

Action Item # 4 – Bid Approval

The Westfield Public Works Department is recommending that the Board of Public Works and Safety consider the following Bids for approval:

Bids

- 151st Street and Carey Road Intersection and Road Improvements
- Western Way and Greyhound Pass Improvements
- SR32 Passing Blister Project
- 2008 Resurfacing and Road Maintenance
- Sycamore and Birch Street Improvements

151st Street and Carey Road Intersection and Road Improvements

The Westfield Public Works Department accepted bids for the 151st Street and Carey Road Intersection and Road Improvement Project on July 7, 2008.

The 151st Street and Carey Road Intersection Improvement generally consist of the reconstruction of the intersection of 151st Street and Carey Road to a round-a-bout.

The bids based upon the unit costs are:

Contractor	Base Bid
Calumet Civil Contractors	\$1,148,000.00
Reith Riley	\$1,240,572.00

The City of Westfield Village Park Tax Incremental Fund (TIF) will fund this project.

The Westfield Public Works Department and HNTB Engineering staffs have reviewed the bids for this contract and supplemental information submitted by the bidders, and therefore, recommends awarding the contract not to exceed the base bid of \$1,148,000.00.

The Westfield Public Works Department is recommending that the Board of Public Works and Safety consider the 151st Street and Carey Road Intersection and Road Improvements bid submitted by Calumet Civil Contractors for approval.

Western Way and Greyhound Pass Improvements

The Westfield Public Works Department accepted bids for the Western Way and Greyhound Pass Improvements Project on July 7, 2008.

The Western Way and Greyhound Pass Improvements generally consist of adding a southbound dedicated right turn lane onto 146th Street and widening to Greyhound Pass. This project also consists of improvements to the intersections of Greyhound Pass and Greyhound Court and the intersection of Greyhound Pass and Western Way. Traffic Signals will be added at these two intersection locations and these traffic signals will be sequenced with the US31 and Greyhound Pass intersection to synchronize the flow of traffic through these intersections.

The bids based upon the unit costs are:

Contractor	Base Bid
Calumet Civil Contractors	\$1,783,000.00
Poindexter	\$1,876,792.40
Reith Riley	\$1,901,556.00

The City of Westfield Village Park Tax Incremental Fund (TIF) will fund this project.

The Westfield Public Works Department and HNTB Engineering staffs have reviewed the bids for this contract and supplemental information submitted by the bidders, and therefore, recommends awarding the contract not to exceed the base bid of \$1,783,000.00

The Westfield Public Works Department is recommending that the Board of Public Works and Safety consider the Western Way and Greyhound Pass Improvements bid submitted by Calumet Civil Contractors for approval.

SR32 Passing Blister Project

The Westfield Public Works Department accepted bids for the SR32 Passing Blister Project on July 7, 2008.

The SR32 Passing Blister Project generally consists of adding a west bound passing lane on the north side of SR 32 at the Ditch Road T-Intersection. Additionally a dedicated Westbound turn lane will be added for vehicles turning southbound onto Ditch Road.

The bids based upon the unit costs are:

Contractor	Base Bid
Calumet Civil Contractors	\$114,220.00
E&B Paving	\$113,251.15
Grady Brothers	\$129,440.00
Poindexter	\$137,754.00
Shelly & Sands	\$102,310.61
Reith Riley	\$142,065.00

The project will be funded 90% from the Indiana Department of Transportation and 10% from local road funds for this project.

The Westfield Public Works Department and HNTB Engineering staffs have reviewed the bids for this contract and supplemental information submitted by the bidders, and therefore, recommends awarding the contract not to exceed the base bid of \$102,310.61.

The Westfield Public Works Department is recommending that the Board of Public Works and Safety consider the SR32 Passing Blister Project bid submitted by Shelly & Sands for approval.

2008 Resurfacing and Road Maintenance Project

The Westfield Public Works Department accepted bids for the 2008 Resurfacing and Road Maintenance Project on July 7, 2008.

The 2008 Resurfacing and Road Maintenance Project generally consist of crack and joint sealing on primary roadways throughout the Westfield Corporate limits. Total length of road to be sealed is approximately 61.4 miles. Westfield Park Road from 169th Street to SR 32 will have patching in various areas, milling of existing surface, and surface replacement. Hydrant markers and pavement striping will be included in the resurfacing.

The bids based upon the unit costs are:

Contractor	Base Bid
Calumet Civil Contractors	\$262,140.00
E&B Paving	\$222,862.48
Grady Brothers	\$148,000.00
Milestone	\$139,863.00
Shelly & Sands	\$292,277.50
Reith Riley	\$135,766.75

The City of Westfield MVH, LRS, and Road Impact Fee funds will fund this project.

