# CITY OF ZION

## FIRE RESCUE DEPARTMENT

# SPECIFICATIONS FOR AN AMBULANCE

**BIDS DUE NO LATER THAN 10 A.M. CST TO ZION CITY HALL ON** January24,2018.

In the event a clarification is requested on the content or context of any part of this specification, the question shall be addressed in email to:

Lieutenant Rocco Campanella

Zion Fire/Rescue Department

Email – rockyc@zion.il.us

(847) 746-4036

(847) 746-4035 fax

When a Bidder requests clarification, an immediate response can be assured. In fairness to all Bidders, a copy of the request and the ZFRD reply will be forwarded to all participating Bidders who have requested specifications from the City Clerk. To ensure that each Bidder has actually received their copy, it would be prudent of the Bidder to contact Lieutenant Campanella at various intervals of their bid preparation to check if there has been any clarification requests.

By signing this document, the Bidder agrees that this Bid is made without any understanding, agreement or connection with any other person, firm or corporations making a bid for the same purpose, and that this bid is in all respects fair and without collusion or fraud.

To insure that this contract is awarded to a Bidder who has the resources to meet the performance and warranty criteria specified herein, the Bidders may not have liens placed on their property, buildings or equipment. This agency most probably will procure credit reports to verify compliance. Bids not meeting this requirement cannot be accepted.

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

DATE: *1-5-18*

*City of Zion* is soliciting competitive, sealed bids from qualified vendors for the purchase of One (1), Type I, Ford F-550 (4 x 4), Configuration A ambulance for *City of Zion, 2828 Sheridan Rd. Zion, IL. 60099. City of Zion* reserves the right to reject any and/or all bids. *City of Zion* also reserves the right to accept the bid most advantageous to *City of Zion.*

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 Ford Qualified Vehicle Modifier (QVM) Program Truck Guidelines.

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:

*City of Zion*
*2828 Sheridan Rd.*
*Zion, IL. 60099*
*Email: rockyc@zion.il.us*

Contact Person: Lt. Rocky Campanella
847.746-4036

**All bids are due by 1-24-18 no later than 10:00am and will publicly be opened at that time.**

Vendor to supply paid trip to factory for two (2) representatives from the Zion FD. If assembly plant is farther than 200 miles from the Zion FD, commercial airfare will be the only considered mode of transportation and all meals and lodging will be paid for by the vendor.

| | Bidder Complies | |
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| | Yes | No |

## 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 it's 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 or email 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

| | Bidder Complies | |
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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.

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 Complies | |
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| | Yes | No |

VENDOR QUALIFICATIONS:

FORD QVM: All Bidders shall be members in good standing of the Ford Motor Company's Qualified Vehicle Modifier Program (QVM). Each bidder shall supply a copy of their valid QVM Certification with their bid package. If for any reason the QVM Certification has been withdrawn or suspended by Ford Motor Company 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 QVM Certification.

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: $5,000
- 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

**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;

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(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.

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.

QUALITY MANAGEMENT SYSTEM REGISTERED; The manufacturer shall have a registration for ISO 9001(TM): 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

| | Bidder Complies | |
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| | 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.

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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.

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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%).

| | Bidder Complies | |
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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.

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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 0 20 - 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 0 23 - 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.

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 vehicle(s) proposed.

Crash worthiness of vehicle 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

| | Bidder Complies | |
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| | Yes | No |

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.

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.

| | Bidder Complies | |
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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 | |
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| | 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 manufactured by Ford Motor Company. The chassis manufacturer shall be the vehicle's point of origin. The chassis shall be supplied by Ford 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 2017 or newer F-550, Regular cab, dual rear wheel, four-wheel drive chassis equipped as follows below.

WHEEL BASE: The wheel base shall be 193.3 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 an "XLT" Trim level with tilt steering wheel, cruise control, power windows and door locks. The front bumper and grill shall be accented with chrome. 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.

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 390 horsepower at 2,800 revolutions per minute and deliver 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.

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

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

TURN DIAMETER; The F-series chassis with 193 inch wheelbase.

| | Bidder Complies | |
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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 Ford QVM Guidelines.

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.

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.

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

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

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

TRANSFER CASE: There shall be an aluminum closed coupled, part-time, 2-speed transfer case provided by the OEM. The case shall feature 3 modes of operation; 2-wheel drive HIGH, 4-wheel drive HIGH, 4-wheel drive LOW. The high range two wheel and four-wheel drive ratio shall be 1.00:1 and the low range shall be 2.72:1. The drive mode shall be manually selected by a rotary type electronic switch on the OEM dash. A 4 x 4 shift indicator shall illuminate on the dash when the transfer case is engaged in 4 x 4. After market or a divorced style transfer case is not acceptable.
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.

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.

ALUMINUM WHEELS: Ford Option Code 64A polished aluminum wheels shall be supplied and installed by the OEM on all four (4) outside wheels.

| | Bidder Complies | |
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| | Yes | No |

CENTERS AND LUG NUT COVERS: All four outside chassis wheel lug nuts and center hub areas shall be covered in polished stainless-steel simulators. The wheel simulator design shall not effect tire and wheel balance when the vehicle is driven between zero and eighty miles per hour.

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

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.

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

- Cloth Headliner
- High trim door panels
- Ford option code 21A high back bucket seats
- Cloth sun visors
- Power Door locks
- Power Windows
- Insulation package

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

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.

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.

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.

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.

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REAR AXLE TYPE AND RATIO: The axle shall be Limited Slip Differential with a 4.10:1 gear ratio. Ford Code XG8.

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.

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.

THROTTLE HIGH IDLE: A program shall be set into the OEM engine control through the cruise control module. The throttle control shall be programmed by the OEM.

ALTERNATOR - CHARGING SYSTEM: Two alternators shall be supplied and installed by the OEM The alternators shall be as supplied by Ford under the 47L/A Ford Ambulance Prep option. Both alternators shall be controlled by the vehicle's on board computer. The combined output of the alternators shall be 377 amps at ideal conditions. 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.

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

CHASSIS VOICE CONTROL SYNCH (FORD ONLY); The chassis manufacturer shall include a FORD SYNCH option which will allow for greater safety of the vehicle driver. The driver shall be able to voice control connect to multiple wireless systems. The driver of the vehicle shall refer to the owners manual for details of operation.

MIRRORS: The chassis shall be outfitted with dual OEM, power adjusted mirror glass, manually telescoping trailer tow black mirrors. The mirrors shall connect to the chassis cab doors at 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. The mirror shall feature heated surfaces for the main mirror and the convex

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spotter mirror. The mirror heads shall incorporate forward facing integrated clearance lamps on the outer edge with minimal halo turn signal functions.

REAR KNEELING SUSPENSION: A Liquid Spring rear hydraulic strut suspension shall be installed in lieu of the standard rear OEM single stage leaf springs. The suspension company shall be QS 9000 and ISO 9001 certified for excellence. The liquid suspension shall be rated at 13,660 pounds GAWR and installed per Liquid Spring Directions. Suspension Installation instructions and drawings shall be followed. All guidelines regarding chassis and axle capacity ratings as published by Ford Motor Corporation shall be adhered to.

MECHANICAL SUSPENSION COMPONENTS: The control arms shall be connected to a replacement front hanger that features upper and lower control arm pivot points and a connection point for a heavy-duty sway bar. Both Liquid Spring struts shall be positioned directly aft of the axle and outboard of frame rails. The designed ride height shall maintain original suspension's drive-line geometry.

TRACKING BAR: The suspension shall utilize a lateral control rod (tracking bar) to maintain side to side axle position related to the chassis frame. Wear shoes, mounted to the sides of the frame rails are not acceptable.

HYDRAULIC 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.

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.

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.

REAR STABILIZER BAR: The rear sway bar shall remain OEM.

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.

KNEELING FEATURE ACTIVATION: The kneeling feature shall activate in any forward or reverse gear. The rear suspension shall also kneel when a momentary rocker switch, located at the rear access doors is depressed. The switch panel shall be recessed by one inch to prevent inadvertent damage or activation.

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VEHICLE EXHAUST TERMINATION POINT: The exhaust system routing shall remain unmodified and the termination point shall remain after the rear axle on the right side.

VACUUM PUMP: There shall be a vacuum pump to activate the Patient Area "Heater Control Valves" when the patient area heater is energized. The electrical layout shall be shown on the custom wiring schematics at the time of delivery.

TIRE VALVE EXTENDERS: One pair of tire valve extenders shall supplied and installed for each inside rear wheel. The tire valve extenders shall permit the user to check tire pressure and fill the inside rear tires without removing the outer tire. The extenders shall have a braided stainless steel outer jacket to resist abrasions and cuts. The filler end shall be supported by a valve bracket.

