



**Invitation to Submit Competitive Bids  
For  
Ambulance(s) and Equipment**

DATE: 08-23-2019

*Bryan County EMS* is soliciting competitive, sealed bids from qualified vendors for the purchase of One (1), Type I, Class One (4 x 2), Configuration A ambulance(s) for *Bryan County EMS, 306 South 22<sup>nd</sup> Ave. Durant, OK 74701*. *Bryan County EMS* reserves the right to reject any and/or all bids. *Bryan County EMS* also reserves the right to accept the bid most advantageous to *Bryan County EMS*.

The attached specification defines a heavy-duty, commercial emergency medical vehicle, built to withstand adverse driving conditions. The vehicle shall meet or exceed the latest revision to federal specification KKK-A-1822, Federal Motor Vehicle Safety Standards (FMVS.), National Truck Equipment Association (NTEA) Ambulance Manufacturer's Division (AMD) standards and all other manufactures.

This invitation is extended to all qualified vendors/manufacturers that is specifically in the business of building emergency medical vehicles and/or equipment. This invitation is issued by:

*Bryan County EMS*  
306 South 22<sup>nd</sup> Avenue  
Durant, OK 74701  
[info@bcems.net](mailto:info@bcems.net)

Contact Person:  
Brian Norton  
580-924-4687

**GENERAL CONDITIONS**

**PARTY IDENTIFICATION:**

AGENCY: "Agency" is hereinafter defined as the customer. The customer is an individual or a group of individuals whom represent the interest of the city, borough, county, parish, state or private enterprise and has been charged with the responsibility of purchasing one or more emergency medical vehicle(s).

BIDDER: "Bidder" is hereinafter defined as the vehicle manufacturer and/or its authorized representative. The bidder is an assigned representative who is authorized to commit to a contract with the "Agency".

VENDOR: "Vendor" is synonymous with "Bidder".

NOTICE TO BIDDERS: Bidders shall thoroughly examine any drawings, specifications, schedule, instructions and any other documents supplied as part of this invitation to bid.

Bidders shall make all investigations necessary to thoroughly inform themselves regarding the content of the written specifications, drawings and instructions supplied herein. No pleas of ignorance by the bidder pertaining to the content of the specifications, drawings, schedule or instructions will be considered by the agency once the deadline for bid submission has occurred. Failure or omission on the part of the bidder to make the necessary examinations and investigations into the content of the specifications shall not be accepted as a basis for making variations to the spec. Failure or omission by the bidder to make all clarifications or explanations of exceptions and conditions that exist or that



may exist hereafter shall NOT be accepted as a basis for making variations to the **requirements** of the agency or **compensation** to the bidder.

**DEFINITIONS:**

**CLARIFICATIONS:** Clarifications shall be **written correspondence** between the bidder, the agency and all other qualified bidders. A Clarification shall include the paragraph number, page number, the text with unclear content (as written in the specification) and the definition of the clarification requested. Verbal clarifications shall be documented in writing and distributed to all other qualified bidders at least two business days prior to the deadline for bid submission.

**EXPLANATION OF EXCEPTIONS:** Bidders may take exceptions to any part of the bid contained herein with a written itemized schedule. The schedule shall include the paragraph number(s), the text that the bidder feels he can not comply with an explanation why the bidder feels that the requirement is not in the best interest of the agency and/or an alternate bidder solution. Alternate bidder solutions may be considered by the agency, if the bidder can show the agency that the alternate solution is, in quality and quantity, equal to OR better than the specified item. This agency will share the exception/alternate solution with all other Qualified Bidders. Explanation of exceptions shall be documented in writing at least two business days prior to the deadline for bid submission.

**CORE DESIGN INTENT:** The core design intent of the specifications supplied herein is to purchase an ambulance with the highest level of engineering excellence. The "Core Design" intent of this vehicle shall be centered on the patient's need for pre-hospital care, in conjunction with a safe working environment for the Emergency Medical Personnel.

**BID PACKAGES SHALL NOT TAKE TOTAL EXCEPTIONS:**

Bidders are required under this bid invitation to give, for the consideration of the agency, a proposal that will comply with the written specifications, drawings and schedules supplied herein. The specifications supplied represent a compilation of input from all disciplines of users, patients, maintenance and management personnel who are directly affected by the vehicle's performance. Careful consideration pertaining to safety, configuration, construction, and workmanship are based on working experiences by all the personnel who have direct, working contact with the subject vehicle specified herein. The "core design" of this ambulance was created as a result of resolving issues and improvement suggestions that have originated from the personnel most QUALIFIED to make such input. This agency makes no claim that ALL potential issues or improvements are included in the specifications supplied herein. This agency will consider any VALID concern by any bidder and will consider minor specification exceptions or alternates of equal or better performance, provided that the exception(s) are steered toward meeting the "Core design" intent AND the exception(s) are cleared up not less than two days prior to the bid opening date.

**Caution:**

A bidder who submits a bid that takes "Total Exception" and makes an offering of some "Standard" or "Stock" unit will be viewed by the agency as a bidder who did not make, and is not prepared to make, a valid bid, and is not qualified to manufacture the ambulance as specified herein. Alternate bids will NOT be considered.

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

**VEHICLE QUANTITY:** THIS AGENCY is currently seeking to purchase one vehicle per the specifications set forth in this solicitation for bid. THIS AGENCY AND/OR other government or private agencies that qualify to purchase under this contract will reserve the right to increase the number of vehicles purchased without incurring an obligation to obtain bids from other vendors for a period of two years. A contract extension may be provided to the successful, qualified vendor who has performed satisfactorily to the original contract.

**Bidder Qualifications**

**VENDOR QUALIFICATIONS:**



All Bidders shall be members in good standing of the Manufacture they are using for the chassis in this bid. Each bidder shall supply a copy of their valid OEM Certification with their bid package. If for any reason the OEM Certification has been withdrawn or suspended by the manufacture within the past five years, the bidder shall supply a full written explanation as to why it was withdrawn. The written explanation shall include any corrective actions taken to regain the OEM Certification.

**NO EXCEPTIONS**

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

**PRODUCT LIABILITY INSURANCE:** Proof of current liability insurance shall be supplied. The proof of insurance shall bear the insurance carrier's name, address and phone number. The proof shall also bear the name and address of the insured. This document shall contain the coverage schedule, explaining the type of insurance, the policy number, the effective date of coverage, the policy expiration date and the individual limits.

The minimum amount of coverage shall be as follows:

Commercial General Liability - as follows:

- Each Occurrence: \$, 1,000,000
- Damage to rented premises, each occurrence: \$300,000
- Medical Expenses: \$50,000
- Personal and Adv. Injury: \$1,000,000
- General Aggregate: \$4,000,000
- Products - Comp/OP Agg: \$4,000,000

Automotive Liability - Combined Single Limit: \$1,000,000

Comp/Coll Ded: \$1,000

Excess Liability - Umbrella Form

- Each occurrence: \$5,000,000
- Aggregate: \$5,000,000
- Excess Liability: \$20,000,000

Workers Compensation and Employers' Liability

- E.L. Each Accident: \$1,000,000
- E.L. Disease policy - Each Employee: \$1,000,000
- E.L. Disease - Policy Limit: \$1,000,000

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

**NON-DISCRIMINATION AND EQUAL OPPORTUNITY:** The Bidder/Contractor agrees to comply with all federal statutes relating to non-discrimination. These include but are not limited to:

- (a) Title VI of the civil rights act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin;
- (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. 16811683, and 1685-1686), which prohibits discrimination on the basis of sex;
- (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), which prohibits discrimination on the basis of handicaps and the Americans with Disabilities Act of 1990;
- (d) The Age Discrimination Act of 1974, as amended (42 U.S.C. 6101-6107), which prohibits discrimination on the basis of age;
- (e) The Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse;



- (f) The Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) 523 and 527 of the Public Health Service Act of 1912 (U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records;
- (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing;
- (i) Any other nondiscrimination provisions in any specific statute(s) applicable to any Federal funding for this Agreement;
- (j) The requirements of any other nondiscrimination statute(s) which may apply to this agreement.

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

**DRUG FREE WORK PLACE:** The Bidder shall conduct business as a Drug Free Workplace. The Bidder/Manufacturer and ALL of its sub-contractors shall provide notice to their employees and sub-contractors as required under the Drug-Free Workplace Act of 1988. A copy of Bidder's Drug-Free Workplace Policy shall be furnished to this agency upon request.

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

**QUALITY MANAGEMENT SYSTEM REGISTERED:** The manufacturer shall have a registration for ISO 9001: 2008 for their Quality Management System (QMS). The QMS provides establishment, documentation, implementation, maintenance and improvement of management systems that impact the final quality of the product. Registration of the vendor's QMS demonstrates an enduring commitment to quality, a sharp focus on the customer, and robust communication throughout the product process chain to the customer. This registration provides for oversight with routine inspection of the QMS to maintain certification status. Proof of certification shall be readily available upon demand. Proof of Certification shall be provided with bid during initial bid process

**NO EXCEPTIONS**

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

**NATIONAL TRUCK EQUIPMENT ASSOCIATION TESTING**

**AMD 001 - AMBULANCE BODY STRUCTURE STATIC LOAD TEST:** The ambulance described herein shall be type tested to the National Truck Equipment Association's Ambulance Manufacturing Division, Standard 001 - Ambulance Body Structure Static Load Test except the test weight shall be a minimum of 55,000 pounds. The test shall be conducted by an independent testing laboratory. The module body bid herein shall contain extrusion shapes and general structural layout identical to the test body used in the test.

**AMD 002 - BODY DOOR RETENTION COMPONENTS TEST:** The ambulance described herein shall be type tested to the National Truck Equipment Association Ambulance Manufacturing Division, Standard 002 Body Door Retention Components Test. The test shall be conducted by an independent testing laboratory. The module body bid herein shall contain identical door extrusion shapes, door skin configuration and general structural layout as the test body used in the test.

Safety is this Agency's first concern. Entry and compartment door integrity is crucial to the safety of the patient, public, passengers and crew. If the Bidder has experienced any of the following door conditions as a result of collision, roll over or other accidental impact, then the Bidder shall supply the Agency with a report containing the date, a full explanation of the incident and corrective actions taken.

- A) Any entry door rendered inoperative.
- B) Any door that has come open.
- C) Foreign object penetration into patient cabin through the body structure.



Catastrophic door failure during a collision indicates mechanical defects in the design, hardware and/or the direct construction of the modular door. Any AMD Standard 002 testing prior to the incident is deemed invalid, regardless of the expiration date of the original test.

**AMD 003 - OXYGEN TANK RETENTION SYSTEM STATIC TEST:** The ambulance described herein shall be type tested to the National Truck Equipment Association Ambulance Manufacturing Division, Standard 003 Oxygen Tank Retention System Static Test. The test shall be conducted by an independent testing laboratory.

Safety is this Agency's first concern. Main cylinder control is extremely important and is crucial to the safety of the patient, public, passengers and crew. If the Bidder has experienced a cylinder rack separation from the oxygen compartment wall, OR if the cylinder has come loose from the cylinder restraining device, then the Bidder shall supply the Agency with a report containing the date, a full explanation of the incident and corrective actions taken to prevent future failures. Main Oxygen/Air Cylinders that come loose during a collision indicate mechanical defects in the design of the restraining device or the mounting method. Any AMD Standard 003 testing prior to the incident is deemed invalid, regardless of the expiration date of the original test.

**AMD 004 - LITTER RETENTION SYSTEM STATIC TEST:** The cot/litter retention system described herein shall be tested to the National Truck Equipment Association, Ambulance Manufacturing Division Standard 004 - Litter Retention System Static Test. The cot mount hardware, mounting method and floor reinforcement areas shall exceed the test as described in AMD 004. This test shall be conducted by an independent testing laboratory.

Safety is this Agency's first concern. Main cot/litter retention is critical to patient care. If the Bidder has experienced a litter ejection due to a hardware defect or a defect in the mounting method, then the Bidder shall supply the Agency with a report containing the date, a full explanation of the incident and corrective actions taken to prevent future ejections. Main Cot/Litter ejection's that occur during a collision indicates mechanical defects in the design of the restraining device or the mounting method; Therefore, ALL Bidder AMD Standard 004 testing dated prior to the incident is deemed invalid, regardless of the expiration date of the original test.

**AMD 005 - 12-VOLT DC ELECTRICAL SYSTEMS TEST:** The 12-Volt DC Electrical System described herein shall be tested to the National Truck Equipment Association, Ambulance Manufacturing Division Standard 005 - 12-Volt DC Electrical System s Test. This test is valid for the test article vehicle ONLY. The test shall be conducted on EACH ambulance. The results of the test shall be recorded on an electrical system performance sheet and shall be included with the delivery documents. This test shall be conducted by a qualified quality control electrician at the ambulance manufacturing plant.

Reliability and Safety is this Agency's first concern. The 12-volt electrical system must be functional under all normal or adverse driving and operating conditions. Each electrical device, electrical component, wire, wire route and connection quality shall be tested for reliability as a "SYSTEM" on each vehicle sold. If the Bidder has experienced an electrical fire or an electrical failure resulting in a disabled ambulance going to an emergency call or during transportation, shall supply the Agency with a report containing the date, a full explanation of the incident and corrective actions taken to prevent future electrical failures.

**AMD 006 - PATIENT COMPARTMENT SOUND LEVEL TEST:** The ambulance described herein shall meet or exceed the National Truck Equipment Association Ambulance Manufacturing Division Standard 006 Patient Compartment Sound Level Test. The sound level in the driver or patient cabin shall be eighty decibels or less under the conditions described in AMD Standard 006.

**AMD 007 - PATIENT COMPARTMENT CARBON MONOXIDE LEVEL TEST:** The ambulance described herein shall meet or exceed the National Truck Equipment Association, Ambulance Manufacturing Division Standard 007 - Patient Compartment Carbon Monoxide Level Test. The patient and driver cabin shall be environmentally sealed from carbon monoxide gases that are emitted from internal combustion engines. The ambulance specified herein shall have safe carbon monoxide levels of ten parts per million or less while the vehicle is exposed to the conditions described in AMD Standard 007.



**AMD 008 - PATIENT COMPARTMENT GRAB RAIL STATIC LOAD TEST:** The patient cabin grab rails shall be tested to the National Truck Equipment Association, Ambulance Manufacturing Division Standard 008 - Patient Compartment Grab Rail Static Load Test. The ceiling mounted grab rails shall be subject to a three axis load of three hundred pounds.

The ceiling mounted grab rail shall not come loose from the ceiling or permanently deform. All mounting fasteners shall be threaded into metal structure not less than .125 inches thick.

**AMD 009 - 125-VOLT AC ELECTRICAL SYSTEMS TEST:** The patient cabin shall be wired per the National Truck Equipment Association, Ambulance Manufacturing Division Standard 009 - 125 -Volt AC Electrical Systems Test.

The ambulance wiring shall comply with the National Electric Code in effect at the time of manufacture of the ambulance. The system specified herein shall be a 2-wire system with a ground. All outlets and 120-volt hard wired devices, on the ambulance, shall have ground fault interrupter protection.

**AMD 010 - WATER SPRAY TEST:** The ambulance specified herein shall be water spray tested for water leakage into the patient's and driver's cabins. The door to jamb seal, window installation and seals shall be tested against leakage per the National Truck Equipment Association, Ambulance Manufacturing Division Standard 010 - Water Spray Test. This test shall be conducted on EACH ambulance by the quality assurance department.

**AMD 011 - EQUIPMENT TEMPERATURE TEST:** The ambulance and equipment specified herein shall operate satisfactorily operate between 30 degrees and 125 degrees Fahrenheit per the National Truck Equipment Association, Ambulance Manufacturing Division Standard 011 - Equipment Temperature Test. This standard must be type certified by an independent testing laboratory on a like test model.

**AMD 012 - INTERIOR CLIMATE CONTROL TEST:** The ambulance and equipment specified herein shall be equipped with a HVAC (Heating, Ventilation, and Air Conditioning) System that will meet or exceed the performance criteria set forth in the National Truck Equipment Association, Ambulance Manufacturing Division Standard 012 - Interior Climate Control Test. This standard must be type certified by an independent testing laboratory on a like test model.

**AMD 013 - WEIGHT DISTRIBUTION GUIDELINES:** The ambulance specified herein shall be weighed at the end of the ambulance manufacturer's production cycle to assure compliance with the National Truck Equipment Association, Ambulance Manufacturing Division Standard 013 - Weight Distribution Guidelines.

The vehicle specified herein must be weighed on a four-point scale that measures the weight imposed on EACH wheel. The side to side weight difference tolerance shall not exceed five percent (5%).

The total weight imposed on the FRONT axle shall not exceed the chassis manufacturer's gross axle weight rating minus three hundred pounds.

The total weight imposed on the REAR axle shall not exceed the chassis manufacturer's gross axle weight rating minus one thousand pounds.

The aggregate total of all four points shall not exceed the gross vehicle weight rating minus eleven hundred pounds regardless of customer specified equipment.

**AMD 014 - ENGINE COOLING SYSTEM TEST:** The cooling system in the ambulance specified herein shall be tested to assure compliance with the National Truck Equipment Association, Ambulance Manufacturing Division Standard 014 - Engine Cooling System Test. The vehicle specified herein must be tested at the end of the ambulance manufacturers manufacturing cycle to determine if the cooling system capacity is adequate to maintain safe engine operating temperature at ninety-five degrees, ambient temperature for one hour. EACH ambulance shall be checked to assure a leak and trouble free cooling system performance.