The Westfield Public Works Department Engineering staff has reviewed the bids for this contract and supplemental information submitted by the bidders, and therefore recommends awarding the 2008 Resurfacing and Road Maintenance Project submitted by Reith Riley for approval for an amount not to exceed the base bid of \$135,766.75.

Sycamore and Birch Street Improvements

The Westfield Public Works Department accepted bids for the Sycamore and Birch Street Improvements Project on July 7, 2008.

The Sycamore and Birch Street Improvements Project generally consist of improvements to the storm sewer system in the area of the Sycamore and Birch Street right of way and properties located in the receiving area of the storm water for this drainage basin. This project will also improve a segment of existing sanitary sewer that contributes to the infiltration and inflow problem within the sanitary sewer collections system, existing driveway culverts, roadside ditches, and provide storm sewer connections for properties that need a sump pump connection.

The bids based upon the unit costs are:

Contractor	Base Bid
Calumet Civil Contractors	\$375,100.00
Culy Construction	\$332,559.00
Central Engineering and Construction	\$304,424.00
Earth Resources	\$297,060.55
Fleetwood Engineering	\$385,517.00
Poindexter	\$524,999.00
Sweeney Construction Corp.	\$259,250.00

The City of Westfield’s Storm and Sanitary funds along with a Block Grant from the Noblesville Housing Authority will fund this project.

The Westfield Public Works Department and HNTB Engineering staffs have reviewed the bids for this contract and supplemental information submitted by the bidders, and therefore, recommends awarding the contract not to exceed the base bid of \$259,250.00.

The Westfield Public Works Department is recommending that the Board of Public Works and Safety consider the Sycamore and Birch Street Improvements Project bid submitted by Sweeney Construction Corp. for approval.

Painting City Logo on the 500,000 Gallon Elevated Water Tank at 161st Street

The Westfield Public Works Department accepted bids for the painting the City Logo on the 161st Elevated Water Tank on mid June 2008.

The painting of the logo would consist of the contractor furnish all material, labor and equipment necessary to execute the project . This project will provide the City of Westfield Logo on the east and west side of the elevated tank.

Two quotes were solicited for this project, they are as follows:

Contractor	Quote
Phoenix Fabricators and Erectors	\$9,200.00
USC Tank Service	\$15,280.00

It is the recommendation of the Public Works Department for the Board to propose a motion to approve the contract with Phoenix Fabricators and Erectors for the amount, not to exceed \$9,200.00.

Notice to Bidders- Ambulance Apparatus

Notice is hereby given that the City of Westfield Fire Department Hamilton County, Indiana will accept sealed bids until 16:00 (local time) on August 15th, 2008 at the Westfield Fire Department Headquarters, located at 17535 Dartown Rd., Westfield, Indiana – for a 2009 Medium Duty Ambulance Apparatus.

Specifications for the above Apparatus are on file and may be requested at the following location; Westfield Fire Department 17535 Dartown Rd. Westfield, Indiana 46074.

All bids will be opened at 16:30 pm. (local time) on August 15th, 2008 at the Westfield Fire Department Headquarters located at 17535 Dartown Rd. Westfield, Indiana 46074.

Pursuant to IC 5-17-1-2, the City of Westfield Fire Department reserves the right to reject any and all bids.

Todd Burtron, Fire Chief
Westfield Fire Department

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

SPECIFICATIONS FOR A NEW EMERGENCY MEDICAL VEHICLE

BIDDER INSTRUCTIONS:

The following specification describes a new ambulance that is expected to be acquired by this purchaser. The specification describes the needs of this purchaser as far as chassis configuration and module body design. A state of the art vehicle is required. However, manufacturers that utilize prototype equipment or manufacturing processes will not be considered. The builder's manufacturing history shall be supported by documentation where applicable, and by the reference section within this specification. The benchmark for the initial configuration of this ambulance shall be the current KKK Federal Specification for Ambulances. However, most requirements in this specification exceed the federal specifications because of the specific needs of this purchaser.

Please note that the following specifications represent minimum general terms or requirements. While it is not the intent of this purchaser to preclude any qualified bidder from submitting a proposal it must be clear that any bidder deviating in any substantial manner from these specifications will be rejected as being non-compliant.

Finally, manufacturers or distributors for manufacturers submitting bids shall include the following information with their proposal:

MINIMUM REQUIRED STANDARDS:

The highest degree of quality, both in the materials and in the building processes, is required for the emergency medical vehicle being proposed. At a minimum the manufacturer being proposed must meet all current mandated and voluntary ambulance design standards in effect at the date of the proposal submission. All current Federal Motor Vehicle Safety Standards (FMVSS) must be met, as well as all current Federal Ambulance Design Standards (KKK-A-1822).

The bidder shall state the date of certification for the current KKK-A-1822: _____

The manufacturer shall also comply with Ford Motor Company's QVM program. A copy of the manufacturers current QVM certification must be submitted with the bid.