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## 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.

CREVICE PREPARATION: All skin and extrusion surfaces destine to be mated together, shall be primed with epoxy, etching primer prior to assembly. All over lapping 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.

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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.

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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 over all body paint and finish. Non-fully welded roof sheets to the roof rail extrusions do not meet the intent of this specification and are deems non-compliance to this specification.

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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.

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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

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| | Yes | No |

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 jam 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.

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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 eights (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 eights (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.

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.

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

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.

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.

## COMPARTMENT CONSTRUCTION

MATERIALS: Unless specified otherwise, all exterior compartment walls and backs shall be constructed of .100 polished aluminum diamond plate. 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.

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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.

COMPARTMENT FLOOR CONFIGURATION: This compartment floor shall be a sweep out type floor. The compartment floor shall be flush with the lower door jamb to facilitate compartment floor cleaning. The edge of the compartment floor shall be continuously welded to the lower door jamb. Heat generated from welding shall not distort the straightness or flatness of the jamb or compartment floor. The weld quality must be aesthetically uniform.

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.

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.

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.

BODY DROP: The skirt line of the modular body ahead of the rear wheels shall be 6" lower than 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.

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

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.

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.

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

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.

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

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 88.5" High x 22.125" Wide x 19.5" deep.

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.

COMPARTMENT CONSTRUCTION

MATERIALS: Unless specified otherwise, all exterior compartment walls and backs shall be constructed of .100 polished aluminum diamond plate. 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.

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.

COMPARTMENT DOOR PANEL: The inside door panel of this compartment shall be diamond plate.

COMPARTMENT FINISH: Unless specified otherwise, all exterior compartment walls and backs shall be constructed of .100 polished aluminum diamond plate.

COMPARTMENT FLOOR CONFIGURATION: This compartment floor shall be a sweep out type floor. The compartment floor shall be flush with the lower door jamb to facilitate compartment floor cleaning. The edge of the compartment floor shall be continuously welded to the lower door jamb. Heat generated from welding shall not distort the straightness or flatness of the jamb or compartment floor. The weld quality must be aesthetically uniform.

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| | Yes | No |

COMPARTMENT DOOR: A single, forward hinged, compartment door shall be set for this compartment. The door shall have a single handle and two rotary latches.

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.

COMPARTMENT BACK WALL BUILD OUT: The back wall of the compartment shall be built to reduce the depth of the compartment to 14" deep.

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 49.75" Wide x 19.5" Deep.

COMPARTMENT CONSTRUCTION

MATERIALS: Unless specified otherwise, all exterior compartment walls and backs shall be constructed of .100 polished aluminum diamond plate. 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.

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.

COMPARTMENT DOOR PANEL: The inside door panel of this compartment shall be diamond plate.

COMPARTMENT FINISH; Unless specified otherwise, all exterior compartment walls and backs shall be constructed of .100 polished aluminum diamond plate.

COMPARTMENT FLOOR CONFIGURATION: This compartment floor shall be a sweep out type floor. The compartment floor shall be flush with the lower door jamb to facilitate compartment floor cleaning. The edge of the compartment floor shall be continuously welded to the lower door jamb. Heat generated from welding shall not distort the straightness or flatness of the jamb or compartment floor. The weld quality must be aesthetically uniform.

COMPARTMENT DOORS: A set of double hinged compartment doors shall be set for this compartment. Each door shall have a single handle and two rotary latches.

| | Bidder Complies | |
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| | 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.

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.

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

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 be have semi-rigid, nonconductive 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.

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.

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 be have semi-rigid, nonconductive 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.

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

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

| | Bidder Complies | |
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| | 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 73" High x 33" Wide x 21" deep.

COMPARTMENT CONSTRUCTION

MATERIALS: Unless specified otherwise, all exterior compartment walls and backs shall be constructed of .100 polished aluminum diamond plate. 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.

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.

COMPARTMENT DOOR PANEL: The inside door panel of this compartment shall be diamond plate.

COMPARTMENT FINISH; Unless specified otherwise, all exterior compartment walls and backs shall be constructed of .100 polished aluminum diamond plate.

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.

COMPARTMENT FLOOR CONFIGURATION: This compartment floor shall be a sweep out type floor. The compartment floor shall be flush with the lower door jamb to facilitate compartment floor cleaning. The edge of the compartment floor shall be continuously welded to the lower door jamb. Heat generated from welding shall not distort the straightness or flatness of the jamb or compartment floor. The weld quality must be aesthetically uniform.

COMPARTMENT DOORS OPTION: A set of double hinged compartment doors shall be set for this special request compartment. Each door shall have a single handle and two rotary latches. Doors shall comply with aforementioned construction techniques.

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 tracking, infinitely adjustable, aluminum extruded, heavy duty shelf track. Incrementally adjustable, non-aluminum shelf track is not acceptable.

| | Bidder Complies | |
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| | 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.

VERTICAL DIVIDER: Located in the "M_" compartment shall be NE semi-rigid fixed divider shall be formed of 5052-H32 aluminum sheet. The divider shall be full height of the compartment by fourteen inches (14") deep; measured from the back of the compartment. The exposed edge shall be covered with automotive edge trim.

RETAINER STRAPS: There shall be a pair of two-inch-wide webbed strap shall be supplied in the aforementioned compartment. The strap shall be designed and positioned to prevent backboards and other related items, that may have shifted against the door during transit, from falling out of the compartment when the door is opened. The strap shall employ a metal buckle system with a push button release. The strap be fastened to the compartment walls with a two-inch footman's loop. Plastic "Luggage" type buckles and smaller webbing size is not acceptable. Attachment screws shall not pierce the strap webbing.

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.

SCBA BRACKET: Will be provided and installed at pre-delivery inspection

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 19.5" Deep.

COMPARTMENT CONSTRUCTION

MATERIALS: Unless specified otherwise, all exterior compartment walls and backs shall be constructed of .100 polished aluminum diamond plate. 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.

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.

COMPARTMENT DOOR PANEL: The inside door panel of this compartment shall be diamond plate.

| | Bidder Complies | |
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| | Yes | No |

COMPARTMENT FINISH; Unless specified otherwise, all exterior compartment walls and backs shall be constructed of .100 polished aluminum diamond plate.

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.

COMPARTMENT FLOOR CONFIGURATION: This compartment floor shall be a sweep out type floor. The compartment floor shall be flush with the lower door jamb to facilitate compartment floor cleaning. The edge of the compartment floor shall be continuously welded to the lower door jamb. Heat generated from welding shall not distort the straightness or flatness of the jamb or compartment floor. The weld quality must be aesthetically uniform.

COMPARTMENT DOOR: A single, forward hinged, compartment door shall be set for this compartment. The door shall have a single handle and two rotary latches.

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.

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.

ADJUSTABLE DIVIDERS: One semi-rigid adjustable divider shall be formed of 5052-H32 aluminum sheet. The 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. 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 aforementioned compartment.

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

RETAINER STRAP: One two-inch-wide webbed restraint strap shall be supplied in the compartment. The strap shall employ a metal buckle system with a push button release. The strap is to be fastened to the compartment walls with a two-inch footman's loop. The fastener is not to be fastened through the webbing material.

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FOOTMAN LOOP: There shall be a 2" footman loops located back from the jamb opening on the compartment.

COMPARTMENT LIGHT: (1) One light shall be mounted in the ceiling of the "M-5" compartment. The light shall be surface mount and shall be LED.

SCBA BRACKET: Will be provided and installed at pre-delivery inspection

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.

COMPARTMENT DOOR: A single, forward hinged, compartment door shall be set for this compartment. The door shall have a single handle and one rotary latch.

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.

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.

DRIVE SHAFT LOOP: There shall be a loop of metal secured to the bottom of the chassis to protect the front of the drive shaft from hitting the ground should there be a failure of the front "U"-joint.

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.

OVER FILL PROTECTION: The paint, located under the fuel fill housing shall be protected with .100 stainless steel. The plate shall have a 30 degree offset bend in order to deflect any spill.

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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.

DEF OVER FILL PROTECTION: The paint, located under the fuel fill housing shall be protected with .100 stainless steel. The plate shall have a 30 degree offset bend in order to deflect any spill.

DOOR HANDLE ALIGNMENT (streetside): Compartment door handles for compartment M-1, & M-3 will be the same height from the bottom of the body.

DOOR HANDLE ALIGNMENT (curbside): Compartment door handles for compartment M-3, M-7 and the CSE door will be the same height from the bottom of the body.

## BODY 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.

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").

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 red/white reflexite reflective strip across the flip up step. A

| | Bidder Complies | |
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| | Yes | No |

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.

FENDERS: The rear fender shall be bright aluminum. 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.