**AMD 015 - AMBULANCE MAIN OXYGEN SYSTEM TEST:** Each ambulance's main Oxygen System shall be tested to assure compliance with the National Truck Equipment Association, Ambulance Manufacturing Division Standard 015 -



Ambulance Main Oxygen System Test. The subject vehicle specified herein must be equipped with an Oxygen system that can withstand a 150 PSI charge of dry air or Nitrogen for a period of four hours without a loss exceeding five pounds per square inch of pressure. The results of this test shall be posted inside the oxygen tank stowage compartment. A certificate shall be supplied, describing the test conditions, the initial test pressure, the final pressure (after four hours) and the name of the inspector who performed the test.

AMD 016 - PATIENT COMPARTMENT LIGHTING LEVEL TEST: The ambulance and equipment specified herein shall be equipped with patient compartment lighting that will meet or exceed the performance criteria set forth in the National Truck Equipment Association, Ambulance Manufacturing Division Standard 016 - Patient Compartment Lighting Level Test. This standard must be type certified by an independent testing laboratory on a like test model.

AMD 017 - ROAD TEST: The ambulance and equipment specified herein will meet or exceed the performance criteria set forth in the National Truck Equipment Association, Ambulance Manufacturing Division Standard 017 - Road Test. This standard must be type certified by an independent testing laboratory on a like test model.

AMD 018 - REAR STEP AND BUMPER STATIC LOAD TEST: The rear step and bumper shall be type tested to the National Truck Equipment Association, Ambulance Manufacturing Division Standard 018 - Rear Step and Bumper Static Load Test. This standard must be type certified by an independent testing laboratory on a like test model.

AMD 019 - MEASURING GUIDELINES: COMPARTMENTS AND CABINETS: The ambulance specified herein shall be in compliance with the National Truck Equipment Association, Ambulance Manufacturing Division Standard 019 - Measuring Guidelines: Compartments and Cabinets.

AMD 020 - FLOOR DISTRIBUTED LOAD TEST: The ambulance specified herein shall be type tested to the National Truck Equipment Association, Ambulance Manufacturing Division Standard 020 - Floor Distributed Load Test. This standard must be type certified by an independent testing laboratory on a like test model.

AMD 021 - ASPIRATOR SYSTEM TEST, PRIMARY PATIENT: Each ambulance's primary patient aspirator system shall be tested to assure compliance with the National Truck Equipment Association, Ambulance Manufacturing Division Standard 021 - Aspirator System Test, Primary Patient.

AMD 022 - COLD ENGINE START TEST: The ambulance specified herein shall be type tested to the National Truck Equipment Association, Ambulance Manufacturing Division Standard 022 - Cold Engine Start Test.

AMD 023 - SIREN PERFORMANCE TEST: The ambulance siren system shall be type tested to the National Truck Equipment Association, Ambulance Manufacturing Division Standard 023 - Siren Performance Test.

AMD 024 - PERIMETER ILLUMINATION TEST: The ambulance and equipment specified herein shall be equipped with perimeter lighting that will meet or exceed the performance criteria set forth in the National Truck Equipment Association, Ambulance Manufacturing Division Standard 016 - Perimeter Illumination Test. This standard must be type certified by an independent testing laboratory on a like test model.

AMD 025 - MEASURING GUIDELINES: OCCUPANT HEAD CLEARANCE ZONES: The ambulance specified herein shall be in compliance with the National Truck Equipment Association, Ambulance Manufacturing Division Standard 025 - Measuring Guidelines: Occupant Head Clearance Zones.

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

**CRASHWORTHINESS:** Safety is a primary objective for modular ambulance vehicles produced under this specification. In addition to compliance with design criteria incorporated herein, manufacturer shall also provide certified documentation to provide proof of crash worthiness of module(s) proposed.

Crash worthiness of module shall be demonstrated through a minimum of two actual crash tests of modular body ambulance under laboratory conditions. These crash tests will be similar in scope to testing performed by the National



Highway Traffic Safety Administration and the Insurance Institute for Automobile Safety to verify the crash worthiness of passenger vehicles. An independent test laboratory accepted and utilized by the National Highway Traffic Safety Administration for their crash tests shall perform this testing and provide certification. Testing shall be performed and verified by SAE Member Engineers.

Test criteria shall be defined as a minimum of two actual high-speed impact crash tests between an ambulance and mid-size passenger vehicles. Collisions shall be into each side of manufacturer's standard production modular ambulance body mounted on a chassis, struck by an actual bullet vehicle. Crash energy at impact shall be a minimum of 3,000 pounds at 42 miles per hour.

Reports from crash testing shall be certified by testing lab, and shall include the following minimum results:

- 1) The required six-point medic restraint system shall hold all attendants in their seats. There shall be no head contact with anything except head rests. There shall be no excessive excursion of the attendants in their seats regardless of which way they were facing.
- 2) The ambulance body structure shall remain intact after both impacts. Bending of body shall be localized to point of impact, and doors adjacent to the actual crash point shall continue to operate. There shall be no intrusion into the patient compartment.
- 3) The body mount and pucks shall remain intact as a result of the impacts. There shall be no visual damage to body mounts or floor structure.
- 4) All interior cabinetry and fixtures shall remain in place and undamaged.

This provision requires actual crash testing of an ambulance by high-speed moving vehicles to validate safety and crash worthiness. Crash simulations, acceleration testing, sled testing; barrier testing or other theoretical tests are not sufficient to meet this requirement. Certified documentation from a qualified independent testing laboratory shall be provided with the bid in order to validate compliance with this requirement.

**NO EXCEPTIONS**

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

**QUALITY ASSURANCE:** The vendor shall inspect and test all systems, electrical loads, per current Federal specification KKK-A-1822 Section 4. Testing results shall be documented and displayed in the Oxygen compartment and/or supplied with the delivery handbook.

**QUALITY/COMPLIANCE ASSURANCE:** A thorough quality/compliance inspection by this agency's employees or this agency's hired representative shall compare the Ambulance to the specifications within 10 calendar days of written notice of vehicle completion by the successful bidder. The notice may be faxed, followed by phone contact. The customer reserves the right to authorize the bidder's DEALER to conduct the inspection provided the DEALER is authorized and qualified to correct quality/compliance issues at the DEALER site.

**NON-COLLUSIVE BID CERTIFICATION:**

By submission of this bid response, the Bidder and/or the Bidder's authorized representatives, certify under penalty of perjury, that to the best of their knowledge and belief the following:

- A) The prices in the bid response have been arrived at independently without collusion, consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor, and;
- B) Unless otherwise required by law, the prices which have been quoted in the bid response have not knowingly been disclosed by the Bidder and will not knowingly be disclosed by the bidder, prior to the public bid opening, either directly or indirectly to any competitor, and;





- C) No attempt has been made or will be made by the Bidder, for the purpose of restricting competition, to induce any person, partnership or corporation not to submit a bid response.

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

**DEBARMENT STATUS:**

By submission of this bid response, the Bidder and/or its authorized representatives, certify under penalty of perjury, that to the best of their knowledge and belief they are not currently debarred from submitting bids or bid on contracts by any agency within the home state of THIS AGENCY, nor are they an agent of any person or entity that is currently debarred from submitting bids on contracts by any agency within the home state of THIS AGENCY.

**WARNING:**

This agency will not tolerate Vendors who state compliance to specifications but deliver an incomplete product and/or sub-standard materials and workmanship. Vendors who have made delivery of such an ambulance without making every reasonable effort to remedy the defects found at the time of delivery or within the warranty period will be notified that they are DEBARRED from submitting bids to this agency in the future. This agency will not waste valuable time (more than once) trying to recover legal costs and deal with lost in-service time of new apparatus, working with vendors who are unresponsive to the needs of this agency.

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

**CHASSIS**

TYPE I AMBULANCE: The apparatus shall be a Configuration A, 2-door, conventional cab and chassis with a transferable, modular, ambulance body.

CHASSIS MAKE: The apparatus shall be mounted on a commercially available cab and chassis. The chassis manufacturer shall be the vehicle's point of origin. The chassis shall be supplied as an incomplete vehicle to the successful ambulance manufacturer. The chassis supplied shall conform to all applicable Federal Motor Vehicle Safety Standards in force at the time of manufacture. A statement of conformity shall be supplied with the chassis in an "Incomplete Vehicle Manual".

CHASSIS MODEL: The apparatus shall be mounted on a 2019 or newer 1 ton or greater, Regular cab, dual rear wheel, two-wheel drive chassis equipped as follows below.

WHEEL BASE: The wheel base shall be 189 inches with a cab to axle dimension of 108 inches. **The wheel base shall be factory supplied by the OEM** Modified wheel bases made from chassis with shorter or longer wheel bases are not acceptable.

OEM: The acronym OEM is Original Equipment Manufacturer. The OEM is the chassis manufacturer and the vehicles Maker and Origin.

TRIM LEVEL: The cab shall be equipped with tilt steering wheel, cruise control, power windows and door locks AM/FM radio with Bluetooth and in Dash Navigation. The front bumper and grill shall be accented to match the paint color of the truck. The OEM grille work shall remain OEM. After-market vacuum formed, proprietary grille work made by the ambulance manufacturer is not acceptable due to replacement part cost and lack of immediate availability.

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



**ENGINE:** A V-8, Turbo-Charged Diesel engine shall be provided with a minimum displacement of 6.7 liters (402 cu in). The engine output shall be a minimum 390 horsepower at 2,800 revolutions per minute and deliver a minimum 735 foot pounds of torque at 1,600 revolutions per minute. The compression ratio of the engine is 16.2:1 with a high pressure common rail fuel injection system. Engine performance shall comply with or exceed the most current revision of KKK-A-1822.

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

**TRANSMISSION:** There shall be a, Heavy Duty Torque shift, 6-speed or greater, automatic transmission with overdrive provided.

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

**CAB INTERIOR COLOR:** The color of the cab interior shall be gray.

**TURN DIAMETER:** The chassis with 188.8-inch wheelbase will have a curb to curb turn diameter of 54.8 feet.

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

**CAB SEATS:** OEM high back, velour covered bucket type seats shall be provided in the cab. The seats shall adjust forward and aft. Seat base must be OEM. After market seats and/or bases are not acceptable due to violations regarding SRS (Air Bag) deployment geometry and the manufactures Guidelines.

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

**OCCUPANT RESTRAINT SYSTEM:** The front, forward facing cab seats shall be equipped with OEM installed three-point seat belts. The seat belt assemblies shall meet or exceed FMVS. 208 and 209. The inside conversion panels shall not interfere with the swivel arc of the shoulder rings. Seat Belts will be Bright Orange or Red per NFPA 1901

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

**SUPPLEMENTAL RESTRAINT SYSTEM:** An OEM 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.

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

**GROSS VEHICLE WEIGHT RATING (GVWR):** The GVWR of the chassis supplied shall be at least 18,000 pounds.

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

**FRONT AXLE WEIGHT RATING (FAWR):** The FAWR shall be rated no less than 7,000 pounds.

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

**REAR AXLE WEIGHT RATING (RAWR):** The RAWR shall be rated no less than 13,660 pounds.

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

**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 shall meet current KKK-A-1822.

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



**SPARE TIRE STOWAGE LOCATION:** The spare tire and wheel assembly will not be carried on the unit. The spare tire and all the related tools, if supplied by the OEM, shall be shipped loose with the completed vehicle.

**JACK AND SPARE TIRE TOOLS:** The vehicle jack and tools associated with the spare tire and jack shall be installed behind the passenger's seat.

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

**WHEEL/RIM APPEARANCE:** All 6 wheels will be Aluminum wheels. No Simulators

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

**BRAKES:** 4-wheel anti-lock, power assisted hydraulic brakes shall be supplied by the OEM. The brakes shall be 4-wheel Disc type with Dual piston, Pin slider calipers. The front disc diameter shall be 14.53 inches in diameter and the rear disc shall be 15.55 inches in diameter. The parking brake shall be a foot operated, hand release independent mechanical brake, provided by the OEM

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

**BRAKE BOOSTER / ANTI LOCK SYSTEM:** The brake pedal effort shall be reduced by a hydro-boost power assist unit. The booster shall be installed on the fire wall and linked directly to the foot pedal. Hydraulic brake pressure shall route through a 3-channel, 4-Wheel anti-lock brake system that prevents wheel lock-up.

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

**INTERIOR UPGRADE PACKAGE:** Interior upgrade package shall be ordered and supplied on the chassis. This package shall include:

- Cloth Headliner
- High trim door panels
- High back bucket seats
- Cloth sun visors
- Power Door locks
- Power Windows
- Insulation package

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

**FLOOR PEDALS:** The chassis shall have OEM adjustable floor pedals, option 62M.

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

**DAYTIME RUNNING LIGHTS:** Daytime running light option No 942 shall be supplied and installed by the OEM. Both headlights shall come on with the ignition switch.

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

**SHOCK ABSORBERS:** The chassis supplied shall be equipped with one shock absorber for each side of each axle. An OEM selected one and three eighth (1-3/8") inch gas type shock shall control vehicle spring oscillation and dampen road related jounce and harshness. Ambulance related shields, floor members or other devices shall not interfere with shock replacement.



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

FRONT STABILIZER BAR: A computer selected, one-inch diameter anti-sway bar shall be supplied. The bar shall regulate body shift and enhance drivability, handling and control. The solid torsion spring steel bar shall be attached to the vehicle frame utilizing natural rubber bushings and removable steel bushing housings. The ends of the bar shall be inserted into natural rubber bushings, located near the front wheels. Both axle attachment points shall be cast into the forged steel, I-beam front axle.

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

FUEL TANK: The fuel capacity shall be at least 40 US gallons. The fuel range shall be at least 250 miles per KKK-A-1822.

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

REAR AXLE TYPE AND RATIO: The axle shall be Limited Slip Differential with a 4.10:1 gear ratio.

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

TIRES: All mounted, active tires shall be identical make, tread type, size and load range. For aforementioned GVWR the tires shall be LT225/70R19.5 load range F. 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-1822 3.6.12.

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

AMBULANCE PREPARATON PACKAGE: The chassis provided shall be equipped with an ambulance preparation package designed and installed by the OEM. The 47L allows operator commanded regeneration down to 30% DPF capacity. The 47A had to have at least 70% DPF capacity to do a manual regeneration. The low DEF fluid will not cause the vehicles speed limiting or forced idle. It will still give you the warning lights, chimes and message. The 47L is a Federal Emissions compliant package. ***It is not certified in California or the Green States.*** California has declared to NTEA/AMD that they do not regulate emergency vehicles. The package shall be designed to hold up to the demands and duty cycles inherent with Emergency Medical Vehicles.

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

ALTERNATOR - CHARGING SYSTEM: Two alternators shall be supplied and installed by the OEM. The alternators shall be as supplied by the manufacture for Ambulance Prep option. Both alternators shall be controlled by the vehicles on board computer. The ambulance manufacturer shall not modify the OEM computer's functional control of the alternators. The alternators' output cable, originally connected directly to the positive post of the under hood battery, shall be rerouted to a 3/8" diameter, solid brass junction post. A 2/O positive battery cable shall reconnect the alternators to the batteries from the junction post. The ambulance load cable shall connect under the hood to the aforementioned junction post.

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

THROTTLE HIGH IDLE: A programmable OEM throttle control shall be provided. The throttle shall be programmed for charge protect. The throttle control module shall be located in the ambulance manufacturers center cab console. The throttle shall be easily accessible through removable face panels. Program buttons shall not be readily accessible to end users.

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



**CAB STEREO:** An OEM AM/FM/CD/Bluetooth in dash radio and four cab mounted speakers shall be included with the chassis.

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

**NAVAIGATION:** The Vehicle will have OEM in-dash monitor (not a bolted add on) with built in GPS navigation.

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

**MIRRORS:** Dual OEM, Power adjusted mirror glass, manually telescoping Black mirrors, shall be mounted to the forward, lower corner of the cab door window. Both mirrors shall feature a bi-directional break-away function to permit folding the mirror heads against body in close quarters. The mirrors shall be seven inches wide by eight inches high and flat on both right and left sides.

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

**REAR KNEELING SUSPENSION:** Squat Fast Loader rear hydraulic compression kneeling system shall be installed to the standard rear OEM leaf springs. The suspension company shall be QS 9000 and ISO 9001 certified for excellence. Suspension installation instructions and drawings shall be followed. All guidelines regarding chassis and axle capacity ratings as published by the manufacture shall be adhered to.

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

**MECHANICAL SUSPENSION COMPONENTS:** The system shall feature all hydraulic and electric system construction, and shall maintain the OEM suspension. The Squat Fast loader system utilizes a cylinder and chain system to reduce the distance from the OEM spring suspension to the new axle jounce stop. The designed ride height shall maintain original suspension's drive-line geometry.

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

**HYDRAULLIC SYSTEM:** All hydraulic lines, fittings, reservoirs and valves shall be protected against "stone pecking". Abrasion covers, such as nylon convolute loom over the lines are required. The entire assembled system shall be tested for leaks at every fitting connection point. The system utilizes a 12-volt electric pump and reservoir filled with automatic transmission fluid Dextron III of 4.5 quarts throughout the system.

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

**MECHANICAL QUALITY ASSURANCE:** All fasteners related to the suspension assembly are considered critical. All fasteners shall be tightened to the manufacturer's recommended torque by the primary installation mechanic. A secondary mechanic shall "put a wrench" and re-torque ALL of the fasteners and then spray a contrasting color of paint onto the heads and nuts of each fastener.

