 3.8.4.1 and be compliant with AMD Standard 016- Patient Compartment Lighting Level Test.

24.4 CHECK-OUT TIMER: A 5-minute check-out timer shall activate by opening the rear or side entry door when the battery switch is off. The curbside bank of dome lights shall turn on in the "low" mode. Following the first 5-minute cycle the lights will deactivate. Closing, then re-opening the side or rear entry door, can reactivate the cycle.

24.5 DOME LIGHT TIMER SWITCH: A momentary switch located at the head of the squad bench shall power on curbside bank of dome lights when the module power is off for a period of 15-minutes.

## **25.0 COMMUNICATIONS EQUIPMENT**

25.1 COMMUNICATIONS RADIO PREWIRES: The vehicle shall be equipped with three (3) RG58-U coaxial cables routed from antenna bases mounted over the first, second, and third module dome lights. All three (3) shall terminate behind the driver's seat. A 12VDC battery power, ignition power, and ground lead shall also be provided for each coaxial cable. There shall be an 18" service loop at the starting point and a 36" termination loop. The radio power wires shall originate in the power distribution area and will be labeled appropriately for future installation by a radio technician.

## **26.0 PAINT, LETTERING, DECALS, MISCELLANEOUS**

26.1 100% PAINTFILM COVERAGE: All stages of primer and paint shall cover all weather-exposed surfaces. Hinge mating surfaces on the doors and jambs shall be painted. Bare aluminum and primer-only preparation is not acceptable under door hinges. Doors shall be painted without actuation handles installed. All body cutouts for emergency lighting, shoreline receptacle, etc., shall be cut prior to initiating the prime/paint process to assure complete coverage of all exposed, raw metal.

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

All of the module entry and compartment doors shall be removed prior to painting and be painted separately, at the same time and identically to the module process to insure complete coverage and electrolysis protection between the stainless-steel hinge and the aluminum door and frame surfaces.

To reduce the risk of breaking paint and to provide a for a more consistently robust paint application, all light holes, the license plate bracket hole, gas filler bracket hole, all door window and handle holes and exhaust fan and any other option required mounting holes shall be cut in the module prior to beginning the paint process. Intersection light holes shall be cut in the chassis fenders and cut out must be coated with a corrosion resistant material to comply with Ford QVM requirements to prevent oxidation and rusting of the OEM metal surface.

The manufacturer's standard paint process shall provide that all surface body welds and imperfections be ground flush and body filled as needed to provide a smooth even surface that facilitates a flat smooth paint finish.

The entire exterior surface of the module shall be sanded with an air powered DA sander and a minimum 150 grit sand paper and then the module shall be washed with DX-330 cleaner/degreaser to remove any metal, oil or contaminant residue prior to the application of the seam seal process.

All exterior body seams shall be sealed with 3M panel bond/seam sealer to provide a smooth application environment for the prime and paint processes and to prevent future contamination, oxidation and corrosion.

The entire exterior surface of the module shall be coated with a primary coat of PPG "Delfleet" etch-coat primer, flash dried and then coated with a high performance PPG "Delfleet" primer sealer and baked to dry. The primer sealer coat shall be sanded to a flat smooth finish to eliminate all nibs and imperfections, inspected and etch primer/sealer applied where necessary and washed with DX330 to provide a clean, smooth surface prior to the application of the base coat application.

The entire exterior surface of the module shall be coated with an application of PPG "Delfleet" color mixed base coat. The base coat shall be baked to dry and inspected for imperfections. Minor surface repairs shall be utilized to provide a smooth surface prior to the application of the clear coat material. The entire exterior surface of the module shall be coated with an application of a PPG - "Delfleet" clear coat finish that will provide a robust, durable finish. The clear coat finish shall be baked per PPG "Delfleet" process instructions prior to the finished surface process application.

After the clear coat process is completed, the entire exterior surface of the module shall then be sanded with a minimum 1200 grit sand paper and then buffed using 3M Perfect-It III buffing compound to provide a clean, high gloss final surface finish.

Without exception, the manufacturer shall monitor the entire application process. The inspection process shall provide mil-thickness measurements at numerous random locations across the body to insure that the total paint process shall provide a minimum of 5 mils dry build, without runs or sags, after the completion of the final sand and buff process.

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

26.2 PAINT AND COLORS: The module shall be painted white to match the chassis. Any painting performed by the manufacturer, of the body and/or chassis, shall be covered under warranty for a period of not less than four (4) years / forty-eight (48) months, and shall be sanctioned by the paint manufacturer.

26.3 ROOF STAR-OF-LIFE: A 36" vinyl star-of-life shall be installed on the roof of the module.

26.4 OTHER LETTERING & DECALS: A federal specification KKK-A-1822F "Star-of-Life" decal shall be applied to the roof of the ambulance.

The following labels shall be provided as standard.

- Notice: This vehicle Equipped with 12VDC charging System (Mounted in cab)
- 'Shore Inlet 125VAC 60 HZ"
- '125VAC Outlet'
- '12VDC Outlet'
- 'Diesel Only' or 'Gasoline Only' (per chassis requirements)
- 'No Smoking/Oxygen Equipped'
- (2) 'Fasten Seat Belt' signs provided: (1) located in the cab and (1) in the module.

26.5 FIRE EXTINGUISHERS: In compliance with the Federal Specification KKK-A-1822F, there shall be two (2) 5lb. ABC rated fire extinguishers with mounting brackets. These extinguishers shall be shipped loose with the completed ambulance for installation by this agency.

**27 REFERENCES AND STANDARDS**

27.1 MANUALS: An Owner's Manual copied onto a thumb drive along with the OEM chassis manufacturers supplied items shall be provided with each vehicle. The information on the disc consists of the following items:

1. Chassis Warranty Card & Owner's Information
2. Chassis Maintenance and Operating Tips
3. Extra Set of Keys
4. 15 Year Module Warranty
5. 3 Year / 36,000 mile Conversion Warranty
6. 6 Year / 72,000 mile Electrical Warranty
7. 4 Year Paint Warranty
8. Care and Maintenance Instruction
9. Heater/AC Information & Warranty
10. OEM Chassis Manual
11. Schematics for Standard Systems:
  - Charging System
  - Power Distribution
  - Front Switch Panel

Wyoming County Emergency Services - **BID SPECIFICATIONS**

Bidder Complies Exactly as Written

Yes No

- Rear Switch Panel
  - Climate Control System
  - OEM Drawings
  - Wire Harness list
  - Circuit Diagrams for all Systems
12. Conversion Component Information  
 13. Operations Manual  
 14. Warranty and Parts List - Siren, Light bar, Etc.

**28 ADDITIONAL EQUIPMENT:** The following equipment shall be included in the proposal price.

28.1 Stryker 6506 Power Pro XT Cot – High-Configuration. Shall include a 2<sup>nd</sup> battery and battery charger.

28.2 Stryker 6390 Power Load System – Shall be installed as stated earlier in the specification.