SKIRT RAILS: The entire skirt-line of the body, forward and aft on the rear wheels shall have formed .188" diamond plate 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.

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.

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.

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

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

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.

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.

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.

RUNNING BOARDS: Running boards (An auxiliary step) shall be constructed of .100 diamond plate with an aggressive traction "Grip strut" insert. The aggressive traction shall be

| | Bidder Complies | |
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| | Yes | No |

part of the running board and not a welded in section. One running board shall be provided on each side of the cab. Built in diamond plate mud flaps shall keep front tire splash and road grime off the step.

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.

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.

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.

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.

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 clear within the light to act as additional warning lights.

FRONT ICC 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.

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 | |
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| | Yes | No |

REAR ICC 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.

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

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.

STOP/TAIL LIGHT: The stop/tail light fixtures on the rear of the body shall be Whelen Brand series M6, Light Emitting Diode to operate as both tail and stop modes and shall be red when illuminated.

TURN SIGNAL LIGHT: The turn signal light fixtures on the rear of the body shall be Whelen Brand series M6, Light Emitting Diode to operate as left and right turn signal lights and shall be amber arrow when illuminated.

BACK UP SIGNAL LIGHT: The backup signal light fixtures on the rear of the body shall be Whelen Brand series M6, Light Emitting Diode to operate as left and right back up signal lights and shall be clear when illuminated.

LIGHT HEAD FLANGE: Whelen bright, chrome (Flange), on the above "M" Series light head(s).

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.

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

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 LED-M9 series. The scene light group shall meet or exceed the present revision of the Federal specification KKK-A-1822.

BRIGHT CHROME-LIKE FLANGES: The M9 scene light group shall each have bright chrome trim flanges.

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.

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| | Yes | No |

RIGHT SCENE LIGHTS: Two scene lights shall be provided on the right side of the module. The lights shall be Whelen LED-M9 series. The scene light group shall meet or exceed current revision of the Federal specification KKK-A-1822.

BRIGHT CHROME-LIKE FLANGES: The M9 scene light group shall each have bright chrome trim flanges.

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 LED-M9 series. The scene light group shall meet or exceed current Federal specification KKK-A-1822.

BRIGHT CHROME-LIKE FLANGES: The M9 scene light group shall each have bright chrome trim flanges.

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.

ADDITIONAL FLOOD LIGHT ACTIVATION: The rearward scene lights shall come on with when the vehicle is placed in reverse in addition to the rear flood/load lights.

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

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.

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.

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| | Yes | No |

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

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.

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.

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.

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.

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.

LINER PANELS: The patient cabin head liner substrate material shall be one quarter inch thick, composite metal with powder coated finish 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.

RED/WHITE CABIN DOME LIGHT: The patient cabin shall have a 8" LED Whelen model 80CREHCR dome light in the ceiling. The light will be in lieu of a standard ceiling dome light. The light will have the ability to change from white LED to red LED with switch in A/A. The light to be replaced shall be determined prior to production.

PATIENT CABIN DOME LIGHTS: The patient cabin shall have ten dual intensity, Kinequip LED dome lights in the ceiling. The domes centers shall be aligned along two, five

| | Bidder Complies | |
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| | Yes | No |

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.

15 MINUTE TIMER: A variable 0 to 15 minute, spring wound, mechanical timer switch shall provide temporary illumination of the patient cabin for check out purposes. The switch input shall be wired directly to the vehicle batteries. The switch shall be located on the curbside wall, by the C/S access doors over the squad bench lid. The timer circuit shall comply with the latest revision of KKK-A-1822.

LIGHTS POWERED BY TIMER: The aforementioned timer shall power the street side (Left side) bank of dome lights on the high intensity setting. The duration of the light shall vary with the setting of the timer.

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.

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

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.

LOCATION; Located of the Secondary patient, in the close proximity to the Knee/Waist area of the patient.

IV HOOK No 3: 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.

LOCATION; Located of the Primary patient, in the close proximity to the Knee/Waist area of the patient.

IV HOOK No 4: 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.

LOCATION; Located of the Secondary patient, in the close proximity to the Knee/Waist area of the patient.

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

| | Bidder Complies | |
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| | Yes | No |

TIG welded to the main rail. The rail shall be recessed in an ABS pan 1.5", located curbside of center pad.

STREET SIDE OVER HEAD ASSIST RAIL: This rail shall be naturally accessible to assist working attendants in maintaining their balance. The rail shall exceed federal specification KKK-A-1822 3.15.2C. The rail shall be 1 ¼ diameter, 100% stainless steel and 72 inches long. All rail fittings shall be TIG welded to the main rail. The rail shall be located over the primary patient. Grab rails that utilize separate, set screw rail fittings are not reliable and not acceptable.

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.

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.

ADDITIONAL WARNING LIGHT: There shall be installed a Whelen M9 size White LED light with Clear lens and programmable flash functions

LIGHT HEAD FLANGE: Whelen bright, chrome (Flange), on the above "M" Series light head(s).

WARNING LIGHT: There shall be installed a Whelen M9 size Blue LED light with Clear lens and programmable flash functions.
LIGHT HEAD FLANGE: Whelen bright, chrome (Flange), on the above "M" Series light head(s).

The above LED light(s) shall be programmable to flash without an external flasher.

ALTERNATIVE LIGHTBAR SWITCHING: The switching of the lighting package that makes up the alternative light bar package shall be through the Primary/Secondary switching system. All red lights shall be through the primary side of the switch and any clear lighting (if optioned) shall be through the secondary side.

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

## PUBLIC ADDRESS (Visual) WARNING LIGHTS

WARNING LIGHT FLASHER: There is not to be an external flasher unit. The LED warning lights shall each flash independently of each other. There shall be no preset flash pattern and it will not comply with the present revision of KKK-A-1822. This agency chooses to have this flash pattern as we feel that it is as effective as the required flash pattern incorporated within the verbiage of the present revision of KKK-A-1822.

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.

OPTICOM: The ambulance shall include a Tomar Opticom unit connected to a selected light and controlled with a switch in the console with an auto off if vehicle is taken out of drive gear.

GRILLE LIGHTS: There shall be four warning lights installed on the chassis front grille in a location that provides maximum direct warning while blocking minimal air flow or none if possible.
WARNING LIGHT HOUSINGS: Deep chrome housings will be used for the warning lights to provide additional protection and a distinctive appearance. The housings will mount on the large bar of the 2017 and newer Ford Chrome grille towards the outer edge while not blocking air flow.

WARNING LIGHTS: There shall be two warning lights installed, one Whelen 5TIR6 with Red LED diodes and one Whelen 5TIR6 with Blue LED diodes. The lights feature built in programmable flashers.

WARNING LIGHTS: There shall be four warning lights installed, two Whelen 5TIR6 with Red LED diodes and two Whelen 5TIR6 with Blue LED diodes. The lights will be made to flash in an "X" pattern

INTERSECTION LIGHTS:

LIGHT HEADS: A pair of Whelen Engineering, M4 Series LED Light heads shall be supplied in the aforementioned location. The light head shall feature Light Emitting Diodes. The light head shall comply with all photometric, chromaticity and physical requirements set fourth in the current revision of Federal specification KKK. The lens shall feature a smooth outer surface designed to filter light frequency (Color) evenly over the area of the entire light head. A certificate of Compliance shall be made available to the agency upon request.

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

LIGHT HEAD HOUSING: The intersection light shall have a contoured housing to fit the OEM fender.

WARNING LIGHT: There shall be a Whelen M2 warning light installed with Split colors Red and White Diodes. The light shall feature dual built in flashers that are programmable.

Opticom Location: Built into STROBE Center Front Warning Light position.

OUTER FRONT BODY LIGHTS:

LIGHT HEADS: A pair of Whelen Engineering, M9 Series LED Light heads shall be supplied in the aforementioned location. The light head shall feature Light Emitting Diodes. The light head shall comply with all photometric, chromaticity and physical requirements set fourth in the current revision of Federal specification KKK. The lens shall feature a smooth outer surface designed to filter light frequency (Color) evenly over the area of the entire light head. A certificate of Compliance shall be made available to the agency upon request.

LIGHT HEAD FLANGE: Whelen bright, chrome (Flange), on the above "M" Series light head(s).

WARNING LIGHT: There shall be installed a Whelen M9 size Red LED light with Clear lens and programmable flash functions

The above LED light(s) shall be programmable to flash without an external flasher.

UPPER SIDE BODY LIGHTS:

LIGHT HEADS: Two pair of Whelen Engineering, M9 Series LED Light heads shall be supplied in the aforementioned location. The light head shall feature Light Emitting Diodes. The light head shall comply with all photometric, chromaticity and physical requirements set fourth in the current revision of Federal specification KKK. The lens shall feature a smooth outer surface designed to filter light frequency (Color) evenly over the area of the entire light head. A certificate of Compliance shall be made available to the agency upon request.