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

**SUSPENSION JOUNCE STUDY:** A suspension jounce clearance study shall be performed throughout the full range of suspension travel to ensure adequate clearance of suspension, frame and brake components. Test results shall be documented and supplied in the owner's manual.

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

**KNEELING FEATURE ENABLE:** The rear suspension shall kneel when the triggering device is activated AND an enable switch, located in the cab console is activated.

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



**KNEELING FEATURE ACTIVATION:** The kneeling feature shall activate in PARK position only. The kneeling feature shall NOT activate in any forward or reverse gear. The above rear suspension shall kneel when the trailing rear access door is opened.

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

**SUSPENSION CUSHIONING:** There shall be a "CUSHY" poly ride suspension component installed at the interlink between the OEM rear leaf spring and the rear leaf spring shackle connection point. The suspension component is intended to dampen vehicle road shock and reduce vibration frequencies.

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

## **MODULE CONSTRUCTION - GENERAL**

**SERVICE INTENT:** The ambulance body shall be all aluminum. The body sheet shall be reinforced with structural members designed to resist deflection and hold up to extreme ambulance service per the latest revision of federal specification KKK-A-1822.

**BODY MEMBER ALLOY:** The side, front and rear sheet shall be derived from .125", 5052-H-32 aluminum sheet. The roof sheet shall be one (1) piece, .090", from roof rail to roof rail. The side structure and structural shapes shall be extruded of 6105-T5 aluminum.

**STRUCTURAL INTEGRITY:** The body shall be capable of providing impact, deformation and penetration resistance in the event of a collision. The body structure shall be capable of passing a standalone static load test on a type-tested body. The test shall be conducted in accordance to AMD-001 **except the test weight shall be a minimum of 55,000 pounds**. The same unit shall be subjected to the same test with the body turned on its side. A complete copy of the testing documents with photos, must be supplied upon bid review if requested by this agency. Non-compliant bids will be rejected.

**WELD QUALITY:** All welds within the modular body shall meet American Welding Society codes for structural and sheet welding. Compliance documentation must be supplied upon bid review if requested by this agency.

**CREVICE PREPARATION:** All skin and extrusion surfaces destined to be mated together, shall be primed with epoxy, etching primer prior to assembly. All overlapping extrusion to skin surfaces shall be bedded with a two-part acrylic high strength bonding adhesive.

**SIDE STRUCTURAL MEMBERS:** The sheet edges will be fit into slots designed within a proprietary, double hollow, corner post extrusion in addition to the two-part acrylic bonding agent. The sheet will be MIG welded and structurally bonded to the extrusion. Double-hollow designed corner post extrusions shall be used to weld side and end assemblies together. Horizontally oriented, adjoining structural box tubes shall be welded to the corner post with a minimum 50% surface weld. The intermediate structural members of the side grid shall be two (2) inch by two (2) inch 6105-T5 aluminum, architectural box tubing. All entry and compartment door adjacent members shall be one quarter (1/4") inch, two (2) inch by two (2) inch proprietary extruded shape. The main structure shall surround the compartment openings and provide intermediate skin support. The intermediate structure spacing shall have a nominal dimension of twelve (12) inches. All grid structure shall be welded together with a minimum of 75% of available mating surface. The side skin shall be bonded to the structural grid using (1.75") wide, VHB (Very High Bond) adhesive tape. The edges of the tube that touch the skin will be sealed with Bostik Brand, Simson ISR 70-03 Construction Adhesive.

**SIDE IMPACT RAILS:** There shall be four (4) side impact rails, located in the upper and lower sections of the side walls. They shall consist of 6105-T5 aluminum, that is solid half (1/2) inch thick by four (4) inch plate on the curbside and one-half (1/2) inch by four (4) inch plates on the streetside that are continuously MIG welded or Huck structurally fastened to the structural grid. Since this is a safety item, no exceptions will be accepted



**SEAT BELT ANCHORAGE:** Occupant seat belts shall be drilled and tapped through one-half (1/2) inch by four (4) inch plate on the curbside and one-half (1/2) inch by four (4) inch plates on the streetside that are continuously MIG welded to the structural grid. Since this is a safety item, no exceptions will be accepted.

**SIDE SHEET:** The side sheet shall be .125 thick, 5052-H32 aluminum. The side sheet compartment opening cut outs shall be cut with CNC controlled, gantry mounted plasma or high speed routing equipment. The door opening shall be cut to allow for the skin to be molded into the jamb opening to create a crevice free jamb with a smooth paint finish. The machine formed skin shall return into the body at least 3/4" to meet the jamb extrusion. This method will encourage square openings to receive the door assemblies and maintain critical structural locations. The door jamb shall have a full structure frame behind the jamb skin return. It shall not rely strictly on the skin for the compartment jamb.

Pre-determined ventilation louvers shall be *formed* into the body sheet, where specified. *A seamless door jamb exterior is required to minimize corrosion. Extruded type exposed door jambs do not meet this specification. The skin shall completely conceal the door-jamb from view.* The only visible seams on the body sheet shall be at the corner posts. The skin shall extend .688" below the skirt rail extrusion to a drip edge to keep moisture from collecting underneath where the skin meets the skirt rail extrusion.

**CORNER POST EXTRUSION:** The corners of the modular body shall be made from an extruded aluminum structure that has an alloy of 6063-T6. The corner post extrusion shall be 3.25" x 3.25" with a 2" radius on the outer corner. The corner post extrusion shall have an internal web member that runs on a 45-degree angle to the front and side of the modular body. Where the internal web meets the exterior extrusion wall the internal web shall flair into a .125" radius giving a .25" wall thickness at the exterior wall of the extrusion. There shall be a .75" flange on each side of the corner post extrusion that is a side skin receiver. The side skin receiver shall be funnel shaped to allow the exterior side skin to fully seat into the corner post extrusion. The interior walls of the corner post extrusion shall be .125" thick and they shall incorporate a 45-degree weld bevel on the interior corners.

**REAR SILL EXTRUSIONS:** The rear body and floor substructure shall be constructed of a dual proprietary aluminum extrusion with mating joints. The lower floor extrusion is a combination continuous extrusion with an incorporated L mating surface. The lower door extrusion is a multi-chamber construction with matching radius corner and surfaces to the floor sill. This combination of extrusion and joint structure provides for strong joint strengths, and continuous contact surface between the floor sill and the outer-body door extrusion.

**FRONT AND SIDE WALL GUSSET PLATES:** The front wall and side wall structural members shall have additional support with a fully welded gusset system that shall be made of 5052-H32 aluminum plate, one quarter (1/4) inch thick by four (4) inch by four (4) inch.

**REAR AND SIDE WALL GUSSET PLATES:** The rear wall and side wall structural members shall have additional support with a fully welded gusset system that shall be made of 5052-H32 aluminum plate, one quarter (1/4) inch thick by four (4) inch by four (4) inch.

**ROOF RAIL EXTRUSIONS:** The roof corners of the modular body shall be made from an extruded aluminum structure that has an alloy of 6063-T6. The roof rail extrusion shall be 4.55" x 3.5" with a 2" radius on the outer corner. A full length drip rail shall be incorporated into the roof rail corner post extrusion, drip rails at the top of the modular body that are not inclusive of the roof rail extrusion do not meet the intent of the specification and are deemed non-compliant to this specification. The roof rail extrusion shall have an internal web member that runs on a 45-degree angle to the front and side of the modular body. Where the internal web meets the exterior extrusion wall the internal web shall flair into a .125" radius giving a .25" wall thickness at the exterior wall of the extrusion. There shall be a .75" flange on the lower side of the roof rail extrusion that is a side skin receiver. The side skin receiver shall be funnel shaped to allow the exterior side skin to fully seat into the roof rail extrusion. There shall be a .75" x .125" recess into the roof side of the extrusion for locating the roof



sheeting. This recess shall have a 45-degree weld bevel. The interior wall of the roof rail extrusion that is in-board of the side skin funnel shall be 2" wide so that they line up with the exterior side wall. The interior wall of the roof rail extrusion that is in-board of the roof sheeting recess shall be 2.25" wide so that they line up with the 2.25" roof bows. The interior walls of the roof rail extrusion shall be .125" thick and they shall incorporate a 45-degree weld bevel on the interior corners.

**ROOF SHEET:** The four (4) edges of the sheet shall be continuously welded to the roof rail extrusion to prevent leaks. All perimeter welds shall be ground smooth and worked smooth prior to the overall body paint and finish. Non-fully welded roof sheets to the roof rail extrusions do not meet the intent of this specification and are deemed non-compliance to this specification.

**ROOF BOWS:** The roof sheet shall be supported by full width .125" x 2" x 2.25" architectural box tubing. The roof bows shall be located on twelve (12) inch centers. The roof bows shall be MIG welded to the roof rail extrusions with no less than four (4) and one-half (1/2) inches of continuous weld per end. The roof sheet shall be bonded to the roof bows with VHB (Very High Bond) adhesive tape.

**LATERAL ROOF SUPPORTS:** If this agency requires ducted ceiling HVAC, additional structural support will be added as a result of the 2" ducted heat and A/C delivery system. 2" x 2" three sided extruded channel with two sides being .125" thick and the bottom surface for fastener acceptance to be .160" shall be full length of the body.

**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 100% continuously TIG welded to cast aluminum corner castings. The castings shall have internal mating flanges that extend horizontally inside the upper roof rail extrusion and vertically down the corner post extrusions.

**FLOOR MEMBERS:** Floor structures shall be 6105-T5 aluminum, one-quarter (1/4) inch by 1.500 by 3.000 aluminum, architectural proprietary shape with bevels built into the extrusion die to allow for full weld penetration on the edge of the extrusions. The die must be designed so that the inside of the corner has the same thickness of aluminum as the remaining four sides.

**FLOOR GUSSET PLATES:** The floor member to side wall fully welded gusset system shall be made of 5052-H32 aluminum plate, one quarter (1/4) inch thick by four (4) by four (4) inch and quarter (1/4) inch x six (6) inch x six (6) inch. A minimum of 12 gussets shall be located, dual gusset plates at each main cross member site.

**FULL WIDTH CROSS MEMBERS:** The module floor shall provide core support for the side assemblies and shall incorporate a minimum of three (3) full body width floor members shall connect to and support the side wall assemblies. Each member shall be made of 6063-T6 aluminum. The front floor tube is to be a minimum of 3.000 x 1.500 x .250 thick 6105-T5 aluminum tube which is fully MIG welded into the front corner post at each side of the vehicle. On top of the tube is to be a minimum .188 thick 5052 aluminum front sill running full width of the body. One of the members located just forward and/or rear of the rear wheel housing shall be one-quarter (1/4) inch by 1.500 by 3.000 rectangular architectural box tubing. The last floor cross-member shall be a 1.625 x 2.188 x .250 6105-T5 aluminum tube on the rear wall which is fully MIG welded into the rear corner posts at each side of the vehicle. This tube is butted up and welded to a 2.000 x 1.000 x .125 thick 6105-T5 tube which is also fully MIG welded to the rear corner post. A minimum of eight (8) total 6" gussets, (1/4) inch thick will be installed to reinforce two (2) at each cross member and sidewall tubes directly fore and aft of the axle.

**WATER TIGHT PATIENT CABIN:** The sub floor shall be shielded from moisture. A forty (40) mil thick aluminum sub sheet shall be sealed to the floor structure with silicone sealant. Additional aluminum plates shall be intermittent welded between compartments, wheel well liners, step wells and fuel filler housings. All of the areas shall be thoroughly sealed from one to the other, creating a sealed patient cabin from the outside. Extrusion hollows shall be filled with expandable foam sealant to prevent fumes and moisture from entering.





## DOOR CONSTRUCTION

**DOOR SKIN:** No welded seams are allowed, only one piece formed corners. The door skin shall be .090 thick, 5052-H32 aluminum sheet formed on all four sides utilizing an ACF Multiflex Corner Former Model MF 25 to create a crevice free surface for best paint adhesion and corrosion resistance. The formed edges shall not have elongation cracks due to forming and shall maintain material thickness uniformly over the entire sheet. The formed edges uniformly round off seamless for better paint adhesion and aesthetic appeal that does not require cutting and welding in the corners.

**DOOR FRAMING:** The door frame shall reinforce the perimeter of the skin pan. The extrusion shall incorporate a T-slot to receive an extruded, hollow, dual durometer closed cell UV protected TPV gaskets with relief holes for even compression for a proper and complete seal from the door to the door jamb. The gasket corners shall be welded without using adhesives for bonding. The door frame extrusion shall also add torsion resistance to the door assembly. The door jamb extrusion and frame extrusion shall be cut 45-degree on each corner. Each of the four corners shall incorporate a key way and spline that is designed to drive into each corner and maintain a perfect 90-degree angle prior to welding. The door castings shall include gusset plates for additional support for the door construction. The door frame shall also incorporate a clearance way for UNF threaded blind fasteners for the door panels. The door panel shall not rest on the body of the blind fasteners.

**FINAL DOOR ASSEMBLY:** The door skin shall be bonded to the frame assembly with an adhesive sealant in addition to intermittent welding. For entry doors: Additional, horizontal structure shall be added to maintain door skin flatness as well as penetration resistance in the event of a collision. The horizontal members are extruded J-channel, 0.150" thick. A minimum of two (2) horizontal members shall be welded in. A vertically oriented 0.150" thick formed hat-channel shall be welded to the webs of both horizontal channels for additional buckling resistance. Compartment doors shall have a reinforcement system of horizontal or horizontal/vertical structure added to maintain skin flatness and impact resistance.

**ENTRY DOOR WINDOW(S) OPENINGS:** The entry door(s) shall incorporate recessed areas that are stamped into the outer door skin to allow for a flush window appearance and shall not protrude with a lip on the outer door skin of the modular body.

**DOOR PANELS:** The inside entry door panels shall be made of (.080") thick aluminum plate and shall be finished per these specifications later in this document. The center panel shall be removable for easy lock service/lubrication. The inside of the compartment door panels shall be made of (.080") thick polished aluminum diamond plate. The edges of the door panel shall be recessed into the door frame extrusion. The panels shall be fastened to the door frame with stainless steel, #10-32 UNF machine screws threaded into aircraft quality blind fasteners. Each fastener shall have an internal tooth lock washer to preclude loosening.

**DOOR JAMB:** The door jamb shall accommodate rigid fastening of compartment door hinges. The jamb shall include a hollow cell that shall conceal wiring for the non-mechanical door switch. The door jamb frame shall be cut 45-degree on each corner from the door edge corner, each of the four corners shall consist of a key way and spline that is designed to drive into each corner and maintain a perfect 90-degree angle prior to welding. Additionally, the jamb shall be continuously MIG welded on the inside and the outside corners. *A seamless door jamb exterior is required to minimize corrosion - extruded type door jambs do not meet this specification. The skin shall completely conceal the door-jamb from view. "No Exterior Door Extrusions Allowed".*

**HINGE:** All doors shall have stainless steel, continuous, piano hinge. The pin diameter shall be .250 and staked into place to prevent drifting out of the hinge leaf. The knuckle lengths shall be one inch. The hinge attachment bolts shall be one quarter inch diameter by one-inch-long stainless steel Type TT (Thread Rolling Screws) hex head bolts. All tapped holes for hinge bolts shall be treated with an anticorrosion compound prior to installation of each hinge bolt. Thread cutting screws are not acceptable. Each hinge leaf shall have a Mylar insulation strip (3M Scotch No 8411) between the leaf and the Jamb/Door.



**LATCHES:** The latches shall meet FMVSS 206. All latches shall be two-stage, rotary- type. The latches shall be through bolted to the door frame extrusion. All entry doors shall have two rotary latches per door. To assure uniform latch timing and functional door reliability, only straight, one-quarter (1/4) inch diameter rods shall connect the latches to the handle. All double hung compartment doors shall have two rotary latches per door.

**NADER PINS:** All nader pins shall be headed to prevent the door(s) from opening under impact. They shall be hex headed Grade-8 fully adjustable with a 5/16" thick knurled stainless steel retainer plate to keep the nader pin from moving after adjusted. The opening in the door jamb extrusion shall be large enough to allow full adjustment with the nader pin washer covering the hole.

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

**BUILD TO SPEC VARIATION:** The actual build unit may have a variation in actual sizing at any point of up to 1/4" from quoted spec sizing. Where an actual size is deemed to be important as it impacts the fit of an article, it must be clearly noted with confirmation received from the manufacturer of ability to build.

## **MOUNTING**

**MOUNTING SYSTEM:** The outside dimension, across the frame rails on this chassis is thirty-four (34) inches. Twelve (12), one quarter (1/4) inch thick steel out riggers, designed specifically to through bolt to the frame rail web, shall be supplied and installed. Each out rigger shall be through bolted to the frame utilizing three (3), five eighths (5/8) inch diameter, UNC, grade eight, Flanged Hex head bolts and corresponding grade eight, flanged, locking hex nut.

Each out rigger shall accommodate a natural rubber vibration isolator and support for the body's mounting sill. Outriggers shall not protrude more than four (4) and three eighths (3/8) inches measuring from the frame's web to the outer tip of the out rigger deck. All mounting sills shall be made of one-inch-thick by three-inch-wide solid aluminum flat bar. A grade L-9 seven sixteenth inch diameter by four-inch-long hex-head bolt shall be used to bolt the sill down at each isolator site.

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

## **MODULE CONFIGURATION**

**OVER ALL LENGTH:** The overall length of the vehicle shall not exceed twenty-three (23) feet, nine (9) inches. The departure angle and length shall meet or exceed the current revision of Federal Specification KKK-A-1822.