LIGHT HEAD FLANGE: Whelen bright, chrome (Flange), on the above "M" Series light head(s).

WARNING LIGHT: There shall be installed a Whelen M9 size Red LED light with Clear lens and programmable flash functions

The above LED light(s) shall be programmable to flash without an external flasher.

REAR INTERSECTION LIGHTS:

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

LIGHT HEADS: A pair of Whelen Engineering, M7 Series LED Light heads shall be supplied in the aforementioned location. The light head shall feature Light Emitting Diodes. The light head shall comply with all photometric, chromaticity and physical requirements set fourth in the current revision of Federal specification KKK. The lens shall feature a smooth outer surface designed to filter light frequency (Color) evenly over the area of the entire light head. A certificate of Compliance shall be made available to the agency upon request.

LIGHT HEAD FLANGE: Whelen bright, chrome (Flange), on the above "M" Series light head(s).

WARNING LIGHT: There shall be installed a Whelen M7 size split Red/ Blue LED light with Clear lens.

REAR OUTER BODY LIGHTS:

LIGHT HEADS: A pair of Whelen Engineering, M9 Series LED Light heads shall be supplied in the aforementioned location. The light head shall feature Light Emitting Diodes. The light head shall comply with all photometric, chromaticity and physical requirements set fourth in the current revision of Federal specification KKK. The lens shall feature a smooth outer surface designed to filter light frequency (Color) evenly over the area of the entire light head. A certificate of Compliance shall be made available to the agency upon request.

LIGHT HEAD FLANGE: Whelen bright, chrome (Flange), on the above "M" Series light head(s).
The LED (Light Emitting Diode) shall be split red and amber in color.

WARNING LIGHT: There shall be installed a Whelen M9 size Red LED light with Clear lens and programmable flash functions

The above LED light(s) shall be programmable to flash without an external flasher.

WARNING LIGHT: There shall be installed a Whelen M9 size Blue LED light with Clear lens and programmable flash functions

The above LED light(s) shall be programmable to flash without an external flasher.

ADDITIONAL REAR BODY LIGHTS:

LIGHT HEADS: A pair of Whelen Engineering, M9 Series LED Light heads shall be supplied in the aforementioned location.

LIGHT HEAD FLANGE: Whelen bright, chrome (Flange), on the above "M" Series light head(s).

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

LOCATION: On the rear of the module, aligned with each upper window in the access doors. The light shall flash through the window when the doors are opened.
The LED (Light Emitting Diode) shall be split red and amber in color.

WARNING LIGHT: There shall be installed a Whelen M9 size Red LED light with Clear lens and programmable flash functions

The above LED light(s) shall be programmable to flash without an external flasher.

WARNING LIGHT: There shall be installed a Whelen M9 size Blue LED light with Clear lens and programmable flash functions

The above LED light(s) shall be programmable to flash without an external flasher.

CENTER REAR BODY LIGHTS:

LIGHT HEADS: A Whelen Engineering, M6 Series LED Light heads shall be supplied in the aforementioned location. The light head shall feature Light Emitting Diodes. The light head shall comply with all photometric, chromaticity and physical requirements set fourth in the current revision of Federal specification KKK. The lens shall feature a smooth outer surface designed to filter light frequency (Color) evenly over the area of the entire light head. A certificate of Compliance shall be made available to the agency upon request.

LIGHT HEAD FLANGE: Whelen bright, chrome (Flange), on the above "M" Series light head(s).

Light: Whelen M6, LED, AMBER LED/CLEAR Lens, Programmable

The above LED light(s) shall be programmable to flash without an external flasher.

OVERHEAD CAB DOME LIGHT: A pair of 12 Volt Kinequip LED lights shall be installed in the cab headliner, one over driver and one passenger side to illuminate each side of the cab. The switch on each light shall switch the light from Off to Red and Off to Clear.
Customer Supplied Part(s) : Yes See account

RECHARGEABLE FLASH LIGHTS: Two (2) Stream Light "Fire Vulcan" rechargeable flash lights shall be supplied and installed by the ambulance manufacturer. The light shall have a polymer case, unbreakable lens and a run time of one and one half hours (Between charges). The light shall charge back to 100% in twelve to fourteen hours.

FLASH LIGHT LOCATION(S): The aforementioned flash lights shall be located in the M-3 & M-5 compartments.

FLASH LIGHT POWER: The aforementioned flash light shall be Constant Hot.

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

SPOT LIGHT: A 200,000 candle power, Go light model GL-20214 with LED optics searchlight with a permanent mount remote control ON/OFF joystick control shall be provided in the cab. The control shall be located in easy reach of both driver and passenger.

SPOT LIGHT MOUNT: The light shall be mounted on the cab roof and be black in color.

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.

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.

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 effected by this switch per Fords Qualified Vehicle Modifiers program, bulletin No 63. 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.

AUTO BATTERY SWITCH SHUT DOWN: The main conversion power shall automatically shut down five minutes after the ignition switch is turned to the OFF position. This will function shall save battery power should the conversion switch be left on during inactive time.

POWER MODULE DOOR LOCKS: Each compartment and/or entry doors listed below shall Lock or Unlock with a single depression of a momentary switch. Each door shall be fitted with a bidirectional, momentary electric solenoid designed to operate a mechanical rod in a linear fashion. The rod shall mechanically interface with the door lock mechanism inside the door. All rod connections shall be designed for high cycle operation without mechanical disconnection. The battery compartment shall NOT have the power lock/unlock feature. This compartment shall remain key operated.

DOOR LOCK SWITCH: The aforementioned door lock(s), shall be wired to activate with the OEM cab door locks and their switches in the cab.

OEM KEY FOB OPTION: The aforementioned door lock(s), shall be wired to activate with the OEM cab door locks and their switches in the cab as well as the OEM remote key fob activator.

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

DOOR LOCK SWITCHES: The module entry doors shall have internal integrated electric door lock activation switches.
ONLY the following doors shall have power door locks:

POWER DOOR LOCK (Rear Module Entry); There shall be installed an electric solenoid powered actuator for the module door lock.

POWER DOOR LOCK (Curbside Entry Door); There shall be installed an electric solenoid powered actuator for the module entry door lock.

HIDDEN DOOR LOCK SWITCH: A weather proof momentary switch shall be installed, concealed from view. Installation of Remote Door Lock Switch feature may increase likelihood of unauthorized entry into vehicle. By checking this option, purchaser further agrees to hold AEV or chassis manufacturer harmless for any loss of vehicle or contents caused by unlawful access.

LOCATION; The switch shall be located in the OEM grille area.

CAMERA SYSTEM: The vehicle shall include a single camera backup monitoring system. The system shall include, but not limited to a 5" color monitor that is mounted within clear view of the driver, but not to obstruct view out the front windshield at eye level. The monitor shall be connected to a camera mounted on the rear of ambulance body to allow the driver to view as they are backing up. Unless otherwise specified, the camera shall be mounted over the rear doors as close to the centerline of the vehicle a possible. There shall be a second camera mounted on the module interior. The system shall include all the necessary cables connect the system together with power as needed. The monitor shall automatically be tied in so that when the vehicle is placed in reverse, it will automatically illuminate the monitor and through the monitor controls shall allow for the monitor to be illuminated when the vehicle is in any gear.

Monitor: mount on arm attached to Ceiling

Camera 1
View Location - Backup, Module rear

Camera 2
Camera view location - Module interior patient camera - grab rail recess

| | 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.

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).

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.

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.

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.

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 | |
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| | 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.

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.

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.

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

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.

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.

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.

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

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.

DOOR/COMPARTMENT AJAR BUZZER: In addition to the standard door and compartment ajar lights, there shall be a buzzer to be installed in the cab console to activate at the same time the lights flash.

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.

AUXILIARY CAB CONSOLE: A ergonomically designed extension console shall be contour matched to the Main ambulance conversion console. The console shall be a tapered design with a fourteen and one half inch width at the front of the console and a twelve inch width at the rear of the console. The height shall not exceed the height of the engine cover console measured at the rear. The length of the console, measured at the center, shall be at least twenty-one inches. Design of console will be determined by the dept. prior to build.

DRINK HOLDERS: The aforementioned extension console shall feature two drink holders, large enough to accommodate 44 ounce paper cups. The drink holders shall be recessed into the console with one piece, self-rimming trim rings. The console finish and the drink hole recessed areas shall be water proof, due to cup condensation.

The Drink Holder shall be located at the Front of the Add On Console.

NOTE BOOK SLOT: The aforementioned extension console shall feature a four inch by full width slot specifically designed to hold note books and/or clipboards. The inside finish of the slot shall be of the same material as the outside laminate. The slot shall be located in the rearward most end of the extension console.

CAB ARMRESTS: A permanent mounted padded armrest shall be bolted to the driver's and passenger's side of the cab center console. .
Customer Radio: Space for Customer installed Radio Heads

GLOVE STORAGE: There shall be glove storage at the rear of the add on console as part of the add on console. It shall be designed to hold (3) three boxes of gloves standing on end for easy access.

| | 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.

BACK UP ALARM: The apparatus shall include a 97 to 107 decibel back up alarm, activated by shifting into reverse.
The apparatus back up alarm shall not include any type cut off device.

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.

BATTERY CHARGER: The ambulance chassis batteries shall be wired into an onboard Kussmaul Auto Charge 1200 Battery Charger system through the shoreline power. When the vehicle has the ability to be connected to 125vac household current through the shoreline that is specified within these specifications, the Kussmaul Auto Charge 1200 shall properly charge and condition the chassis batteries so that they will maintain the voltage and amperage required to operate the ambulance conversion properly.

BATTERY CHARGER LOCATION: The aforementioned battery charger shall be installed in the left front middle compartment.

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

POWER SOURCE FOR PORTABLE EQUIPMENT No 1: Positive and Negative polarity fourteen gauge wires shall be supplied and installed for subsequent storage of portable equipment. The wires shall have 36" tails and be barreled off and protected by a ten (10) ampere automatic reset circuit breaker.

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

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.

125 VAC to 12 VDC CONVERTER/BATTERY CHARGER No 1: A IOTA Engineering, LLC, Model DLS-30 Converter with a 30 ampere output capacity shall be supplied and installed. The device shall convert a 125 Volt, 60 Hertz Alternating current input into 13.4 to 13.6 Volt Direct current. The device shall provide clean, constant D.C. Power. When

| | Bidder Complies | |
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| | Yes | No |

specified below this device shall be capable of serving as a battery charger that charges up to it's full output capacity and tapers back the output to a maintenance mode depending upon the need of the batteries.

This DLS series battery charger/power supply shall be designed with high quality components that have life span ratings of up to ten years of continuous use. This device shall feature self protection features including:

1) AC Input Protection: protects against damaging spikes (up to 190 Volts) AC That may come from the line or generator.
2) Reverse Battery Polarity Protection: protects against incorrect wiring hook up with fuses that can be easily replaced.
3) Brown Out Input Protection: protects against input spikes created by temporary or intermittent loss of input power.
4) Over Current Protection: protects against supplying too much output current
5) Over Temperature Protection: protects against thermal damage with a unique proportional fan control circuit that turns on a whisper quiet when the unit reaches 35 degrees Fahrenheit (35 degrees Celsius).

Warranty: The device shall be covered by the manufacturer for a period of two years against defects in materials or workmanship from the date of retail delivery.

An alternate charger / Converter may be supplied provided the alternate is equal in function, warranty and the alternate device has been approved by the agency prior to production.

CONVERTER TO POWER: The aforementioned converter/charger shall power the Portable Equipment Pre-wire within these specifications when the shoreline is connected and the aforementioned converter/charger has 110vac power.

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 | |
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| | 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

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

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

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.

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

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

POWER SOURCE FOR COMMUNICATION RADIO(S) No 3: 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.

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

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

POWER SOURCE FOR COMMUNICATION RADIO(S) No 4: 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 aforementioned power provision shall be wired directly to the main vehicle batteries.<br><br>LOCATION: The aforementioned power source shall be located in the left front middle compartment.<br><br>POWER SOURCE FOR COMMUNICATION RADIO(S) No 5: 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.<br><br>POWER SOURCE: The aforementioned power provision shall be wired directly to the main vehicle batteries.<br><br>LOCATION: The aforementioned power source shall be located in the left front middle compartment.<br><br>BUSS BAR: A combination bus bar shall be installed for the auxiliary electrical equipment. This bus bar combines negative and positive buses on one block. The block features 20 studs and 5 gangs along with a clear removable polycarbonate cover that snaps over the bus. the maximum voltage shall be 48 volt DC at 150 amp. The bux material shall be tin plated copper.<br><br>LOCATION: In the front console and its polarity will be switched hot.<br><br>BUSS BAR: A combination bus bar shall be installed for the auxiliary electrical equipment. This bus bar combines negative and positive buses on one block. The block features 20 studs and 5 gangs along with a clear removable polycarbonate cover that snaps over the bus. the maximum voltage shall be 48 volt DC at 150 amp. The bux material shall be tin plated copper.<br><br>LOCATION: In the front console and its polarity will be constant hot.<br><br>BUSS BAR: A combination bus bar shall be installed for the auxiliary electrical equipment. This bus bar combines negative and positive buses on one block. The block features 20 studs and 5 gangs along with a clear removable polycarbonate cover that snaps over the bus. the maximum voltage shall be 48 volt DC at 150 amp. The bux material shall be tin plated copper.<br><br>LOCATION: In the A/A and its polarity will be switched hot. | | |

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

BUSS BAR: A combination bus bar shall be installed for the auxiliary electrical equipment. This bus bar combines negative and positive buses on one block. The block features 20 studs and 5 gangs along with a clear removable polycarbonate cover that snaps over the bus. the maximum voltage shall be 48 volt DC at 150 amp. The bux material shall be tin plated copper.

LOCATION: In the A/A and its polarity will be constant hot.

## ANTENNA LEADS

ANTENNA BASE #1: The antenna base shall be a series KE-794 with a integrated cable to terminate where the customer decides at the pre-construction meeting.

TERMINATION POINT ANTENNA #1: In the front radio console

ANTENNA BASE: The antenna base shall be a series K-94 with a integrated cable to terminate lined up with the edge of the curbside entry door, centered side to side as near as possible.

TERMINATION POINT ANTENNA #2: Behind the A/A

ANTENNA BASE: The antenna base shall be a series K-94 with a integrated cable to terminate where the customer decides at the pre-construction meeting.

TERMINATION POINT ANTENNA #3: Behind the A/A

ANTENNA BASE: The antenna base shall be customer supplied GPS antenna with a integrated cable to terminate where the customer decides at the pre-construction meeting.

TERMINATION POINT ANTENNA #4: Behind the A/A

ORIGINATION POINT #2: The Coaxial cable shall originate on the module roof. The port is located approximately 24 inches back rearward of roof port #1.

PORT PLATE COVER(S): There shall be a stainless steel square plate secured the ceiling panel, just under the location where the coax termination point is between the ceiling and the roof. This will give easy access to the coax for the radio installer after delivery from the factory.

| | Bidder Complies | |
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| | Yes | No |

ORIGINATION POINT 3: The Coaxial cable shall originate on the module roof. The port location shall be centered side to side and is located approximately 24 inches back rearward of roof port #2.

PORT PLATE COVER (S): There shall be a stainless steel square plate secured the ceiling panel, just under the location where the coax termination point is between the ceiling and the roof. This will give easy access to the coax for the radio installer after delivery from the factory.

ORIGINATION POINT: The Coaxial cable shall originate on the cab roof.

## 125V SHORE LINE AND OUTLETS

PRIMARY SHORE LINE INLET: A 125 volt, twenty amp (20A) Straight blade (NEMA 5-20R), shore line inlet shall be provided on the module left, positioned behind the left front compartment and above the left front middle compartment. This inlet shall supply power to all 125 volt outlets, and engine block heater. 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.

SHORELINE INDICATOR LIGHT: There shall be a red indicator light to power to the shoreline system within the ambulance body. The light shall be an LED 130v light fixture that is shock and vibration proof. The light fixture shall have a 100,000 hour life for long lasting service in the field. Being LED technology, the fixture shall have a very low heat generation. The LED indicator light fixture shall be located above the shoreline inlet.

## 125 VAC OUTLETS

DUAL USB & 125V POWER COMBO OUTLET: There shall be an 125volt outlet combo with a dual USB charging size provided in the designated area. The outlet will be wired to portable equipment hot to prevent battery drainage. The outlet features two (2) USB style ports, with up to 3 amps maximum output which would allow for two devices to charge simultaneous. The outlet features a red LED indicator when power is supplied.

OUTLET LOCATION: This 125 Volt outlet shall be located in the patient cabin's, main "Action Area", with location as shown on the approval drawings.

| | Bidder Complies | |
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| | Yes | No |

125 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.

INTERIOR 12 Volt Direct Current (DC) OUTLETS:

12 VOLT OUTLET No 1: This outlet shall be a, 12 volt, direct current, 20 Ampere, automotive "cigar" lighter size commercial outlet. This outlet 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.