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

**MODULE LENGTH:** The module length shall be at least one hundred seventy-two (172) inches.

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

**MODULE WIDTH:** The module width shall comply with the current revision of Federal Specification KKK-A-1822. The module shall be ninety-five (95) inches wide, excluding lights and accessories.

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

**MODULE HEAD ROOM:** The module shall not be less than seventy-two (72) inches actual measured headroom. The measurement shall be taken from the patient compartment floor to the ceiling panels.



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

## COMPARTMENT CONSTRUCTION

**MATERIALS:** Unless specified otherwise, all exterior compartment walls and backs shall be constructed of .100 aluminum. All compartment floors shall be formed of .125 aluminum sheet. Compartments for generators, oxygen, and backboards will have .250 compartment floors. All compartment ceilings shall be formed of .090 aluminum sheet. The ceilings and floors shall form around the sides and back to provide an overlapping joint. The floor and ceiling surfaces shall be double action (DA) sanded to 180 grit. The floors and ceilings are bonded to the walls and back and intermittent welded on six (6) inch centers.

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

**DRAIN HOLES:** Drain holes shall be provided on the bottom of the compartments. Each hole shall be baffled to prevent splash water from entering the compartment. Holes will be 1/4 "

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

**VENTILATION:** There shall be a hole in the compartment below floor line approximately 5-3/8" wide x 2-9/32" tall that will accept a specially designed baffled vent. The baffles shall have a stainless steel spring that allow for only one-way operation. They allow air to escape out of the compartment when the door is closed, but not for air to come back into the compartment to keep dirt and dust out of the compartment interior. Engineering shall determine the amount of these vents required by the volume of space in the compartment.

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

**TALK THROUGH CAB TO MODULE WINDOW:** A 14" inch high by 19" inch wide access from the module to the cab shall be provided. Sliding polycarbonate doors shall close off the access window. The cab shall NOT be rigidly fastened to the modular body. A flexible, Accordion shaped, closed cell rubber bellows, custom made for the opening shall be provided to tie the cab to the module. One joint in the bellows is acceptable and shall be located on the bottom of the opening. The joint shall be completely vulcanized. The window provided shall meet or exceed current Federal specification KKK-A-1822.

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

**CAB ROOF SUPPORT:** There shall be a 3/16" thick by 3" wide extending from driver's side to passenger side on the underside of the cab roof above the headliner to prevent any oil canning noise that might be caused by wind against the front body wall and the cab roof.

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

**BODY DROP:** The Curbside of the modular body ahead of the rear wheels' skirt shall be 6" lower than the streetside and behind the rear wheels. This will allow the curbside entry step to be lower to ground level making it easier to enter the curbside entry door and meet the requirement of KKK-A-1822 latest revision.

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

**CURBSIDE ACCESS DOOR:** The curbside side access door shall be at least 82.812" high by 31" wide measured at the door jamb opening.

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



**JAMB PROTECTION:** At the curbside side, module entry door, a full width, formed, stainless steel jamb protection plate shall be provided to prevent heavy traffic from chipping the paint.

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

**DOOR CHECK:** The compartment door(s) in excess of 13" pass through width shall be equipped with a door check (hold open) device. All vertically hinged doors in excess of 13" pass through width shall have a gas operated bi-directional spring shock door check. Door check brackets shall be drilled and tapped through a minimum of 3/8" material to preclude coming loose.

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

**DOOR SWING:** The compartment door checks shall be installed to allow the door to open ninety degrees (90) from the fully closed position.

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

**STEP WELL:** A two-step diamond plate step well shall be provided at the curb side access door. Each step tread dimension shall not be less than 10 inches. Both steps in the step well shall be illuminated, per current Federal Specification KKK-A-1822. The floor of each step will have a no slip material applied.

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

**STEP WELL ILLUMINATION:** A 3" clear interior LED light shall illuminate the curbside step well per the current revision of Federal specification KKK-A-1822.

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

**LEFT FRONT COMPARTMENT (M-1):** This compartment shall be located in the left front corner of the modular body. The minimum compartment dimensions shall be 82.5" High x 22.125" Wide x 19.5" deep.

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

**SPLASH GUARD:** A deflector plate shall be welded between the left front and left front middle compartments. The shield shall be specifically designed to shield water splash from the compartment vents.

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

**COMPARTMENT LIGHT:** (1) One light shall be mounted in the ceiling of the "M-1" compartment. The light shall be surface mount and shall be LED.

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

**LEFT FRONT MIDDLE COMPARTMENT (M-2):** This compartment is located adjacent and rearward to the left front compartment. The minimum compartment dimensions shall be 34.5" High x 51" Wide x 19.5" Deep.

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

**ADJUSTABLE SHELF:** A standard duty aluminum adjustable shelf shall be provided. The shelf shall be formed of .125 (1/8") thick aluminum, with 2 inch upward turned lips on all four sides. The shelf shall be mounted on Unistrut infinitely adjustable, aluminum extruded, heavy duty shelf track. Incrementally adjustable, non-aluminum shelf track is not acceptable.



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

**SHELF BRACKET:** Each above exterior adjustable shelf shall include four (4) self-gusseted .157" thick shelf brackets that will allow for easy adjustment up and down for each shelf. Each bracket shall be secured to the shelf by carriage head bolts on the top of the shelf and hex head bolts to secure them to the shelf tracking material in the compartments. This will guard against shelf deformation in the compartments when the shelves are secured in place.

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

**COMPARTMENT LIGHT:** (1) One light shall be mounted in the ceiling of the "M-2" compartment. The light shall be surface mount and shall utilize 921 bulbs.

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

**CONDUIT No 1:** An empty one and one half inch diameter conduit expressly designed to add wires after vehicle delivery by the end user or his/her authorized agent shall be supplied and installed. The conduit shall have semi-rigid, non-conductive liner that is free of inside ridges that can bind on the wire harness being pulled through the conduit. The outer jacket shall be a non-conductive, spiraled rigid coil designed to maintain the original shape of the liner, throughout the length of the conduit run.

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

**ORIGINATION POINT:** The aforementioned conduit shall originate in the left front middle (M-2), exterior compartment.

**TERMINATION POINT:** The aforementioned conduit shall terminate in the patient cabin behind the main action area control panel.

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

**CONDUIT No 2:** An empty one and one half inch diameter conduit expressly designed to add wires after vehicle delivery by the end user or his/her authorized agent shall be supplied and installed. The conduit shall have semi-rigid, non-conductive liner that is free of inside ridges that can bind on the wire harness being pulled through the conduit. The outer jacket shall be a non-conductive, spiraled rigid coil designed to maintain the original shape of the liner, throughout the length of the conduit run. A pull wire shall be installed into the conduit to aid the purchasing agency in future installation of equipment.

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

**ORIGINATION POINT:** The aforementioned conduit shall originate inside the main electrical cabinet. **CONDUIT**

**TERMINATION POINT:** Behind Driver's seat

**TERMINATION POINT:** The aforementioned coaxial cable shall terminate in the cab behind the driver's seat.

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

**LEFT REAR COMPARTMENT (M-3):** This compartment shall be located in the left rear corner of the body. The minimum compartment dimensions shall be 61 1/2" High x 25" Wide x 19 1/2" deep.

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

**CEILING VENTILATION:** Specified compartments shall have a hat channel at the ceiling level. The hat channel shall run to no closer than 1" from the compartment side walls to allow for air exchange. Hidden from view, shall be two to three,



(4") holes above the hat channel to exhaust the compartment air when the door is closed to allow it to close with minimal effort.

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

**ADJUSTABLE SHELVES:** Two (2) standard duty aluminum adjustable shelves shall be provided. The shelves shall be formed of .125 (1/8") thick aluminum, with 2 inch upward turned lips on all four sides of each shelf. The shelves shall be mounted on Unistrut infinitely adjustable, aluminum extruded, heavy duty shelf track. Incrementally adjustable, non-aluminum shelf track is not acceptable.

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

**SHELF BRACKET:** Each above exterior adjustable shelf shall include four (4) self-gusseted .157" thick shelf brackets that will allow for easy adjustment up and down for each shelf. Each bracket shall be secured to the shelf by carriage head bolts on the top of the shelf and hex head bolts to secure them to the shelf tracking material in the compartments. This will guard against shelf deformation in the compartments when the shelves are secured in place.

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

**COMPARTMENT LIGHT:** (1) One light shall be mounted in the ceiling of the "M-3" compartment. The light shall be surface mount and shall be LED.

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

**RIGHT REAR COMPARTMENT (M-5):** This compartment shall be located in the right rear corner of the body. The minimum compartment dimensions shall be 82 13/16" High x 25 5/8" Wide x 21" Deep.

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

**CEILING VENTILATION:** Specified compartments shall have a hat channel at the ceiling level. The hat channel shall run to no closer than 1" from the compartment side walls to allow for air exchange. Hidden from view, shall be two to three, (4") holes above the hat channel to exhaust the compartment air when the door is closed to allow it to close with minimal effort.

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

**ADJUSTABLE DIVIDERS:** Two semi-rigid adjustable dividers shall be formed of 5052-H32 aluminum .090 thick sheet. One divider shall be sixty inches (60") high by fourteen inches (14") deep; measured from the track; and have a two inch return flange formed along the sixty-inch edge for mounting. The second divider shall be thirty inches (30") high by fourteen inches (14") deep; measured from the track; and have a two inch return flange formed along the thirty-inch edge for mounting. All corners on the dividers shall be rounded or chamfered. The exposed edges shall be covered with automotive edge trim. Two full width, horizontally oriented, Unistrut C-channel tracks shall be fastened to the back wall of the compartment.

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

**DIVIDER MATERIAL:** The aforementioned divider(s) shall be made of 0.125 thick 5052-H32 aluminum sheet.

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

**COMPARTMENT LIGHT:** (1) One light shall be mounted in the ceiling of the "M-5" compartment. The light in this compartment shall be recessed flush.



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

**RIGHT REAR FORWARD COMPARTMENT (M-6):** This compartment shall be located just forward of the right rear compartment aft of the rear wheel opening. The minimum compartment dimensions shall be 19" High x 10 3/8" Wide x 19 1/2" deep.

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

**COMPARTMENT LIGHT:** (1) One light shall be mounted in the ceiling of the "M-6" compartment. The light shall be surface mount and shall be LED.

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

**RIGHT FRONT COMPARTMENT (M-7):** This compartment shall be located in the right front corner of the module body. The minimum compartment dimensions shall be 67 1/2" High by 25 1/4" Wide. The compartment door shall provide direct outside access into the right front advanced life support equipment storage area.

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

**REAR ACCESS DOORS:** The rear of the module shall be equipped with double, hinged patient compartment access doors. The doors shall be centered on the body and align with the patient compartment aisle space. The doors shall measure 46-3/4 inches wide by 60-5/8" high, jamb to jamb.

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

**REAR ACCESS DOOR JAMB:** At the rear access doors, a full width, formed, stainless steel jamb protection plate shall be provided to prevent the cot frames from chipping the paint. The stainless steel protection package shall start from under the kick plate and follow the contour of the jamb extrusion, cover the end of the sub-floor and cover the last four inches of the vinyl floor covering.

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

**FUEL FILLER AND HOUSING:** The filler neck supplied by the OEM shall be used. The filler neck shall be vented and be diameter indexed to accommodate a FUEL pump nozzle. The fuel filler neck shall be bolted to a cast aluminum fill housing. The filler housing shall be an open design with a bright polished mounting flange. The housing configuration and filler installation shall comply with the OEM Body Builders Layout Book. The fuel filler neck shall be grounded directly to the frame rail to prevent static electric charges from igniting the fuel vapors during refueling. The fuel filler cap shall be supplied by the OEM. The cap shall be attached to the filler housing with a lanyard. The filler cap shall incorporate an over-tighten protection device that ratchets, when the preset cap torque is reached.

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

**UREA FILLER AND HOUSING:** The filler neck shall be a Cast Products Inc. model FG5301-1. The filler neck shall be vented and be diameter indexed to accommodate the DEF nozzle. The fuel filler neck shall be bolted to the cast aluminum fill housing. The housing bezel shall be bright and polished. The housing configuration and filler installation shall comply with the OEM's Body Builders Layout Book. The filler cap shall be supplied by the OEM.

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



## PROTECTION AND BRIGHT WORK

**WIRE/HOSE COVER:** The area between the back of the cab and the front of the module shall have a .100 aluminum diamond plate cover, attached to the frame rails, to protect any hoses and/ or wires routed in that location. The cover shall be mounted to close-off the area with a finished appearance.

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

**FRAMING:** The rear step bumper shall exceed the current revision of KKK-A-1822. The bumper shall be framed in with ¼ x 2 x 4 aluminum 6063-T6 rectangular tubing. The bumper shall be bolted directly to the chassis frame. In addition, the top of the bumper shall be mounted below the body skirt-line, so that minor collisions do not damage the body. The bumper will collapse under the body. For the stated reasons, there shall be no exceptions to this feature.

**OUTER PONTOONS:** The outer bumper ends (pontoons) shall be covered in .100 polished aluminum diamond plate. The outer corners shall be angled 50 degrees. Each pontoon cover shall be through bolted to the bumper frame with stainless steel, pan-head, Phillips head, ¼-20 bolts and Nylock nuts.

**DEPTH OF BUMPER:** The rear bumper shall protrude from the rear surface of the module body to the rearward most metal surface by at least nine and one half inches (9-1/2") and not more than ten inches (10").

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

**CENTER STEP:** A flip up step shall be provided to allow closer access to the patient cabin floor. The step shall be as wide as the rear access door jamb. The step shall have aggressive traction. The step shall have a white reflexite reflective strip across the flip up step. A stainless steel piano hinge shall have a staked in, ¼" diameter pin, one inch knuckles and one Type-F ¼" through bolt every four inches.

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

**FENDERS:** The rear fender shall be Black Rubber. The fender shall be isolated and mounted to the wheel opening with thin membrane, double side tape. In addition to the tape, 100% nylon bolt and nuts shall hold the fender to the body.

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

**SKIRT RAILS:** The entire skirt-line of the body, forward and aft on the rear wheels shall have Black Rubber skirt rails to protect the body. Each skirt rail shall meet current Federal Specification KKK-A-1822. Each rail shall be chamfered 45 degrees at both ends. The rails shall be fastened through the bottom of the rail into the bottom of the modular body. The rails shall not cut into the paint. They shall be mounted through nylon isolators in such a manner that they are spaced off the body.

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

**REAR KICK PLATE:** The rear kick plate shall be made of 0.100-inch-thick Polished aluminum diamond plate and run from corner post to corner post. The height shall be from the skirt-line of the body to the bottom door jamb under the rear access doors.

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

**RECESSED TAG AREA:** The kick plate shall feature a centered and illuminated recessed area to mount a standard U.S. six-inch-high by twelve-inch-wide license plate. The recessed area must be located as specified below and aesthetically TIG Welded around the perimeter of the opening. Threaded inserts and bolts to install the tag shall be installed and provided.

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





**RECESSED TAG AREA LOCATION:** The tag area shall be centered in the kick plate.

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

**TAG LIGHT:** The tag area shall be LED illuminated with the park light circuit.

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

**BODY CORNER POST PROTECTION:** The lowest twenty-four inches (24") of the corner post extrusions shall be protected against stones and road debris. The corner post guards shall be formed of .080 thick polished aluminum diamond plate, contour fit to the corner post extrusions and riveted into place. A bead of silver colored, silicone sealant shall be applied across the top edge of the guards. The bottom of edge of the guard shall be left unsealed to promote moisture drainage.

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

**FRONT OF BODY:** The front of the body shall have skirt-line protection plates made of .080 aluminum diamond plate. The corner posts shall have form fit diamond plate protection height matched to the frontal plates. The height of the protection is twenty-four inches up from the body skirt line.

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

**REAR ACCESS DOOR CHECKS:** Rear access doors shall open at least 150 degrees. The door checks shall be 2 piece, heavy duty, cast aluminum, grabber type with gaskets. The door shall have a ½ round stock loop that plunges into a positive rubber/cast socket.

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

**FRONT MUD FLAPS:** Mud flaps shall be mounted to the front fenders just behind the front tires. The mud flaps shall be 1/4" thick natural rubber material. Each mud flap shall be sandwiched between the wheel well liner and a torque distribution plate. The torque distribution plate shall be at least .100 thick aluminum plate. Each mud flap shall be through bolted to the fender with at least three (3) fasteners.

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

**REAR MUD FLAPS:** Mud flaps behind both sets of rear tires shall be supplied and installed. The mud flaps shall be 1/4" thick natural rubber material. Each mud flap shall be sandwiched between the wheel well liner and a torque distribution plate. The torque distribution plate shall be at least .100 thick aluminum plate. Each mud flap shall be through bolted to the wheel well liner with at least three (3) one-quarter inch (1/4") diameter stainless steel bolt.

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

**CORROSION:** The anti-electrolysis procedure for any holes that are drilled for application of materials is to be as follows, After the hole is drilled, the opening(s) are to be treated with Tactile 517 prior to installation of any fasteners to guard against any future corrosion.

**EXTERIOR FASTENERS:** All screw sites require a replaceable nylon insert for the fastener to thread into to isolate the dissimilar metals. Each hole shall be treated with an Electrolysis Corrosion Control compound (Tactile 517) prior to installation of the nylon inserts. All exterior screws shall be stainless steel.

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

**BODY CORNER CAPS:** The front and rear upper body corners shall include a cavity built into the aluminum body that shall not sacrifice the body integrity.



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

**FRONT CORNER ICC LIGHTS:** The front body corner caps shall include DOT approved compliant light fixtures with clear lenses. The lenses shall house ICC fixtures that include amber LED's to be mounted to the front and front corners. There shall also be additional LED lights that alternate red and blue within the light to act as additional warning lights.

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

**FRONT I.C.C. LIGHTS:** Clearance lights shall be provided per FMVSS 108. The lights shall illuminate the height of the vehicle, define the vehicle center line. Three (amber) lights shall be provided on the front of the module and be populated with at least two LED's.

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

**REAR CORNER ICC LIGHTS:** The rear body corner caps shall include DOT approved compliant light fixtures with clear lenses. The lenses shall house ICC fixtures that include red LED's to the rear and rear corners. There shall also be additional LED lights that alternate red and amber within the light to act as additional warning lights.

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

**REAR I.C.C. LIGHTS:** Clearance lights shall be provided per FMVSS 108. The lights shall illuminate the height of the vehicle, and define the vehicle centerline. Three red lights shall be provided on the rear of the module and be populated with at least two LED's.

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

**CORNER CAP WARNING LIGHT SWITCHING:** The above mentioned corner cap LED lights shall be wired to activate in Primary Only.

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

**SIDE MARKER LIGHTS:** Side marker lights shall be Kinequip Model 112401RD (Red) and shall flash alternately with the rear turn lights. All lights shall be LED.

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

**FLANGES:** The M series tail light group shall be black flanges.

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

**STOP/TAIL LIGHT:** The stop/tail light fixtures on the rear of the body shall be Whelen Brand series 600 Fully Populated Light Emitting Diode. The lights shall operate as both tail and stop modes and shall be red when illuminated.

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

**TURN SIGNAL LIGHT:** The turn signal light fixtures on the rear of the body shall be Whelen Brand series 600, Light Emitting Diode. The lights shall operate as left and right turn signal lights, and shall be amber arrow when illuminated.

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

**BACK UP SIGNAL LIGHT:** The back-up signal light fixtures on the rear of the body shall be Whelen Brand series 600, LED light to operate as left and right back up signal lights and shall be clear when illuminated.

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



**THIRD BRAKE LIGHT:** A third brake light shall be located centered above the rear access doors. The light/lens shall measure at least 15 square inches. The light is to be a Kinequip, model KFL-3BLO1 fixture.

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

**THIRD BRAKE LIGHT:** When the brake is applied the light will steady burn.

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

**EXTERIOR FLOOD and LOAD LIGHTING:**

**LEFT SCENE LIGHTS:** Two scene lights shall be provided on the left side of the module. The lights shall be Whelen M series. The scene light group shall meet or exceed the present revision of the Federal specification KKK-A-1822.

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

**FLANGES:** The M series scene light group shall each have Black trim flanges.

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

**SCENE LIGHT SWITCHING:** The scene lights shall come on with two separate rocker switches labeled Right Flood and Left Flood, located in the center cab console controlled by the master switch. The right (curb side) scene lights shall also come on when the side entry door is opened.

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

**RIGHT SCENE LIGHTS:** Two scene lights shall be provided on the right side of the module. The lights shall be Whelen M series. The scene light group shall meet or exceed current revision of the Federal specification KKK-A-1822.

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

**FLANGES:** The 900 series scene light group shall each have Black trim flanges.

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

**REAR LOAD LIGHTS:** Two rear load lights shall be provided on the rear of the module, above the rear access doors. The lights shall be Whelen M series. The scene light group shall meet or exceed current Federal specification KKK-A-1822.

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

**FLANGES:** The M series rear load light group shall each have Black trim flanges.

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

**REAR LOAD LIGHT SWITCHING:** The rear load lights shall come on with a separate rocker switch located in the cab console controlled by a master switch. The switch shall be labeled "Rear Flood" and shall control both rear load lights on the rear of the body and above the rear access doors. The rear load lights will come on when rear doors are opened.

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

**A/C UNIT LOCATION:** On the floor behind the attendant seat. A/C Unit will have a ducted delivery system in the ceiling with eight (8) adjustable vents. And Two additional adjustable vents above and behind the attendant seat

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



**REAR AIR CONDITIONING EVAPORATOR:** The module shall have an additional, self-contained A/C unit complete with an evaporator coil, heater core and a 12-volt blower. The blower shall consist of two concentrically located cylinder fans mounted on one common 12-volt motor. The fan shall be three speed and shall deliver 580 cubic feet of air per minute on high. The unit shall be rated at least 32,000 British Thermal Units (BTU) in A/C Mode and 43,300 BTU in Heater Mode. The Vehicle A/C and Heat system must meet or exceed current Federal specification KKK-A-1822.

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

**CONDENSATION DRAIN PAN:** A condensation pan shall be provided to collect water condensation from the evaporator coil. The drain pan shall be formed from 1/8 ABS plastic sheet and shall be listed (tilted) toward the drain fitting. The Evaporator unit shall be mounted so that the weight of the coil, case and blower assembly does not rest on the pan. Additionally, the entire evaporator shall list toward the condensation drain fitting to enhance water flow to the drain hose. The drain hose shall be ½ I.D., collapse resistant and fiber reinforced poly-tubing. The hose shall be routed from the condensation pan to the street.

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

**HEATER HOSES:** Heater hoses for the cab shall remain O.E.M. 5/8 inside diameter, EPDM Nomex rubber hoses shall route from the O.E.M tie in point to the rear heater core.

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

**AIR CONDITIONING HOSES:** All A/C Hoses shall meet Society of Automotive Engineers (SAE) J-2064. The discharge (High side) hoses shall not be less than 5/16 inside diameter (Size 6). The suction (Low side) hoses shall not be less than ½ inside diameter (Size 10). All hoses shall be A.S.T.M. Type D, with a thermoplastic inner liner (Nylon) that is protected by two textile reinforced braided electrometric outer jacket. The hose shall be qualified for use with R-134A, R-404 and R-407. The hose specified herein shall be subjected to a battery of tests per A.S.T.M. D-380. The results shall be supplied by the hose manufacturer.

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

**RETURN AIR GRILLE:** Installed around the Heat/AC unit shall be a perforated 13-gauge steel grille. The grille shall allow 156 inches of return air flow to the Heat/AC unit. The grille shall provide complete access to the Heat/AC unit. The grille to have a black powder coat finish. There shall be two quarter turn locks supplied and installed on the grille. The locks shall have a black powder coated finish. Lock pawl activation shall be enabled with a round bitted key.

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

**CARBON FILTER:** The return air grille shall be supplied with a pre carbon filter that is designed to fit the slot within the grille. It shall be installed and shall not rattle. The filter shall be replaceable and/or cleanable by this department's fleet maintenance in the field.

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

**CEILING DUCTED INSULATED AIR CONDITIONING DELIVERY:** One duct shall route over the primary patient and attendant, and one shall run over the lap area of squad bench. Each duct shall contain four spherically adjustable registers, evenly spaced, total of 8. There shall also be two registers located directly behind the attendant's seat.

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

**REAR AC CONTROLS:** An ON/OFF switch shall be located in the action area. The switch will not control fan speed. A separate three speed fan speed control switch shall be located in the action area control panel.



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

**LINER PANELS:** The patient cabin head liner substrate material shall be one quarter inch thick, composite metal laminated to center plastic material. An upholstered center panels shall provide access to ceiling wiring and be covered in the same upholstery type as the seat and back rest pads found on the squad bench and/or CPR seat.

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

**PATIENT CABIN DOME LIGHTS:** The patient cabin shall have eight dual intensity, Kinequip LED dome lights in the ceiling. The domes centers shall be aligned along two, four light banks. The left bank shall provide light directly over the patient; the right bank shall provide light directly over the aisle/squad bench. The dome lights and configuration shall meet current Federal Specifications KKK-A-1822.

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

**IV HOOK No 1:** One chrome plated, surface mounted IV hook, with a spring loaded retention gate, shall be supplied in the ceiling of the patient cabin. The hook shall feature an anti-swing strap next to the hook.

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

**LOCATION:** Located of the Primary patient, in the close proximity to the Head/Chest area of the patient.

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

**IV HOOK No 2:** One chrome plated, surface mounted IV hook, with a spring loaded retention gate, shall be supplied in the ceiling of the patient cabin. The hook shall feature an anti-swing strap next to the hook.

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

**LOCATION:** Located of the Secondary patient, in the close proximity to the Head/Chest area of the patient.

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

**RECESSED CURB SIDE OVER HEAD ASSIST RAIL:** The rail shall exceed the current revision of current Federal specification KKK-A-1822. The rail shall be 1 ¼ diameter, 100% stainless steel with gray anti-microbial coating and 72 inches long. All rail fittings shall be TIG welded to the main rail. The rail shall be recessed in an ABS pan 1.5", located curbside of center pad.

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

**MODULE INSULATION:** The module insulation, except the under the floor shall consist of material having the following characteristics, 8mm thick nonabsorbent, reflective and shall have an air cell core. The air cell core shall consist of one layer of polyethylene bubble film that is sandwiched between one (1) layer of 99 percent pure aluminum foil and white colored polyethylene film. The insulation shall be installed with at least ½ air space from exterior skins, exposed to direct sun light. The insulation thermal rate testing shall be conducted in accordance with A.S.T.M. E84-89A, ANSI 2.5, NFPA 255, UBC 42-1, and U.L. 723. The walls shall not be less than R-15.0 down, R-7.31 Horizontally and R5.4 up. The insulation shall have a NFPA Class A and a UBC Class 1 fire rating with a flame spread index of 20 and a smoke developed index of 30. The application shall include a single layer of the insulation on all four walls, doors, compartments, ceiling and floor.

**NO EXCEPTIONS**

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



**MODULE FLOOR INSULATION:** The floor shall have 0.5-inch-thick mass loaded acoustical (XPS) extruded polystyrene foam composite attached to the inside floor surface to provide a noise reduction of 75%. Patient compartment floor is now fully insulated for sound deadening and enhanced temperature control without increasing load height. The total R value of the floor must be greater than or equal to 4.5 to 5.0 per inch.

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

**WARNING LIGHT FLASHER:** All M Series Super LEDs do not require a flasher. A synch wire will be run to all light heads.

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

**FLASH PATTERN:** Will be set by the Agency

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

**PRIMARY / SECONDARY SWITCH:** The warning light system shall be controlled with a switch(es) located in the cab console. The switch(es) shall allow for "Off" position, "Primary" position, and "Secondary" position. Each output of the switch shall be indicated with a small red lamp, integrated in the switch legend area. The switch shall have an engraved, illuminated legend that clearly defines the function of the switch.

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

**GRILLE LIGHTS:** There shall be two M Series Red/Blue LED lights shall be mounted in Black flanged housings on the grille supports and mounted in such a way as not to block air flow.

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

**INTERSECTION LIGHTS:** There shall be two Whelen M Series, red/Blue warning lights installed on the front chassis fenders to warn intersection traffic.

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

**FRONT UPPER ZONE WARNING LIGHT:** There shall be installed a Whelen M Series White LED lights with Clear lens. The light is non-programmable and relies on a separately installed flasher for operation. Light to be in the upper front center of the module zone.

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

**FRONT UPPER ZONE WARNING LIGHTS:** There shall be installed six warning lights in the upper front of module zone. The lights shall be a Whelen M Series RED/Blue LED lights with Clear lens. The light is non-programmable and relies on a separately installed flasher for operation.

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

**MODULE SIDE WARNING LIGHTS:** There shall be four Whelen M series Super LED lights in the upper outermost positions. The lights shall be a Whelen M Series RED/BLUE LED lights with Clear lens.

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

**REAR UPPER WARNING LIGHT ZONE:** There shall (2) Rear Upper Body Lights: M Series LED. On the rear of the module, one in each upper outer corner inside of the structural corner post. The light shall be a Whelen M Series RED/BLUE LED lights with Clear lens.



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

REAR UPPER ZONE WARNING LIGHT: There shall be installed one warning light in the upper rear center of the module zone. The light shall be Whelen M Series Super LED Amber LED lights with Clear lens.

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

TWO BATTERY SYSTEM: The ambulance conversion and chassis shall run with two-maintenance free twelve volt batteries as specified below.

BATTERY LOCATION: Both batteries shall be located under the OEM hood in the engine compartment.

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

BATTERY BRAND: Both batteries shall be the OEM brand, same model and type. Each battery shall be rated at a minimum OEM rating. The batteries shall be warranted by the OEM manufacturer for at least three years (thirty-six months) from the date of delivery to the agency.

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

BATTERY SWITCH: A conversion disconnect switch shall be supplied to remove positive polarity from the ambulance conversion circuits. Constant battery power shall be supplied for device memories. None of the chassis functions shall be affected by this switch per manufacture. The switch shall be a Cole Hersee Model M2484-16 with a legend bezel that defines the ON and OFF position. An indicator light shall illuminate on the cab console panel.

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

MODULE DOOR LOCKS: The module door locks shall be operated by key activation into the lock cylinder or keyless remote from the FOB.

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

DOOR LOCKS: All door locks in the cab will have a one button auto locking function located in the action area of the patient compartment.

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

## **ELECTRICAL SYSTEM 12 Volt General**

MODULE GROUNDING: A minimum of (2) two braided ground straps shall be through bolted to the chassis frame and the floor structure of the modular body. The bolts shall be at least 3/8 diameter. A flat washer shall be provided under the head of the bolt, over the strap lug. Additionally, an internal tooth lock washer shall preclude loosening. Conventional stranded copper cables are not acceptable because they do not suppress RFI and does not meet SAE J551.

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

GENERAL GROUNDS: To comply with current Federal specification KKK-A-1822 plus enhance ground quality and reduce trouble shooting time, all devices wired within the ambulance conversion shall be centrally grounded. Each device shall have a separate ground wire routed to a central buss bar then grounded via fine strand cable to the module body. Local grounds are acceptable only when the device is drawing at or less than 100 milliamps (0.1 amps).

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



**12 VOLT WIRE:** All wires within the ambulance harnesses shall meet current Federal specification KKK-A-1822. All wire insulation shall be GXL cross-linked polyethylene. Permanent wire identification and wire function shall be printed on 4 centers along the full length of the wire. Wire conductors shall be stranded copper.

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

**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.

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

**CIRCUIT BOARD:** The single relay control board is a fully integrated relay control board designed and built to IPC Class 3\* guidelines. The VF4 style socket relay is rated at 20A at 24 VDC with built-in on-board diode suppression. Three status indicators for Blown Fuse, Coil Power and Load allow for intuitive operation and troubleshooting. Also included is a medium sized ATO blade style fuse / circuit breaker holder that is rated for 20A. Wiring connections are made via a WAGO Cage Clamp removable lockable connector, which provides a secure, vibration proof and corrosion resistant wire termination. Installation time is reduced by as much as 75%. All of these features are mounted in a 2"x2" DIN Rail mountable package. Clearly, the Single Relay Control Board is a best-in-class solution for Emergency Vehicle relay applications.

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

**CIRCUIT BREAKERS:** All conversion related circuits shall be protected with manual reset blade breakers. The value of the breaker for each circuit shall not exceed 75% of the rated capacity of the weakest component in the circuit.

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

**CAB CONSOLE:** An ergonomically designed console with a A-A plywood substrate shall be contour matched to the cab floor. The console shall be a parallel wall design with a twelve and one half inch over all width. End panels and center console bulkhead panels shall add rigidity and square to the console. The substrate shall be laminated per the following finish specification.

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

**SWITCH PANEL, CAB CONSOLE:** A switch panel made from 3/16 thick, translucent, acrylic sheet. The acrylic material shall evenly disperse label, indicator illumination. The Sheet shall be coated with a black colored, rigid plastic film. A CNC router shall engrave, permanent switch legends, switch holes, meter holes, and indicator legends. The switches shall be organized in two rows. The top row shall start with an Emergency Master, followed by all of the emergency related switches. The bottom row shall start with a Master Switch, followed by all of the non-emergency related switches. The switch panel features an auto-dimming capability as related to a light sensor in the volt meter. Each switch features a reinforced hub as part of the integral sealed housing. The Sealed rocker switches are LED illuminated. Each switch meets or exceeds IP66 ratings for contamination.

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

**REAR SWITCH PANEL, ACTION AREA:** A switch panel made from 3/16 thick, translucent, acrylic sheet. The acrylic material shall evenly disperse label, indicator illumination. The Sheet shall be coated with a black colored, rigid plastic film. A CNC router shall engrave, permanent switch legends, switch holes, meter holes, and indicator legends. The sealed switches shall be organized in one row and control all patient compartment functions, dome lights, action area light, exhaust vent, inverter (if equipped), HVAC, suction pump and any added features.





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

MASTER SWITCH: The patient area master switch shall be located in the cab switch console.

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

VOLT METER: The charging system voltage condition shall be indicated through a conventional two-inch diameter, analog type gauge. The volt meter shall be wired through the ignition switch and indicate system voltage ranging from eight to sixteen volts, direct current.

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

COMPARTMENT AJAR INDICATOR LIGHT: A back lighted "Compt Open" light shall be engraved in the cab console's main switch panel. This light color shall be AMBER. The light shall meet current Federal Specification KKK-A-1822.

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

INDICATOR LIGHT FUNCTION: The door ajar indicator light shall flash when two conditions are met:

- 1) The main conversion power switch is turned to the ON position.
- 2) Any compartment or entry door is opened.

The door ajar light shall come ON with a door that is not COMPLETELY latched.

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

BATTERY POWER "ON" INDICATOR LIGHT: An indicator light, labeled "Amb Pwr" shall be engraved in the cab console's main switch panel. The light color shall be GREEN. The light shall meet current Federal Specification KKK-A-1822.