OUTLET LOCATION: This 12 Volt outlet shall be located in the patient cabin's, main "Action Area", on the back wall.

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

12 VOLT OUTLET No 3: This outlet shall be wired the same as outlet #1.

OUTLET LOCATION: This 12 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.

POWER SOURCE: The input for the aforementioned outlet shall be wired directly to the vehicle batteries. A second Vanner Model 5275 medical isolator shall be supplied in the circuit.

12 VOLT OUTLET No 4: This outlet shall be wired the same as outlet #1..

OUTLET LOCATION: This outlet shall be located in the passenger's side of the cab console.

USB OUTLET: A Dual USB outlet will be provided in the console at a location pre-determined prior to delivery.

POWER SOURCE: The input for the outlet shall be wired exactly like outlet Number One.

SIREN; There shall be installed a Federal PA 300 012 MSC siren in the ambulance front location as described in the work order and approved by the agency. The features of the Siren shall be the most current available from the siren vendor.

| | Bidder Complies | |
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| | Yes | No |

SIREN SPEAKERS: Cast Products model No SA4327-1-AEV siren speakers shall be supplied and installed through the front bumper. Each speaker shall have a 100 watt driver and shall emit from the front OEM bumper. The horn shall feature a bumper contour matched bezel that provides a mounting rim large enough for four counter sink fastener holes. The ambulance manufacture shall use four (4) stainless steel, #2 Phillips oval head 1/4-20 x 2" machine screws with stainless steel nylon type locking nuts, stainless steel split lock washer and flat washers to fasten each speaker to the bumper. The siren and speakers shall meet or exceed all performance criteria set fourth in Federal specification KKK-A-1822D 3.14.6. For any non similar metal surfaces a corrosion inhibitor compound prior to final installation of the speakers.

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.

AIR HORN SYSTEM: The apparatus shall be supplied with an authoritative sounding air horn system that is loud enough to overwhelm almost every usual audible distraction. The air horns shall, when enabled, emit a loud (138 decibel) signal with tremendous power for the duration of the users' depression of the Activation switch. The system shall contain two horns of UNEQUAL length to cover a wider frequency range.

AIR HORN ACTIVATION: The air horns shall be activated through a twelve volt solenoid valve. The solenoid valve shall feature an orifice size large enough to allow 20 CFM of air volume to pass through at fifty pounds per square inch of pressure. The solenoid valve shall be activated by a momentary switch. The solenoid valve shall automatically shut off when the switch is released. Activation will be through two (2) separate switches on either side of the console.

AIR HORN SUPPLY TANK: There shall be a air horn supply tank to store the air that is generated by the compressor to supply the specified horns. This tank that shall be determined by engineering and the air horn manufacturer shall be secured to the chassis frame rails.

AIR HORN ACTIVATION REQUIREMENTS: The Module Master switch shall be activated for the air horns to be active.

COMPRESSOR FOR AIR HORNS: A Buell Model No 6540 maintenance free, Oil-less Air compressor shall be supplied and installed. This intermittent duty (6 minutes ON, 25 minutes OFF) compressor shall be dedicated for the air horn use only. The compressor shall generate 1.15 cubic feet per minute (CFM) of air volume at zero pounds per square inch and shall have a compression capacity of at least 125 pounds per square inch. The compressor shall run and stop automatically with a pressure switch that is set to come on at ninety five (95) pounds per square inch and SHUT OFF at One hundred twenty five (125) pounds per square inch. The

| | Bidder Complies | |
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| | Yes | No |

compressor inlet port shall be filtered. The compressor shall supply compressed air to a pressure vessel listed below. The pressure vessel shall not exceed 3.0 gallons (693 cubic inches) of volume. Amperage draw shall never exceed 18 amperes at 12.0 volts, even at start up.

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

The specified air horn compressor shall be located in the M2 compartment.

AIR HORN LOCATION: The air horn trumpets shall be located under the front OEM cab both attached to a bracket under the passenger area.

LEFT AIR HORN: The left air horn shall be a Buell-Strombos model No 1061. The horn shall feature all brass construction, hand spun brass bell, a stainless steel diaphragm and heavily chrome plated exterior finish. The horn shall emit 140 decibels at one meter with a frequency of four hundred ninety three (493) Hertz.

RIGHT AIR HORN: The left air horn shall be a Buell-Strombos model No 1062. The horn shall feature all brass construction, hand spun brass bell, a stainless steel diaphragm and heavily chrome plated exterior finish. The horn shall emit 140 decibels at one meter with a frequency of three hundred ninety six (396) Hertz.

MICA COLORS: The mica color selection shall be two tone. The upper two thirds of the cabinetry shall be Light Gray with a Matte finish. The lower third of the cabinetry shall be genuine stainless steel with a brushed finish. The parting line between colors shall be straight, tight and clean. Mica edge shall be router clean, back filed and dry fitted prior to final lamination to the cabinet face. Seam quality showing evidence of using the "Factory Edge" shall be rejected. A sample of the subject mica color and stainless steel finish shall be supplied at the post award conference.

STAINLESS STEEL APPLICATION: The lower section of the squad bench face under the lid shall be applied with the stainless steel laminate as well as the same height on the rear filler panel between the squad bench and the rear doors.

STAINLESS STEEL APPLICATION: The lower section of the wall cabinet face at approximately the same height as the attendant seat cushion.

LEXAN™ COLOR: The LEXAN™ throughout the vehicle shall be transparent with a gray medium tint. All doors shall be at least three sixteenths of one inch thick (3/16"), shatter proof and scratch resistant. The edges of the door shall be worked and burned smooth. The material shall be flexible enough to be cold formed (Bent) at ninety degrees, without fracturing the material.

HANDLES, LEXAN WINDOW DOORS: Full height, anodized aluminum, extruded drive on handles shall be supplied on each 3/16" door. The handle shall wrap around the leading

| | Bidder Complies | |
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| | Yes | No |

edge of each door and mount with one way angular, blind mounting teeth designed to be driven on.

Attendant Seat EVS 1880 10 degree Back 4pt Seat Belt with Child seat 4pt

ATTENDANT SEAT: There shall be a high back captain's seat mounted in the patient area. The seat shall have an integrated child safety seat with a pull down backrest and concealed 4-point child restraint. The seat shall be mounted per the requirements in the latest revision of KKK-A-1822. The seatbelt on the main part of the seat shall be an integrated, 4-point that is supplied and tested by the seat manufacturer as a complete package. The color of the seat shall be Concrete.

SEAT BASE: There shall be a powder coated metal seat that is tested to be utilized with the attendant seat or integrated Child Safety 4-point harness that is hidden behind the removable back pad. 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.

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.

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.

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

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 | |
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| | 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 constrains 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.

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.

PLASTIC VENT: A fifteen square inch free air flow ventilation hole he 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.

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.

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.

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

NON-LOCKING LATCH: A round pull style chrome positive latch shall be supplied and installed on the cabinet door. A small "pre-load" on the latch shall be imposed to prevent the door from rattling.

CURB SIDE GLOVE BOX STORAGE: There shall be glove box storage for three (3) boxes of gloves located on the curbside, above the entry door. A three box glove dispenser shall be

| | Bidder Complies | |
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| | Yes | No |

built into the cabinet with a fixed partition between each box of gloves. The gloves shall dispense through oblong slots cut into the 3/8-inch thick Lexan door. One door shall cover all three glove box bays, hinge across the top and feature a brass bodied, roller bearing type catch at the bottom.

HINGED POLYCARBONATE DOOR: A 3/8" (0.375 in) thick, overlay hinged door with three oblong, dispense through holes shall be supplied on the aforementioned cabinet. The outer door edges and the oblong hole edges in the door shall be router semi-round and burned smooth. Each oblong hole shall align with the center of each divided cabinet cell. The design intent for the oblong holes is to be capable of dispensing gloves through the door, directly from the box.

CURBSIDE UPPER CABINET: The curbside upper cabinet is located on the curbside (right side) of the patient cabin, over the squad bench. The cabinet length shall be maximized and start within two inches of the curbside entry door opening and mate to the right rear wall of the patient cabin.

CABINETS "K1 & K2": An interior cabinet shall be provided above the squad bench, on the curb side of the vehicle. This multipurpose cabinet interior shall be finished in high impact, white colored mica that is impervious to disinfectants and cleaners. The cabinet shall have two openings, each with a fixed divider set back from the face.

DUAL FLIP UP POLYCARBONATE DOORS: Dual 3/8" (0.375 in) thick, overlay flip up doors shall be supplied on the cabinet.

HINGES: Reel Torque Style.

NON-LOCKING LATCH: A round pull style chrome positive latch shall be supplied and installed on the cabinet door. A small "pre-load" on the latch shall be imposed to prevent the door from rattling.