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

INDICATOR LIGHT FUNCTION: The "Amb Pwr" indicator light shall burn steady when the main conversion power switch is turned to the ON position.

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

DOOR AJAR INDICATOR LIGHT: A back lighted "Door Ajar" light shall be engraved in the cab console's main switch panel. This light color shall be RED. The light shall meet current Federal Specification KKK-A-1822.

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

SWITCHPANEL ILLUMINATION: Illumination of the switch panels shall be provided by LED strips attached to the underside of the switch panels. The strips shall be powered by 12volt DC.

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

CAB CONSOLE FINISH: The console body shall be finished with a 20 mil Easy Grip film. The Easy Grip shall be a self-adhesive as well as bonded to the substrate with high bond contact adhesive. All joints shall be inconspicuous and bonded along the edges.

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

BACK UP ALARM: The apparatus shall include a 97 to 107 decibel back-up alarm, activated by shifting into reverse.

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



**GROUND STRAPS:** Four (4) 7/8" wide by 1/8" thick, fine strand, woven straps shall provide a ground path from the module body to the chassis frame. Woven straps filter out RFI noise originating from alternators, strobe power supplies and other devices, that may find their way into intercom, stereo and two-way communication radios. Each end of the ground straps shall be through bolted with 3/8" diameter, grade 5 or 8, hex head bolts and lock nuts. Each connection site shall be cleaned to the bare metal prior to fastening the strap. The connections shall have a dielectric anti corrosion spray applied.

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

**12 VOLT POWER INVERTER:** A highly reliable Vanner 1050CUL electronic power conversion unit that utilizes MOSFET power semiconductors and a microprocessor controller shall be supplied, installed and wired to the outlets specified herein. A Built in 30A automatic transfer switch shall transfer all loads from the inverter to the shore line, when the shore line cord is plugged into 125 VAC shoreline power. The device shall convert 12-volt DC battery power into 1,050 watts of precisely regulated modified sine wave 125-volt AC power. The device shall hold output power between 114 volts and 126 volts AT a frequency of 59.9 to 60.1 Hertz. The device shall not consume more than 105 amperes at 12-volts direct current (DC). The device shall be certified by Underwriters Laboratories to the present revision of the Federal Specification KKK-A-1822. The location of the inverter is specified below.

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

**POWER SOURCE FOR PORTABLE EQUIPMENT No 1:** Power sources are located and included with a purchased inverter.

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

**LOCATIONS:** The power sources shall be located (1) console, in the cab and (1) behind the A/A panel.

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

**POWER SOURCE:** The aforementioned power provision shall be fed off of the output of the ignition switch or when the battery charger/conditioner is connected to the shoreline.

**BATTERY CHARGER/CONDITIONER:** When the system is connected to shore/utility power, the battery charger (built into the aforementioned inverter) will automatically charge the batteries, then keep them fully charged. The system's microprocessor controls the charging sequence, starting with the high charger (55 Amp) mode. When the batteries are fully charged, it switches to the ready/maintenance mode to keep the battery "topped up". The battery charger shall be designed to charge either lead acid flooded (wet) or gel type batteries.

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

**BUILT-IN BATTERY CHARGER:** The aforementioned built in battery charger shall be wired to the vehicle batteries to allow charging/conditioning when the shoreline is energized.

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

The power inverter shall reside in the left front middle compartment.

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

The power inverter shall reside in the left front middle compartment.

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

**COVER:** There shall be a Lexan Cover over the inverter for protection.



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

LOW VOLTAGE INDICATOR: There will be an amber indicator light located in the cab console to illuminate if the vehicle voltage drops below 11.8 volts DC. If the voltage remains under 11.8 volts DC in excess of 120 seconds, there shall be a warning buzzer in addition to the light.

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

## **COMMUNICATIONS RADIO(S) RELATED**

### **RADIO POWER**

POWER SOURCE FOR COMMUNICATION RADIO(S) No 1: Positive and Negative polarity ten gauge wires shall be supplied and installed for subsequent installation of communications radio(s). The wires shall be barreled off and protected by a thirty (30) ampere automatic reset circuit breaker

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

POWER SOURCE: The power provision shall be fed off of the output of the conversion main power (Battery) switch.

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

LOCATION: The power source shall be located behind the passenger's seat, in the cab.

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

POWER SOURCE FOR COMMUNICATION RADIO(S) No 2: Positive and Negative polarity ten gauge wires shall be supplied and installed for subsequent installation of communications radio(s). The wires shall be barreled off and protected by a thirty (30) ampere automatic reset circuit breaker.

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

POWER SOURCE: The power provision shall be fed off of the output of the conversion main power (Battery) switch.

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

LOCATION: The power source shall be located behind the Action area control panel in the patient cabin.

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

### **ANTENNA LEADS**

COMMUNICATIONS RADIO ANTENNA PRE-COAX No 1: This coaxial cable shall be RG58-U type. Leave an 18 service loop at the mod roof and a 36 tail at the interior termination point. A tag shall specify the other termination point for each coax provided.

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

ORIGINATION POINT: The Coaxial cable shall originate on the module roof. The port location shall be centered side to side and approximately 36" back from the front edge of the module roof.

TERMINATION POINT: Behind Passenger's seat w/ 36" Tail



TERMINATION POINT: The Coaxial cable shall terminate in the cab / drivers' cabin behind the passenger seat.

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

### 125V SHORE LINE AND OUTLETS

PRIMARY SHORE LINE INLET: A 125 volt, fifteen amp (15A) Straight blade (NEMA 5-15R), shore line inlet shall be provided. This inlet shall supply power to all 125 volt outlets. The inlet shall be grounded to keep continuity with the buildings GFI Breaker. The inlet shall have a spring loaded, weather proof cover over the inlet. The inlet must be male. An engraved placard or permanent vinyl label, stating voltage and amperage shall be located over the inlet. At the back of the Ambulance. Facing rearward.

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

### 125 VAC OUTLETS

125 VAC Outlet, No 1: 15A, Hospital Grade, IVORY

125 VAC OUTLET No. 1: The following outlets shall be UL listed, 125 Volt, Hospital grade, Straight blade NEMA 5-15R outlets. Each outlet shall be installed in a UL listed, recessed, fiberglass back box with a minimum of one and three quarter inch of box depth. The outlet cover shall be stainless steel. The outlet must be grounded and protected by a GFI (Ground Fault Interrupted) Breaker. Each outlet body must illuminate when power is applied to the outlet. Each Outlet shall be clearly labeled with a permanent RED colored decal defining the outlet voltage.

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

OUTLET LOCATION: This 125 Volt outlet shall be located in the patient cabin's main "Action Area", one by the Bench seat. One in the back of the patient compartment by the back doors as with location as shown on the approval drawings.

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

VAC OUTLET No. 2:

OUTLET LOCATION: This 125 Volt outlet shall be located inside of the right front ALS Cabinet. The outlet shall be mounted on the back wall of the cabinet (related to inside access) in the upper right corner. The location of the outlet shall be defined on the proposal drawings.

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

USB PORTS:

The Ambulance will be manufactured with 2, 2-hole USB ports, these outlets shall be located and wired as specified below. The outlet shall be separately protected and shall be electrically isolated from other electrical functions on the vehicle. This outlet shall be wired per current Federal specification KKK-A-1822.

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

OUTLET LOCATION: This USB outlet shall be located in the patient cabin's main "Action Area", on the back wall and in the ALS cabinet.

POWER SOURCE: The input for the outlet shall be wired to the output of the battery switch.

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



**ELECTRONIC SIREN:** The siren hardware shall consist of a remote mount siren amplifier and a flush mounted control head, Whelen WS295HFS2. The two-channel siren amplifier shall operate two 100 watt RMS speaker drivers and the following functions: RAD, PA, MAN, HF, WAIL, YELP, PIER. The siren control head shall feature a rocker type power switch, rotary function/Mode switch, a Manual momentary button switch, Diagnostic indicator lights a hardwired microphone and a microphone volume control potentiometer.

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

**SIREN OR HORN SELECTOR SWITCH:** The O.E.M. horn ring shall control the O.E.M. electric horn and the siren's manual momentary input controls. A switch shall connect the horn ring to either the O.E.M. HORN or to the SIREN. The switch shall be located in the cab console's switch panel. The switch legend, that clearly defines the switch function shall be engraved in the switch panel. The legend shall be illuminated when the head light switch is on.

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

**SIREN SPEAKERS:** The speakers shall each have a 100-watt driver and shall emit through an horn body located directly behind the O.E.M. fog light location in the bumper area, one on left side and one on right side. The siren and speakers shall meet or exceed current KKK-A-1822 Specifications.

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

**MICA COLOR:** The mica color selection shall be White with a Glossy finish. A sample of the subject mica color shall be supplied at the post award conference.

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

**ATTENDANT SEAT:** The main attendant seat shall be an EVS high backed fixed 10.5-degree back seat with six-point black seat belt. The vacuum formed cover shall be Blue Ridge in color. The seat shall be tested by the original seat manufacturer to current J3027 test standards and mounted to the instructions provided to the matching base as recommended. The seat shall have travel slide mechanisms attached to the seat base. Seat will have a Child Restraint seat built in.

All restraints will be Bright orange or Red in Color.

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

**SEAT BASE:** There shall be a powder coated metal seat that is tested to be utilized with the mounted EVS seat. The metal base shall be concealed behind a substrate with mica laminate to be color keyed to the patient area interior. There shall be a flush mounted solid door on a stainless steel hinge with a spring loaded lever latch.

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

**SOLID HINGED DOOR:** A 3/4" (19mm) thick door shall be supplied on the aforementioned cabinet. The door shall be flush fitted to the opening and have uniform gap spacing around the perimeter of the door. The door shall be hung on a continuous, stainless steel piano hinge with mounting screws, spaced every two inches along the full length of the pre-punched hinge. The door shall be finished with white cabinet liner laminate on the inside and the same colored mica as the cabinet face on the outside.

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

**DOOR EDGE FINISH:** The edges of the aforementioned door(s) shall be covered with anodized aluminum, U-shaped trim. The trim shall be miter cut and wrapped around the perimeter of the door (On ALL four sides), including the hinged side. The trim shall be bonded to the door edge and clamped. No screws or other mechanical fastener shall be used to fasten



the trim work to the door(s). The corners of the doors shall be broken (rounded) after application. Vinyl "Iron on" or mica edge banding is not acceptable.

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

HINGE ORIENTATION: The aforementioned door shall be hinged along the bottom edge of the door.

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

NON-LOCKING LATCH: A black positive latch shall be supplied and installed on the cabinet door. A small "preload" on the latch shall be imposed to prevent the door from rattling.

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

AIR CONDITIONING EVAPORATOR CABINET: The patient cabin shall be equipped with a rear air conditioning and heat unit. The unit shall be wired, connected and installed per the environmental section of this specification. A cabinet, specifically designed to fit, form and function to the constraints set forth in the surrounding cabinet design and air exchange for cooling/heating performance requirements. The AC/Heat cabinet will be located behind the attendant seat on the floor. The AC/Heat delivery system will be ducted to the modular ceiling. It will have eight (8) spherical adjustable vents. In addition, there will be two vents above and facing the attendant seat on cabinet H. The design shall provide adequate air return to meet or exceed current revision of the Federal specification KKK-A-1822.

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

LEFT FRONT CABINET, "H": This cabinet shall be located behind the attendant seat and on top of the Air Conditioning unit. Access to the main circuit board shall be provided through the face of the cabinet facing the curbside. The access door shall be hinged along the right side with a non-locking lever type latch at the top. The door shall open without interference with other cabinet doors or hardware. The cabinet will have two adjustable Air Conditioning vents behind and above the attendant seat.

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

PLASTIC VENT: A fifteen square inch free air flow ventilation hole be cut into the above door. The edges of the cut out shall be banded. The hole shall be covered with an aesthetically appealing, molded plastic louver cover. The louver cover shall be black in color and secured with at least one No 8 screw in each corner.

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

SOLID HINGED DOOR: A 3/4" (19mm) thick door shall be supplied on the aforementioned cabinet. The door shall be flush fitted to the opening and have uniform gap spacing around the perimeter of the door. The door shall be hung on a continuous, stainless steel piano hinge with mounting screws, spaced every two inches along the full length of the pre-punched hinge. The door shall be finished with white cabinet liner laminate on the inside and the same colored mica as the cabinet face on the outside.

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

DOOR EDGE FINISH: The edges of the aforementioned door(s) shall be covered with anodized aluminum, U-shaped trim. The trim shall be miter cut and wrapped around the perimeter of the door (On ALL four sides), including the hinged side. The trim shall be bonded to the door edge and clamped. No screws or other mechanical fastener shall be used to fasten the trim work to the door(s). The corners of the doors shall be broken (rounded) after application. Vinyl "Iron on" or mica edge banding is not acceptable.

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



HINGE ORIENTATION: The aforementioned door shall be hinged along the right edge of the door.

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

NON-LOCKING LATCH: A black positive latch shall be supplied and installed on the cabinet door. A small "preload" on the latch shall be imposed to prevent the door from rattling.

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

RIGHT FRONT CABINET (I): The right front cabinet is hereinafter known as ALS cabinet. All fixed and adjustable shelf surfaces shall be covered in Easy Grip material. All fixed and adjustable shelf lips shall be covered with anodized aluminum trim. All shelves shall have a ¼ lip. The ALS cabinet shall provide at least 21.0 cubic feet of storage and Configured as follows.

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

Cabinet I-1: This cabinet is located on the top section of the right front patient area.

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

SINGLE FLIP UP POLYCARBONATE DOOR: A Single 3/8" (0.375 in) thick, overlay flip up door shall be supplied on the cabinet.

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

CABINET I-2: This cabinet is the upper middle section of the ALS (Cabinet I). Access from the inside shall be as follows below.

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

DUAL FLUSH DOORS: Two oppositely hinged, 3/4" (19mm) thick doors shall be supplied on the aforementioned cabinet. The doors shall be flush fitted to the opening and have uniform gap spacing around the perimeter of the doors. Each door shall be finished with white cabinet liner laminate on the inside and the same colored mica as the cabinet face on the outside.

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

HINGE ORIENTATION: The doors shall be hinged along the outside edge of each door.

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

C-HANDLES: The door shall be fitted with a four-inch wire pull with a brushed chrome finish.

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

DOOR CATCH: An opposing ball bearing catch shall be supplied and installed on the cabinet door. The catch body shall be made of brass with Built in tension adjustment to relax or intensify the "grip" on the door.

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

RIGHT FRONT CABINET OUTSIDE ACCESS: The right front cabinet of the module shall have outside access through the right front (M-7) compartment door.



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

**ADJUSTABLE SHELVES:** Two shelves shall be supplied in the cabinet, One shelf on each side of the center divider in cabinet. The shelf shall be made of 1/2" thick substrate and finished in white colored laminate. Both sides of the shelves shall be laminated. The shelves shall be secured to four shelf clips with Phillips head wood screws, from the bottom of the shelf. An anodized aluminum angle shall be securely fastened to the front edge of the shelf. The vertical leg of the angle shall provide a lip along the front edge.

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

**CABINET I-3:** The lower section shall be approximately 25% of the overall cabinet height. Must meet current Federal specification KKK-A-1822. Access from the inside shall be as follows below.

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

**SOLID HINGED DOOR:** A 3/4" thick door shall be supplied on the cabinet. The door shall be flush fitted to the opening and have uniform gap spacing around the perimeter of the door. The door shall be finished on both sides with the same colored laminate as the cabinet face.

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

**DOOR EDGE FINISH:** The edges of the aforementioned door(s) shall be covered with anodized aluminum, U-shaped trim. The trim shall be miter cut and wrapped around the perimeter of the door (On ALL four sides), including the hinged side. The trim shall be bonded to the door edge and clamped. No screws or other mechanical fastener shall be used to fasten the trim work to the door(s). The corners of the doors shall be broken (rounded) after application. Vinyl "Iron on" or mica edge banding is not acceptable.

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

**HINGE ORIENTATION:** The aforementioned door shall be hinged along the bottom edge of the door.

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

**LOCKING LATCH:** A positive latch shall be supplied and installed on the aforementioned cabinet door. The latch shall be powder coated Black and be near flush when in the "Closed" position. The latch shall be fitted with a cylinder type lock that prevents door latch activation, when locked. Door latch activation shall be triggered by depressing a flush fitted release button that unlatches a lever. The spring loaded lever shall rotate about an axis near the surface of the door panel and extended a rotating pawl behind the latch side door frame. The depth of the pawl shall be adjustable to the latch side door frame. A small "preload" on the latch shall be imposed to prevent the door from rattling.

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

**RIGHT FRONT CABINET OUTSIDE ACCESS:** The right front cabinet of the module shall have outside access through the right front (M-7) compartment door.

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

**RIGHT REAR CABINET:** The right rear exterior compartment specified herein shall be completely concealed from interior view by a right rear cabinet. All exposed surfaces of this cabinet shall be fully laminated over substrate matching main cabinet structures. The vertical outer corner shall feature a radius anodized aluminum trim. The trim shall originate from the top of the mated squad bench and terminate into the ceiling.





**UPHOLSTERY PAD:** An upholstered pad covering the entire forward facing wall, over the squad bench shall be provided. The pad shall include at least 1/2" thick foam padding covered in the same heavy duty vinyl covering specified for the squad bench cushions and the remaining upholstery package.

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

**SQUAD BENCH:** A squad bench shall be installed on the curbside of the patient compartment. Seating shall be installed as described writing these specifications. All seat belts and anchorage shall comply with F.M.V.S.S. 209 and 210. The Squad Bench shall comply with current KKK-A-1822. A back and head rest shall be supplied for all seated personnel along the squad bench.