NON-LOCKING LATCH: A round pull style chrome positive latch shall be supplied and installed on the cabinet door. A small "pre-load" on the latch shall be imposed to prevent the door from rattling.

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 ¾ lip. The ALS cabinet shall be provide at least 22.0 cubic feet of storage and Configured as follows.

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

| | Bidder Complies | |
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| | 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.

NON-LOCKING LATCH: A round pull style chrome positive latch shall be supplied and installed on the cabinet door. A small "pre-load" on the latch shall be imposed to prevent the door from rattling.

CABINET I-2: The middle section shall be shortened in height to accommodate for a slide out drawer directly below.

ROLL UP DOOR: There shall be a Robinson Shutter Style roll up door installed on the inside of the patient cabin to cover the Right Front ALS cabinet. It shall be the counterbalance style door with side tracks. The door shall form a coil at the top of the door opening which shall be hidden by the extended door header. This counterbalance style door is the only type of door that shall be acceptable so it leaves the back wall of the compartment unobstructed when the door is opened. There is a lower round bar latch to secure the door. The door shall feature a key lock. The finish of the slats shall be satin aluminum finish.

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

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.

DRAWER I-2a: One drawer shall be supplied, installed and located directly below cabinet I-2. The drawer shall feature a 13mm (1/2") thick substrate with laminate. The drawer body shall be laminated on ALL exposed surfaces, including hidden and less conspicuous surfaces. This drawer shall add at least 1.9 cubic feet of interior stowage accommodations described in Federal specification KKK-A-1822D 3.11.1. Access from the inside shall be as follows below.

DRAWER FRONT: A 3/4" (19mm) thick drawer front shall be fitted on the aforementioned drawer. The drawer front shall be flush fitted to the opening and have uniform gap spacing around the perimeter. The drawer front shall be finished with white cabinet liner laminate on the inside and the same colored mica as the cabinet face on the outside.

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

| | Bidder Complies | |
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| | Yes | No |

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.

NON-LOCKING LATCH: A round pull style chrome positive latch shall be supplied and installed on the cabinet door. A small "pre-load" on the latch shall be imposed to prevent the door from rattling.

DRAWER SLIDES: The aforementioned drawer shall be equipped with ball bearing, full extension drawer slides rated at one hundred and thirty pounds at an eighteen inch length, per pair. The length of the slide shall be at least the length of the drawer body and shall travel at least the length of the slide plus one inch over travel. The slides shall be mounted to the side of the drawer body and cabinet case. The slide sectional envelope shall not exceed one half inch wide by two and three eighth inches high.

In order to thoroughly clean the drawer and the case, the drawer slides shall feature a quick detach lever in each slide, to allow the drawer to be removed from the case without tools.

CABINET I-3: The lower section shall be approximately 25% of the over all cabinet height.

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

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.

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.

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

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

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.

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

NON-LOCKING LATCH: A round pull style chrome positive latch shall be supplied and installed on the cabinet door. A small "pre-load" on the latch shall be imposed to prevent the door from rattling.

SQUAD BENCH: A squad bench shall be installed on the curbside of the patient compartment. The number of seating locations shall be installed as described in the options following this general heading specification. All seat belts and anchorage shall comply with FMVSS. 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.

BIO-WASTE RECEPTACLE: A biological waste receptacle shall be installed in a roll-out drawer. The drawer body shall be made of fully laminated, A-A cabinet grade plywood and shall be mounted on full extension, side mounted drawer slides with a 100 pound per pair load rating. The slides shall feature a quick disconnect to allow the drawer to be removed for cleaning. The drawer body receptacle shall accommodate a sharps container and a solid waste container per the following paragraphs. A white colored "Bio-waste" symbol and legend shall be applied to the drawer front.

BIO-WASTE LOCATION: The bio-waste containers shall be in the squad bench and accessible from the curb side entry door. The drawer shall roll out over the step well or toward the front of the patient cabin. The drawer shall be installed at the head of the squad bench and shall rollout over the step well area and toward the Right front ALS cabinet. The receptacle shall accommodate a sharps container and a solid waste container per the following paragraphs. A white colored "Bio-waste" symbol and legend shall be applied to the drawer front.

WASTE CONTAINER: One six quart (346 cubic inch), rimmed plastic waste container shall be supplied and fitted into the "Bio-waste" enclosure.

SHARPS CONTAINER: A puncture proof, disposable sharps container located at the head of the squad bench with a 2 gallon capacity shall be supplied for safe disposal of used/contaminated syringes. .

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.

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

| | Bidder Complies | |
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| | 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.

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.

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 millimeter.

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.

STREETSIDE TOP CABINETS;

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.

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.

HANDLES, LEXAN WINDOW 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.

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.

SHELF STANDARDS: The aforementioned cabinet shall be equipped with non incremental, aluminum, C-shaped shelf standards.

| | Bidder Complies | |
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| | 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.

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.

HANDLES, LEXAN WINDOW 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.

BASE WALL CABINET: The base wall cabinet is located on the Street side (Left side) of the patient cabin. The over all height of the Base Wall Cabinet shall be approximately 75% of the over all 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.

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.

ACTION AREA TRAY: The entire action area work surface shall be covered with a 16 gauge, polished, 304 stainless steel tray. All four edges of the tray shall feature up turned lips measuring 3/4 inch high. The tray shall be applied to the action area substrate with adhesive. The edges of the stainless steel shall be protected with automotive edge trim.

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 cabinet will be ergonomically angled towards the CPR seat. 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.

SHELF STANDARDS: The aforementioned cabinet shall be equipped with non incremental, aluminum, C-shaped shelf standards.

| | Bidder Complies | |
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| | 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.

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.

HANDLES, LEXAN WINDOW 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.

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 forty four (44") 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. The cabinet configuration and dimensions shall comply with the drawings attached in appendix A.

CPR SEAT STOWAGE: The under CPR seat stowage cabinet shall add at least 1.5 cubic feet of interior stowage accommodations described in Federal specification KKK-A-1822E 3.11.1. An access lid from the top shall provide entry into the cabinet with a recessed paddle latch.

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.

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

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.

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

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

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

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.

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.

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).

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 through out the patient cabin regardless of the body length. The flooring material shall be commercial grade sheet vinyl floor with coin shaped protrusions on the surface. The floor covering shall be Lonseal Loncoin II Flecks No 150 "Onyx " (Black). The main field of the flooring around the "coins", shall be textured to minimize the appearance of minor scratches and imperfections brought on by wear.

FLOORING MAIN EDGE: The one-piece patient cabin floor covering material shall run the full with 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.

REAR THRESHOLD: There shall then a .125" aluminum sheet that is full width of the rear door area and mate to the top of the rear access door jamb and cover at least six inches of flooring. Yellow Speedliner coating shall be applied to the top surface of the aluminum sheet.

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

C/S THRESHOLD: There shall then a .125" aluminum sheet that is full width of the CSE door area. Yellow Speedliner coating shall be applied to the top surface of the aluminum sheet.

## COT MOUNT HARDWARE

PRIMARY COT MOUNT: Prep for main cot mount, Install support plate in floor, Cot mount shall be Dealer Supplied Stryker model No 6390 Power Load System.

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 Ford's Qualified Vehicle Modifiers' 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.

12v power feed location FRONT for Stryker powerload 6390

COT POSITION No 1: 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.

PRIMARY COT POSITION REINFORCEMENT; 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 houck fasteners.

PRIMARY COT: The aforementioned cot fastener shall be set up to use a Stryker Model No. Power-Pro XT Cot with the following options:

XPS Option
Power-Load compatible option
Knee-Gatch/Tredelenburg
Steer lock option
3 stage IV pole w/PR option

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

Fowler O2 bottle holder
Pocketed back rest pouch
Base storage net
Head end storage flat
Equipment hock
SMRT charger mounting bracket

COT HOOK: A Stryker Cot hook for the powerload system of solid aluminum shall be through bolted to the powerload system near the rear access doors. 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.

## 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.

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" 9.5 mm (3/8") OD Copper inlet pipe stub which is silver brazed to a brass, one piece, 33 mm (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-1822E 4.4.6. Pressure drop across the outlet shall be less than 2.0 PSI At normal working pressure.

| | Bidder Complies | |
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| | Yes | No |

OXYGEN OUTLET No 1: This outlet latch shall be designed to accept Chemtron style, dual press down to release adapters. This Oxygen outlet shall be provided where specified below.

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

OXYGEN OUTLET No 2: This outlet latch shall be designed to accept Chemtron style, dual press down to release adapters. This Oxygen outlet shall be provided where specified below.