All restraints will be Bright orange or Red in Color.

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

**UNDER LID STOWAGE:** The squad bench shall provide storage under the access lids. This multipurpose storage area shall be finished in high impact, white colored laminate. Must meet current Federal specification current KKK-A-1822.

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

**SQUAD BENCH LIDS:** Two (Split) squad bench lids shall be supplied over the squad bench storage area.

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

**HINGE, SQUAD BENCH LID(S):** All squad bench lids shall be installed with butt style, hinges. The hinges shall be through bolted for longevity of the vehicle. There shall be a minimum of two hinges per lid.

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

**LID LATCH:** One latch to hold each lid down shall be supplied. The lid latch shall be stamped stainless steel construction and latches automatically by simply closing the bench lid.

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

**LID CHECKS:** Each squad bench lid shall have a bi-directional gas spring lid check (Hold open). The force value selected and ball stud locations shall provide lift assistance after twenty degrees of bench lid lift angle. The ball stud mounts shall be at least 10 millimeters.

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

**EDGE TRIM:** The edge of the squad bench lid shall be finished with aluminum anodized "J" trim. The trim is to be supplied with countersunk holes to allow for screws to be installed flush so the screw head does not catch anything.

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

**RESTRAINT NET:** A detachable net shall be installed at the head of the squad bench. In the event of sudden stop or frontal accident, the design intent of the net is to minimize injuries to unbelted personnel seated on the squad bench. The net is a safety barrier between the occupant/personnel and the bulkhead cabinetry. The net shall be a grid of 2 wide safety web, spaced on maximum centers of 8 inches.

The net shall be secured at six points. The net shall be tightly stretched and attached at two points on each of the following surfaces: The floor at head of squad bench, the curb side wall, the ceiling. All Restraint Net attachment devices shall be aviation quality and pull strength tested. A 2,000-pound force applied in shear (Horizontally). Detachment of the net shall be done without the need for a removal or installation tool(s). Each device shall feature a



cadmium plated steel attachment ring that is forged in one continuous ring, without a split or seam. Each device shall be sewn onto the net webbing with a 1 3/4-inch square shaped thread path and diagonal X-shaped thread path to assure web to ring security.

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

**CABINET "A":** An upper, interior cabinet shall be provided directly over the rearward section of the Base wall cabinet. This cabinet shall accommodate a power air exhaust blower with a removable service panel. This multipurpose cabinet interior shall be finished in high impact, white colored laminate. Must meet current Federal specification KKK-A-1822.

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

**ADJUSTABLE SHELF:** A shelf shall be supplied in the cabinet. The shelf shall be finished in white colored laminate. Upper, lower and aisle side surfaces of the shelf shall be laminated. The shelf shall be secured to four shelf clips with Phillips head wood screws, from the bottom of the shelf. An anodized aluminum angle shall be securely fastened to the front edge of the shelf. The vertical leg of the angle shall provide a lip along the front edge.

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

**SINGLE FLIP UP POLYCARBONATE DOOR:** A Single 3/8" (0.375 in) thick, overlay flip up door shall be supplied on the cabinet.

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

**CABINET "B":** An upper, interior cabinet shall be provided directly over the "Action Area". This multipurpose cabinet interior shall be finished in high impact, white colored laminate. The cabinet shall be ergonomically angled toward the CPR seat. Must meet current Federal specification KKK-A-1822.

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

**ADJUSTABLE SHELF:** A shelf shall be supplied in the cabinet. The shelf shall be finished in white colored laminate. Upper, lower and aisle side surfaces of the shelf shall be laminated. The shelf shall be secured to four shelf clips with Phillips head wood screws, from the bottom of the shelf. An anodized aluminum angle shall be securely fastened to the front edge of the shelf. The vertical leg of the angle shall provide a lip along the front edge.

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

**SLIDING POLYCARBONATE DOORS:** The cabinet shall be equipped with two sliding 3/16" polycarbonate doors within a closed anodized aluminum track/frame. The sliding polycarbonate door track shall be an extruded, anodized aluminum shape designed to accommodate a flocked, felt type track for the doors to slide in and lightly resist movement. The mitered corners shall be spline together and riveted. The extrusion shape shall cover one half of one inch of cabinet fascia around the perimeter of the track frame.

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

**HANDLES, POLYCARBONATE DOORS:** Full height, anodized aluminum, extruded drive on handles shall be supplied on each 3/16" door. The handle shall wrap around the leading edge of each door and mount with one way angular, blind mounting teeth designed to be driven on.

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

**BASE WALL CABINET:** The base wall cabinet is located on the Street side (Left side) of the patient cabin. The overall height of the Base Wall Cabinet shall be approximately 75% of the overall head room. This cabinet shall be built in ONE



piece. The laminate along the fascia shall be ONE piece on single color laminate selections. A CPR Side Seat shall be provided on the street side aligned with the primary patient abdomen.

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

**ACTION AREA:** The action area is a work surface located on the forward end of the Base Wall Cabinet and adjacent to the attendant seat. The work surface shall be at least 5.5 square feet. The work area height shall be 24 inches to 29 inches. The work surface shall have a three quarter inch (3/4") high lip.

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

**A/A TRAY:** There shall be a countertop action area forward at the wall cabinet. The countertop shall be color keyed high pressure laminate to match the remainder of the high pressure laminate in the patient area.

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

**CABINET "D":** An interior cabinet shall be provided directly over the rearward "Telemetry Area just aft of the CPR side seat within the base cabinet on the street side. This multipurpose cabinet interior shall be finished in high impact, white colored mica that is impervious to disinfectants and cleaners. The cabinet shall add at least 2.6 cubic feet of interior stowage accommodations described in Federal specification KKK-A-1822E 3.11.1.

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

**ADJUSTABLE SHELF:** A shelf shall be supplied in the cabinet. The shelf shall be finished in white colored laminate. Upper, lower and aisle side surfaces of the shelf shall be laminated. The shelf shall be secured to four shelf clips with Phillips head wood screws, from the bottom of the shelf. An anodized aluminum angle shall be securely fastened to the front edge of the shelf. The vertical leg of the angle shall provide a lip along the front edge.

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

**SLIDING POLYCARBONATE DOORS:** The cabinet shall be equipped with two sliding 3/16" polycarbonate doors within a closed anodized aluminum track/frame. The sliding polycarbonate door track shall be an extruded, anodized aluminum shape designed to accommodate a flocked, felt type track for the doors to slide in and lightly resist movement. The mitered corners shall be spline together and riveted. The extrusion shape shall cover one half of one inch of cabinet fascia around the perimeter of the track frame.

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

**HANDLES, POLYCARBONATE DOORS:** Full height, anodized aluminum, extruded drive on handles shall be supplied on each 3/16" door. The handle shall wrap around the leading edge of each door and mount with one way angular, blind mounting teeth designed to be driven on.

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

**CABINET "F":** An interior cabinet shall be provided directly below the rearward "Telemetry" Area just aft of the CPR side seat within the base cabinet on the street side. This multipurpose cabinet interior shall be finished in high impact, white colored mica that is impervious to disinfectants and cleaners. The cabinet shall add at least 2.2 cubic feet of interior stowage accommodations described in Federal specification KKK-A-1822E 3.11.1.

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

**SLIDING POLYCARBONATE DOORS:** The cabinet shall be equipped with two sliding 3/16" polycarbonate doors within a closed anodized aluminum track/frame. The sliding polycarbonate door track shall be an extruded, anodized aluminum



shape designed to accommodate a flocked, felt type track for the doors to slide in and lightly resist movement. The mitered corners shall be spline together and riveted. The extrusion shape shall cover one half of one inch of cabinet fascia around the perimeter of the track frame.

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

HANDLES, POLYCARBONATE DOORS: Full height, anodized aluminum, extruded drive on handles shall be supplied on each 3/16" door. The handle shall wrap around the leading edge of each door and mount with one way angular, blind mounting teeth designed to be driven on.

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

CPR SEAT: A left side "CPR" side seat shall be provided on the street side and aligned with the primary patient's abdomen. The seat shall be at least twenty-four (24") inches wide and normal squad bench seat height. Upholstered seat pads shall be located within the seat area for the seat, back, both arms and hips. The CPR seat area shall have rounded corners. All restraints will be Bright orange or Red in Color.

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

BACK REST: The CPR side seat shall feature a padded, fixed back rest with chamfered upper corners.

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

TELEMETRY AREA: A four-inch-wide upholstery covered and padded arm rest shall be installed. The arm rest shall create a 3/4" to 1" lip on the leading edge of the telemetry area.

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

SHARPS AND TRASH: There shall be a bio waste receptacle at the rear of the Telemetry area. It shall consist of an ABS tray within the mica countertop. The ABS tray shall allow for biological waste with separate needle disposal. The sharps and waste shall be molded into an ABS plastic tray. Access the bio-waste container and needle collection jar shall be done from the top of the action area in the patient compartment. The sharps container shall be a 3-Quart Bemis container with a spring located clip to hold it in place in the event of an accident.

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

TELEMETRY AREA SURFACE TYPE: The "Telemetry area" shall be finished with the primary color laminate.

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

CABINET O1: This cabinet shall be located in the forward action area for storage of medical tubing, air ways, ventilation face masks, and/or miscellaneous items. Must meet current Federal specification KKK-A-1822.

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

ADJUSTABLE SHELF: A shelf shall be supplied in the cabinet. The shelf shall be finished in white colored laminate. Upper, lower and aisle side surfaces of the shelf shall be laminated. The shelf shall be secured to four shelf clips with Phillips head wood screws, from the bottom of the shelf. An anodized aluminum angle shall be securely fastened to the front edge of the shelf. The vertical leg of the angle shall provide a lip along the front edge.



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

O1 CABINET SINGLE HINGED POLYCARBONATE DOOR: A 3/8" (0.375 in) thick, overlay hinged door shall be supplied on the aforementioned cabinet. The edges of the door shall be router semi-round and burned smooth.

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

C-HANDLES: The door shall be fitted with a four-inch wire pull with a brushed chrome finish.

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

DOOR CATCH: An opposing ball bearing catch shall be supplied and installed on the cabinet door. The catch body shall be made of brass with Built in tension adjustment to relax or intensify the "grip" on the door.

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

RESTRAINT SYSTEM(S): The Seat Belt System(s) shall be in the following locations:

RESTRAINT SYSTEM(S): The rear seating locations shall consist of the P-6 6-Point restraint system. The P-6 Advanced Restraint System is a "Vehicle mounted" 6-Point restraint system dispersing loads to 6 points of reinforced structure within the vehicle as opposed to concentrating loads on the seat frame. It promotes a seated position with a wide range of mobility. The seated position, in conjunction with the seat system, has been proven to be safer than isolated standing positions in a moving vehicle. As well it is easy to use encouraging greater use in the field than more cumbersome systems involving additional latches, levers, and cables. There shall be two P-6 restraints on the Squad Bench and one P-6 restraints on the CPR Side Seat.

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

SECONDARY PATIENT RESTRAINT SYSTEM: There shall be a location for a secondary patient on top of the squad bench located on the curbside interior of the patient area of the ambulance. To secure the patient there shall be three inertia style retractable straps that match up to three 9" sleeved buckles on the face of the squad bench and 5" sleeved retractors by the squad bench lid hinge. The straps and buckles shall be mounted to comply with the pull test requirements in the present revision of KKK-A-1822.

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

FLOOR AND SUBSTRATE: The floor of the module shall be (3/4) thick 7-Ply, Formaldehyde free, exterior grade, A-C plywood. The glue line between the layers shall be phenolic based. The glue shall be of similar chemical make up to the phenolic glue used in Marine grade plywood, as designated by the A.P.A. (American Plywood Association).

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

FLOOR COVERING: The floor substrate shall be free of dents, voids and moisture prior to application of the floor covering. The plywood substrate shall be 3/4" (19mm) 7-ply exterior grade plywood. The substrate sheet shall be cut from a 60-inch-wide by 144-inch-long oversized sheet. No substrate seams are allowed in high foot traffic areas. This means NO SEAMS are permitted within 132" of the rear access doors or near the side access door.

On longer bodies, the only ONE seam is permitted as long as the full length of the seam is located directly over the center of a 0.250 x 2 x 3 box tube floor member AND the seam does not fall in the aforementioned "High Traffic" areas. The floor covering shall be one piece throughout the patient cabin regardless of the body length. The flooring material shall be commercial grade sheet floor with diamond plate like impression on the surface. The floor covering shall be Lonseal Lonplate No 165 "Sapphire" (Blue).



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

**FLOORING MAIN EDGE:** The one-piece patient cabin floor covering material shall run the full width of the aisle space plus roll up (3") three inches along the Base wall cabinet, squad bench and the right rear cabinet (when applicable). Both roll-up areas shall be recessed approximately 1/2" into the face of the cabinets.

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

**REAR THRESHOLD:** The rear threshold shall be made of 16 gauge brushed stainless steel sheet. The threshold shall conceal the end of the vapor sheet, sub floor, and flooring. The threshold shall mate to the top of the rear access door jamb and cover at least six inches of flooring. Installed over the stainless steel threshold shall be two 2.5" wide "nonskid" tape, strips applied. The color of the tape shall be safety yellow with black diagonal stripes.

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

**C/S THRESHOLD:** The C/S threshold shall be made of .100 polished aluminum diamond plate.

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

## **COT MOUNT HARDWARE**

**PRIMARY COT MOUNT:** The main cot mount shall be a dual position; Stryker model No 6377. The mounts shall be set in the center of aisle and seven inches (7) left of center position.

**COT FASTENER MOUNTING METHOD:** All mounting bolts shall be 3/8" diameter, socket head cap screws with at least 16 threads per inch. All mounting blocks shall be supplied and manufactured by the cot mount manufacturer. The mounting blocks may protrude above the flooring surface by up to 3/16", as long as all of the edges are chamfered. The aforementioned cap screws shall not protrude above the upper surface of the mounting block. All cap screws shall be through bolted through 1/2 (.500) inch thick, 6061-T-6 Aluminum plate structure. One and one half (1-1/2) inch x six (6) inch thick plates shall either be MIG welded or Chuck structurally fastened to the floor grid for both cot mount and attendant seat fastening locations. All fastening hardware shall be either through bolted or tapped depending on under floor clearances due to chassis installed components. Mounting bolts shall not point toward fuel filler or fuel vent hoses, in accordance with good engineering practices set forth by the Society of Automotive Engineers and manufactures program. Bidders shall meet or exceed mechanical strength described in the aforementioned minimum fastening method. Material thickness and/or through bolt criteria is mandatory even if the vendor has current certification to A.M.D. Standard 004 utilizing lesser materials. This cot position shall be set up for a primary wheeled cot set centered laterally (side to side) in the aisle. The longitudinal location shall be set 30 inches measured from the backrest of the attendant's seat (set all the way toward the front of the patient cabin) to the head of the primary cot frame, per current KKK-A-1822. There shall be a singular piece of aluminum reinforcement installed running the length of the primary cot position in the modular ambulance. It shall be secured to the modular tubes by welding or hook fasteners. The design intent is to prevent accidental cot roll off during loading and unloading a one-man cot. The hook shall snag a tubular drag bar that is built in to the cot frame. The cot hook shall be placed in a position where the under carriage of the cot can be erected and locked into place before release of the drag bar.

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

## **OXYGEN, AIR and VACUUM SYSTEMS**

**OXYGEN HOSES:** All oxygen system service hoses, fittings and devices shall be made of nonferrous materials. Hoses used to pipe Medical Oxygen shall be electrically non-conductive, ¼ inside diameter with an abrasion resistant, green



colored outer jacket. The hose manufacturers name, part number, inside dimension and working pressure rating shall be permanently marked along the entire length of the hose. All hoses shall have a working pressure rating of at least 250 pounds per square inch, withstand a system test pressure of 150 PSI / 1033 kPa test prescribed in current Federal specification KKK-A-1822. Each ambulance shall be tested.

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

OXYGEN OUTLETS - GENERAL: Each outlet shall be comprised of an "Inlet Box" and a "Latch Plate" as defined herein. The "inlet box" shall be a universal inlet service box with a 165 mm type "K" (3/8") OD Copper inlet pipe stub which is silver brazed to a brass, one piece, (1 5/16") inlet body. The "inlet box" shall be designed specifically for positive pressure gas service and feature a primary and secondary check valve. Each check valve shall be rated at 1,379 kPa (200psi).

The "Latch Plate" shall insert into the universal "Inlet Box". The "Latch Plate" is comprised of the outer cover plate and latching mechanism that will define the adapter type/Brand that will ultimately connect the patient to the oxygen system. The outlet cover shall be color coded GREEN in addition to having a clear permanent legend that identifies the gas type. Dual gas specific safety pins shall be integrated in the face of the outlet "Latch Plate" for safety.

Outlet adapter types shall be easily changed by simply removing the "Latch plate" specifically designed for brand "A" to brand "B" without any further plumbing changes.

As with all medical gas outlets specified herein, all outlets shall be hydrostatically tested and cleaned for oxygen service. All medical gas outlets specified herein shall be UL (Underwriters Laboratory) listed and CSA approved. All outlets will be subject to a line pressure of 50 PSI and shall be leak tested at 150 PSI Per Federal specification KKK-A-1822. Pressure drop across the outlet shall be less than 2.0 PSI at normal working pressure.

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

OXYGEN OUTLET No 1: This outlet latch shall be designed to accept (Ohio) style, quarter turn / quick release adapters. This Oxygen outlet shall be provided where specified below.

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

LOCATION: The Oxygen outlet shall be located in the primary action area switch and outlet console.

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

OXYGEN OUTLET No 2: This outlet latch shall be designed to accept (Ohio) style, quarter turn / quick release adapters. This Oxygen outlet shall be provided where specified below.

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

LOCATION: The Oxygen outlet shall be located in the passenger Side wall near the curb door area switch and outlet console.

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

OXYGEN OUTLET No 3: This outlet latch shall be designed to accept (Ohio) style, quarter turn / quick release adapters. This Oxygen outlet shall be provided where specified below.

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



LOCATION: The Oxygen outlet shall be located in curb side wall, over the squad bench and near the curbside entry door.

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

MAIN CYLINDER RESTRAINT No 1: One manufacturer supplied M-size compressed, medical gas cylinder shall be carried and secured, vertically inside the left front exterior compartment. Cylinder rack shall be through bolted to the back wall. A rust free cylinder rack with (2) heavy duty ratchet style, web straps with quick spring loaded release shall be type tested to AMD Test 003 Oxygen Tank Retention System Test. The cylinder valve shall also be visible and accessible from the inside through a clear polycarbonate door.

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

NECK STRAP: There shall be an additional webbed strap looped onto the racks upper most securing strap. The strap is to have two loops. The bottom loop will be the section secured to the upper most strap and the upper loop shall be secured onto the neck of the oxygen or medical air bottle to help secure it in place in the case of an upward exertion.

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

CYLINDER TYPE: This rack shall be for a MEDICAL OXYGEN cylinder. The oxygen system input hose shall be suspended over this rack. This input hose shall feature a nonferrous 9/16-18 RH bottle nut and regulator barb. This connection shall comply with the diameter index safety system (DISS) set forth by the Compressed Gas Association (CGA) for safety.

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

CYLINDER RACK LOCATION: The main oxygen cylinder shall be stored in the left front compartment. The cylinder rack shall be through bolted on the back wall, near the right hand wall of the compartment. The cylinder neck shall be visible and accessible through the viewing window.

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

Cylinder Wrench: There shall be a cast aluminum main oxygen cylinder wrench installed in the compartment with the main oxygen cylinder rack. The wrench shall include a cable lanyard that secures the wrench to the compartment wall allowing enough length of cable to loosen and tighten the regulator fitting on the customer installed main oxygen cylinder. The wrench shall be stored in place with either a hat channel bracket or Velcro to keep it secured while the vehicle is in motion.

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

VACUUM (SUCTION) PANEL: A variable vacuum regulator and gauge panel shall be installed in the action area control panel. The vacuum regulator shall vary vacuum delivered to a 1200 cubic-centimeter collection jar specified below. The Vacuum gauge shall not be mounted on the collection jar itself.

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

COLLECTION JAR: The suction system shall be equipped with a shatter proof, graduated, 1200cc, transparent collection container. The container shall be regulated through the SSCOR panel and installed per manufacturers recommendations. The retention bracket when installed per directions is SAE J3043 retention testing compliant.

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

COLLECTION JAR PLUMBING: The collection jar shall be connected directly to the regulator panel in the action area console.

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





**SUCTION PUMP:** The suction pump shall be installed in the left middle compartment, adjacent to the action area panel. The exhaust tube shall be routed to the outside of the vehicle. The pump shall be mounted on rubber vibration isolators to minimize any vibration noise emitted into the patient cabin. The pump shall provide a free air flow of at least 20 liters per minute and achieve a minimum of (11.81 in) Hg vacuum within four seconds after the suction tube is closed. This 49-state pump shall meet or exceed current Federal specification KKK-A-1822.

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

**SUCTION PUMP LOCATION:** The suction pump shall be installed in the left front middle compartment. The pump shall be mounted to the ceiling of this compartment on rubber vibration isolators.

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

**EXTERIOR ENTRY AND COMPARTMENT DOOR HANDLES:** Large chrome plated, die cast paddle handles shall be provided to open all module doors. Blind fasteners shall be used to fasten the handles to the door from the backside. Blind Stabilizer pins shall be incorporated on the backside of the handle for alignment purposes. Every paddle handle shall have an isolation gasket between the paddle body and the door skin. All door skin surfaces shall be painted prior to installation of the handle hardware. All paddles, on single hung and leading double doors shall be locking type and keyed the same (unless specified otherwise). Trailing doors shall; have non-locking paddle handles, mounted on the outside of the door. The Handle shall have a bright chrome like finish mounted into the bright chrome dish. When the door is in the locked position, the handle shall extend when pulled like an automotive handle (free floating) to show the operator that the door is locked and needs to be unlocked to be opened. Systems that utilize a handle that does not free float shall not be accepted as it could bind up the inner hardware and shorten the life of the door operation and timing.

**INTERIOR ENTRY AND COMPARTMENT DOOR HANDLES:** The interior handle shall be lever type. A Lock/Unlock lever shall be installed below the inside lever handle and be clearly marked Lock/Unlock. The inner chrome plated handle shall have a black powder coated cast aluminum bezel for strength.

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

**ASSIST RAIL:** This rail shall be naturally accessible to assist persons entering the rear of the module in maintaining their balance. The rail shall be 1 ¼ diameter, 100% stainless steel with gray anti-microbial coating and 18" long. All rail fittings shall be TIG welded to the main rail. The rail shall be located prior to order confirmation. Grab rails that utilize separate, setscrew rail fittings are not reliable and not acceptable.

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

### **ENTRY DOOR PANELS / WINDOWS / HARDWARE**

**INTERIOR GRAB HANDLE COLOR:** The interior grab handles listed below will be powder coated with anti-microbial, gray in color.

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

**CURB SIDE ENTRY DOOR GRAB HANDLE:** The curbside entry door shall be equipped with a two point, 1 ¼ diameter, stainless steel with gray anti-microbial coating, handicap style grab handles to aid in door closure and entry assistance. The handle shall measure at least eighteen inches long. The handle shall run horizontally, directly above the inside door latch. The door handles shall be fastened directly to the horizontal door structure that is welded to the door assembly.

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



**REAR ACCESS DOOR GRAB HANDLES:** Each rear access door shall be equipped with a two point, 1 ¼ diameter, stainless steel with gray anti-microbial coating, handicap style grab handles to aid in door closure and entry assistance. The handle shall measure at least twelve inches long.

The handle shall run horizontally, directly above the inside door latch. The door handles shall be fastened directly to the horizontal door structure that is welded to the door assembly.

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

**DOOR PANELS:** The inside UPPER door panels shall be made of .080 aluminum diamond plate. The edges of the diamond plate shall be recessed into the door frame extrusion. The center panel shall be upholstery over a smooth aluminum substrate.

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

**CURBSIDE LOWER DOOR PANEL:** The inside door panel shall be made of .080 aluminum diamond plate. The edges of the diamond plate shall be recessed into the door frame extrusion. The panels shall be fastened to the door frame with stainless steel, #10-32 UNF machine screws threaded into aircraft quality blind fasteners. Each screw shall have a neoprene lock washer.

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

**REAR ENTRY DOOR WINDOWS:** The rear entry doors shall have an automotive style window. The window will be recessed in a factory stamped opening. The windows will be near flush. They will be in a fixed position. Each window will have a nominal area of 320 square inches.

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

**SIDE ENTRY DOOR WINDOW:** The curb side (Right) entry door shall be equipped with an automotive style window. The window will be recessed in a factory stamped opening. The window will be near flush. Window will be fixed position. All glass shall be tinted safety glass.

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

**TALK THROUGH WINDOW:** The Cab to Module communications window shall be provided.

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

**LOCKING PIN:** The sliding cab to patient area window shall have a locking pin consisting of metal 1/4" pin with a lanyard retainer to keep from losing the pin when not latched. The pin shall be from the driver's side of the window. The pin shall meet or exceed current Federal specification KKK-A-1822.

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

**ACTION AREA LIGHTING:** A 12 volt LED light shall be provided directly over the forward, street side work surface. A 12-inch swivel fixture shall be provided. The light shall have an on/off rocker switch on the body of the light housing.

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

**LOCATION:** The light shall be mounted to the action area.



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

**UPHOLSTERY MATERIALS:** All padding and upholstered seating shall be covered in 36-ounce vacuum form ready vinyl. Sewn seams in the seat covers and cushions shall be minimized. Upon request, the manufacturer shall be capable of supplying vacuum formed, seamless vinyl covered upholstery. The color shall be color keyed to the laminate color selections made.

**SEAT / BACKREST CORE MATERIAL:** The vinyl covered foam shall meet current Federal Specification KKK-A-1822. Seat cushions shall be ergonomically contoured. All core material shall be open cell, high resilience foam.

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

**UPHOLSTERY COLOR:** All padding and upholstered seating shall be covered in 36-ounce vacuum form ready vinyl per the aforementioned specification. The color of the vinyl shall be Blue. A sample of the actual color shall be submitted with the bid for approval.

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

**TROUGH COVER:** All upholstered pad that is built to cover the trough running down the center line of the vehicle separating the curbside and streetside of the patient compartment shall be manufactured of 1/4" luan non voided plywood with padding and covered with 36-ounce vinyl. The color of the vinyl shall be the same as the remainder of the upholstery in the patient area. The cover shall be fastened to the headliner using stainless steel screws with washers that will accept button covers that are color matched to the trough cover.

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

**UPHOLSTERY JOINERY TYPE:** All padding and upholstered seating shall feature upholstery covered foam that eliminates sewn, visible seams. All cushion corners shall be vinyl wrapped. NO sewn seams are permitted, even at the corners. Seat cushion vinyl shall be pre-formed to the cushion shape to eliminate ALL visible seams. Seat cushions with welting/ piping and sewn corner seams are not acceptable since blood and other liquid form biological discharge can penetrate the seam holes and reside in the foam. All vinyl surfaces shall be pulled tight against the foam, utilizing a hardwood plywood backing board. Loose fitting vinyl coverings are not acceptable.

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

**FULL CUSHIONS:** The post and wheel cups normally placed on the squad bench for secondary stretchers shall be DELETED in favor of full seat cushions without cutouts. The seat cushions shall be the same size as the squad bench lid and WITHOUT cutouts. The user chooses to use a backboard in lieu of a stretcher for a secondary patient.

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

**HEAD PROTECTION - CURB SIDE ACCESS DOOR:** A seamless pad specifically designed to protect the head during egress is required. The pad shall consist of a two-inch-thick foam sheet over a hardwood plywood backing board and covered in seamless vinyl upholstery.

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

**HEAD PROTECTION - REAR ACCESS DOORS:** A seamless pad specifically designed to protect the head during egress is required and shall comply with current Federal Specification KKK-A-1822. The pad shall consist of a two-inch-thick foam sheet over a hardwood plywood backing board and covered in seamless vinyl upholstery.

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



## PAINT

**100% PAINT FILM COVERAGE:** All stages of primer and paint shall cover all 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 and doors removed from body. Paint film thickness to be no less than 4.1 mil thickness.

**PAINT SYSTEM TYPE:** The paint shall be Poly-Urethane type electrostatic application process without exception.

An electrostatic paint spray system is a highly efficient technology for the application of paint to specific work pieces. Negatively charged atomized paint particles and a grounded work piece create an electrostatic field that draws the paint particle to the work piece, minimizing over spray.

For this technology, an ionizing electrode, typically located at the paint gun atomizer tip, causes paint particles to pick up additional electrons and become negatively charged. As the coating is deposited on the work piece, the charge dissipates through the ground and returns to the power supply, completing the circuit. The electrostatic field influences the path of the paint particles. Because the charged particles are attracted to the grounded work piece, over spray is significantly reduced. Paint particles that pass a work piece can be attracted to and deposited on the back of the piece. This phenomenon is known as "wrap."

**MECHANICAL ADHESION PROMOTER:** The entire module shall be degreased. Degreaser shall be applied to manufacturers recommendations. The module body is to be inspected for flaws and imperfections, and to assure built to order specifications. All surfaces shall be initial sanded with 180 grit paper and all imperfections repaired.

**CHEMICAL ADHESION PROMOTER:** The module shall be hot-water washed at (140 degrees or greater). Then the aluminum Body shall be treated with Alumiprep 33 acid etching followed by a complete De-ionized body rinse. To ensure all surfaces are cleaned, this step shall be repeated a second time. The entire unit shall be wet coated with Alodine 5700 conversion coating and de ionized water mixed. The module body is baked at 160 degrees to dry.

**PRIMER:** The module shall then have 2 coats of epoxy primer. The unit is then baked at 140-degree metal temperature for one hour. The module body will then undergo any bodywork or filler that is required at transition(s). A third coat of epoxy primer is applied and cured. The module body will then be final sanded prior to Paint color application. Primer shall be sanded with 320 grit paper to assure flat, orange peel free surface.

**TOP COAT (PAINT):** Entire module shall be degreased. Degreaser shall be applied to manufactures recommendations. Two coats of BTLV High Solids color shall be applied.

**CLEAR COAT:** The clear coat shall be manufactured by the same company as the primer and base coat. Two coats of "clear coat" polyurethane shall be applied per the manufacturer's instructions.

**3M POLISHING SYSTEM:** Prior to 100% paint cure, the paint on the ambulance body shall be sanded to 1200 grit and polished flat per 3Ms Perfect-It product program for smooth finish.

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

**CORROSION:** Anti-electrolysis procedures include, but are not limited to the following.

- 1) Ensure all bare substrate is dry and free from contamination.
- 2) If bare substrate is showing signs of corrosion/oxidation, sand and remove. Use 180 grit until area is removed.
- 3) Thoroughly blow off areas to remove sand dust and metal shavings.
- 4) Thoroughly degrease to be pre-primed using the wipe-on, wipe-off method with clean white rags.  
(Use good quality automotive Degreaser)



- 5) Apply Wash primer CR using a brush to all mated surfaces. Allow to flash for 15 minutes at 70 deg Fah. Mix wash primer CR 1:1 with wash-hardener.
- 6) Apply Urethane caulk to all mated surfaces before assembly to reduce the possibility of corrosion.

EXTERIOR FASTENERS: All screw sites require a replaceable nylon insert for the fastener to thread into. This will isolate the dissimilar metals. Each hole shall be treated with an Electrolysis Corrosion Control compound prior to installation of the nylon inserts. All exterior screws shall be stainless steel.

PAINT WARRANTY: The conversion paint shall be warranted to the original owner for a period of 7 years, 70,000 miles. The color shift shall be no greater than Delta E of 4.0 with minimum gloss retention of 60 gloss units at twenty-degree angle. Warranty to include a 36-month Corrosion coverage with no exclusions.

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

UNDERCOATING: The bottoms side of the module shall be undercoated, with an exception to any area affected by exhaust system direct heat. Application standards for the undercoating shall be achieved or exceeded as directed by OEM or governing standards.

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

REFLECTIVE TAPE: The module door frames shall have a three quarter inch (3/4") wide white reflective tape applied to the door frame interior. The tape shall illuminate the outline shape of the door when the door is opened.

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

MAIN BODY COLOR: The main body color shall be oxford white. The paint finish shall be laid onto the body in a flat, orange peel free, mirror like shine on all four sides.

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

REFLECTIVE / PRISMATIC TAPE: The aforementioned center step shall have a bright, conspicuous prismatic, reflective tape strip applied the rearward facing edge of the step. The tape shall have be white in color.

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

ROOF PAINT; Color match to sides, top finish to exceed industry standard of 5 plus mill thickness.

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

DRIP RAILS: A bright drip rail shall be provided over each compartment. Full height compartments are exempt because the perimeter roof rail drip rails will cover these compartments.

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

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

OWNER'S MANUAL: There shall be shipped loose with each completed unit a DVD data file with pertinent information from the build of the vehicle.

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



**AMBULANCE MARKING PACKAGE:** The vehicle shall be supplied with a lettering and "star of life" symbol decal package as described in current Federal specification KKK-A-1822. The "ambulance marking package" is to be shipped loose with the vehicle. The "star of life" symbols shall meet Figure 4 required by KKK-A-1822.

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

**AMBULANCE MARKING PACKAGE - ROOF STAR:** A 32" roof star shall be included as a part of the lettering and "star of life" symbol decal package (as described in the current Federal specification KKK-A-1822).

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

**SAFETY PLACARDS:** There shall be installed in the chassis cab and patient area descriptive placards in durable materials to remind occupants to fasten seatbelts and to refrain from smoking.

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

**FIRE EXTINGUISHER:** One (5) five pound A-B-C type fire extinguisher shall be supplied loose with the vehicle on delivery.

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

**REFLECTOR PACKAGE:** Six reflectors shall be supplied on the outside of the module body. The reflectors shall be located at skirt line level and the area size shall be at least 3.75 square inches. Each side shall have one AMBER forward reflector and one RED rearward reflector. The rear of the body shall have one RED reflector, located just above the diamond plate kick plate.

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

**OXYGEN REGULATOR:** A fixed output medical regulator shall be supplied with the apparatus. The output shall be fixed via a single chamber pressure setting which can produce a 50 psi +/- 5psi at 7.25 LPM. The output of the regulator may vary as the tank pressure lowers or flow rate is changed. The regulator shall have a CGA 540 thread for the bottle and a 9/16- 18 tpi threaded male connector for the input hose to the system.

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

**CONVERSION WARRANTY**

7 Year, 70,000-mile Mechanical & Electrical including Workmanship.

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

7 Year, 70,000-mile Standard Paint Warranty.

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

36 Month Paint Coatings Corrosion Warranty.

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

20 Year Body Structure Warranty.

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