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

OXYGEN OUTLET No 3: This outlet latch shall be designed to accept Chemtron style, dual press down to release adapters. This Oxygen outlet shall be provided where specified below.

LOCATION: The Oxygen outlet shall be located in the ceiling center pad at the head end of the primary patient.

PORTABLE CYLINDER BRACKET No 1: A Zico QR-E1 portable O2 bottle holder will be installed at a location determined at the pre-delivery meeting. The rack shall be through bolted to reinforced, structural members or brackets that tie in directly to the body of the ambulance.

PORTABLE CYLINDER BRACKET No 2 A Zico QR-E1 portable O2 bottle holder will be installed at a location determined at the pre-delivery meeting. The rack shall be through bolted to reinforced, structural members or brackets that tie in directly to the body of the ambulance.

CYLINDER RACK/LIFT: The high pressure cylinder, for the gas specified below, shall be restrained in an exterior compartment. The cylinder restraint system shall meet or exceed the National Truck Equipment Association (N.T.E.A.) Ambulance Manufacturers Division testing as described in standard 003. The cylinder rack shall accommodate a H-sized (6,900 liter) cylinder AND raise or lower the cylinder into place with an electric actuator that is rated no less than one thousand pounds. The lift capacity rating shall be at least two hundred and five (205) pounds. Current draw of the device shall not exceed 14 amperes. The compartment shall be sized to accommodate the operational/dimensional constraints set fourth by the cylinder lift manufacturer. The cylinder valve must remain in view AND accessible from the inside of the patient cabin per federal specification KKK-A-1822E 3.12.1.

ACTIVATION: The Zico Pendent controller unit with coil cord shall be provided and bracket mounted on the inside door panel in the same compartment as the Oxygen Lift.

| | Bidder Complies | |
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| | Yes | No |

HOSE RETRACTOR; There shall be a Hubbell Tool Balancer included in the compartment at the ceiling to move with the power lift system to keep the Oxygen Hose away from the moving parts of the lift.

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.

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

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.

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.

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.

VACUUM OUTLET No 1: One Vacuum outlet shall be designed to accept Ohio Diamond Vacuum quick disconnect adapters.

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

VACUUM OUTLET ADAPTER: An adapter shall be used to connect the vacuum line from the SSCOR 22000 system, when the container is plumbed through a Vacuum outlet. This vacuum outlet shall be designed to accept the Ohio Diamond Vacuum quick disconnect adapter.

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 out side of the

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

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.

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.

FIRE EXTINGUISHER: One (5) five pound A-B-C type fire extinguisher shall be installed in customer specified location.

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.

EMERGENCY INTERIOR LATCH RELEASE: There shall be a red tipped lever to activate a rotary latch at both the top and bottom interior of each patient access door. These shall be used should the door rods become unattached from either the handle or latch assembly. The mechanisms shall be at the point of latching to the nader pin.

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.

CURB SIDE ENTRY DOOR GRAB HANDLES: The curbside side entry door shall be equipped with a three point, "L" Shaped 1 ¼ diameter, stainless steel with gray anti-microbial coating, handicap style grab handles to aid in door closure and entry assistance.

The grab handle shall run horizontally, directly above the inside door latch and bend Ninety five degrees downward to create a banister (handrail) to aid in vehicle egress. The door handle shall be fastened directly to the horizontal door structure that is welded to the door assembly.

REAR ENTRY DOOR GRAB HANDLES: The rear entry doors shall be equipped with a three point, "L" Shaped 1 ¼ diameter, stainless steel with gray anti-microbial coating, handicap style grab handles to aid in door closure and entry assistance.

The grab handle shall run horizontally, directly above the inside door latch and bend Ninety degrees downward to create a banister (handrail) to aid in vehicle egress. The door handle shall be fastened directly to the horizontal door structure that is welded to the door assembly.

ENTRY DOOR PANELS: All UPPER entry door panels shall be color matches Mica over a smooth aluminum substrate. The center panel shall be upholstery over a smooth aluminum substrate.

CURBSIDE LOWER DOOR PANEL: The inside door panels shall be made of 16 gauge brushed stainless steel. The edges of the stainless 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 machine screw shall have a neoprene lock washer.

CUSTOM LOGO: The agency's custom logo shall be engraved into a panel that is embedded into the middle of the entry door panel. The logo shall be to scale and back lighted with the head light switch.

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.

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 fold out at bottom for ventilation. All glass shall be tinted safety glass.

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

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

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.

ACTION AREA LIGHTING: A 12 volt LED light shall be provided directly over the forward, street side work surface. A 18 inch swivel fixture shall be provided. The light shall have an on/off rocker switch on the body of the light housing.

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

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.

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 Light Gray. A sample of the actual color shall be submitted with the bid for approval.

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.

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.

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.

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.

CLOCK: An Emergency Time manager is defined as a 24-hour clock and timer designed to assist Emergency medical personnel with time management. The time Manager shall provide four functions:

Time of day in hours and minutes
LED sweep second hand shall sweep around the hour and minute display
Elapsed time in hours and minutes
4-alarm timers in 1, 2, 5, and 10 minute increments

The clock size shall be approximately 4 3/4" high by 6 3/4" long with a second hand sweep of 3 1/2" diameter. The main digital display shall have 1/2" high characters. The four digit display shall operate in three modes; "time of day", "Elapsed time" and "timer" mode. In "time of day" and Elapsed time" mode, the display will show hour and minutes. In "Timer" mode, an audible alarm shall sound when timer reaches zero.

The clock shall feature power consumption protection, whereas, the clock display shuts down, 20 minutes after the vehicle's engine is shut down and charging voltages are not present. The display shall come back on when the engine is restarted.

| | 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 with out 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.

| | Bidder Complies | |
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| | Yes | No |

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.

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.

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 QVM or governing standards.

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.

COMPARTMENT FINISH; Unless specified otherwise, all exterior compartment walls and backs shall be constructed of .100 polished aluminum diamond plate.

MAIN BODY COLOR: The main body color shall be Ford OEM Red. The paint finish shall be laid onto the body in a flat, orange peel free, mirror like shine on all four sides.

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

| | Bidder Complies | |
|---|---|---|
| | Yes | No |

tape shall have alternating colors (Red and White). The tape color shall begin and end in Red, and each segment shall measure between seven and nine inches.

REFLECTIVE STRIPE; There shall be a six inch tall reflective stripe installed on the chassis cab and module in a straight manner at approximately the belt line of the overall unit. This main stripe is to provide a nearly continuous safety identification to the sides and rear of the ambulance while in use.

PIN STRIPE: The aforementioned paint belt shall be bordered with 1/4" wide automotive pin stripe tape. The tape shall be White in color. The tape shall be firmly pressed onto the paint, on the center of the color change joint.

ROOF PAINT; Color match to sides, top finish to exceed industry standard of 5 plus mill thickness.

Chevron Items: Grade Chevron to match existing fleet, Lemon Yellow & Ruby Red

ENTRY DOOR CHEVRONS ON LOWER DOOR PANELS; There shall be installed reflective materials in a chevron pattern on the entry door lower panels. The amount of stripes and colors will be determined by following options.

GRAPHICS: To match exiting fleet, inspection available upon appointment.

DRIP RAILS: A bright drip rail shall be provided over each compartment CSE entry door and rear doors. Full height compartments are exempt because the perimeter roof rail drip rails will cover these compartments.

Tire Jack to be shipped loose

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.

AMBULANCE MARKING PACKAGE: The vehicle shall be supplied with a lettering and "star of life" symbol decal package as described in Federal specification KKK-A-1822D 3.16.4. The "ambulance marking package" is to be installed on the vehicle in appropriate locations. The "star of life" symbols shall meet Figure 4.

ROOF STAR OF LIFE; There shall be installed on the module roof a reflective star of life symbol large sized.

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 |

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.

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.

CONVERSION WARRANTY

7 Year, 70,000 mile Mechanical & Electrical including Workmanship.

7 Year, 70,000 mile Standard Paint Warranty.

36 Month Paint Coatings Corrosion Warranty.

20 Year Body Structure Warranty.

# Bid Quotation

Sign in ink in the space provided below. UNSIGNED bids will be considered incomplete and will be subject to rejection.

It is agreed by the undersigned Bidder that the signing and delivery of this bid represents the Bidder's acceptance of the terms and conditions of the foregoing specifications and provisions, and if awarded the bid by the City of Zion, will represent the agreement between the parties.

Name of Firm: _____

Signed (in ink): _____

Name and Title: _____

Manufacturer of Vehicle: _____

Model Year: _____

Street Address: _____

Mailing Address: _____

City, State, Zip: _____

Phone Number(s): _____

**BID QUOTATION:** _____

**Complete Apparatus delivery will be made in** _____ **Calendar days**