The current QVM certification is included.
Yes_____ No_____ Initial: _____

PROPOSAL COMPLETION PROCESS:

Various areas in the following specifications require a response from the bidder. In order to aid in the evaluation process all responses must be consistent and, most importantly, legible. Therefore, the areas that are to be completed by the bidder, along with any other materials that may be submitted by the bidder, must be typed. Bids that are submitted with either hand-written responses, or with hand stamped responses shall be automatically rejected as being non-compliant.

Does the bidder understand this requirement?

Yes_____ No_____ Initial: _____

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SINGLE SOURCE MANUFACTURER:

To simplify warranty coverage and to assure a consistent level of quality throughout the vehicle, a manufacturer is desired that manufactures the major components for the ambulance (excluding the chassis). Major components are defined as including the module body, the aluminum interior cabinets, and the converter-added electrical wiring system. This purchaser understands that manufacturers may purchase some elements, such as switches, boards, etc. with which to manufacture a system.

Further, this specification requires the vehicle manufacturer to own the design of, as well as the rights to, the onboard converter-added electrical system. Generic aftermarket systems that are manufactured by an outside company and installed by the vehicle converter are not acceptable.

These requirements are addressed elsewhere within this specification where the specific defined items are located. Manufacturers who outsource any of the above-referenced components shall be considered non-responsive and will be rejected.

Bidder states that the represented vehicle builder manufactures all of the major components as defined above: Yes_____ No_____ Initial: _____

Bidder states that the represented vehicle builder owns the design of the converter-added electrical system, as well as all rights to that system: Yes_____ No_____ Initial: _____

Component manufacturer (by company name):

Modular Body: _____

Interior Cabinets: _____

Electrical Wiring System: _____

QUOTATION:

The overall quotation shall include a firm price for a vehicle meeting these specifications. The length of time that the price will be held shall be clearly stated in the quotation. The quotation shall include a specific delivery window based on the number of calendar days following the award of the contract. The model year of both the chassis and the conversion shall be clearly stated in the contract.

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WARRANTY:

The proposal shall include all warranties that are required in the following detailed specification. Lifetime warranties will not be accepted because of their unclear nature of duration. All warranties must have specific time durations and shall define warranties on specific components. The minimum acceptable warranty periods are noted below. In the blank lines the bidder shall note the terms of the warranties that apply to the manufacturer being proposed.

MODULAR BODY STRUCTURAL WARRANTY: 15 years/Unlimited Miles
Proposed warranty term: _____ years/_____ Miles

Note: The structural warranty, as noted in the structural section of this specification, will include the module doors, continued module body door alignment, and all interior cabinet construction. It shall also be extended on 5 year intervals in the event that the body is placed on a new chassis provided that (1) the re-chassis is performed by the original manufacturer, (2) the structural warranty has not expired at the time of the re-chassis, and (3) this purchaser approves any structural repairs at the time of the re-chassis. These terms and conditions must be explicitly stated in the manufacturers warranty certificate.

Does the structural warranty proposed comply with the above-stated terms and conditions?

Yes_____ No_____

ELECTRICAL WARRANTY: 6 years/72,000 Miles
Proposed warranty term: _____ year(s), _____ Miles

CONVERSION WARRANTY: 2 Years/24,000 Miles
Proposed warranty term: _____ year(s), _____ Miles

PAINT WARRANTY: 4 Years/48,000 Miles
Proposed warranty term: _____ year(s), _____ Miles

For verification of the completed warranty terms stated above the bidder must include printed manufacturers warranty certificates that meet or exceed the minimum required periods stated above.

Are the manufacturers warranties included? Yes_____ No_____

Warranties shall not be pro-rated in any manner and shall be transferable for their duration. All warranties shall be from the manufacturer as opposed to a distributor or service center. This is necessary for the protection of the purchaser, and to guarantee a certain known level of service and warranty. If, however, the bidder feels that it is necessary to modify the manufacturers warranties, then the bidder shall state why this modification is necessary. In addition, the bidder shall provide a full descriptive warranty certificate describing the warranty modification and the fact that it takes specific precedence over the warranty offered by the manufacturer. If no such certificate is provided, then the modified warranty shall be considered invalid and the manufacturers warranty shall remain in force. If a warranty modification is proposed through either a distributor or service center, then complete financial statements for that business covering the past five (5) years MUST BE SUBMITTED with the bid. If the manufacturer states that no party is permitted to modify its warranty, then any warranty modification

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provided by the bidder, despite being in writing, shall automatically be rejected.

Does the bidder conform to the above-written section? Yes____ No____

In order to simplify the evaluation process the following questions must be answered and this section must be initialed by the bidder.

Are the warranties pro-rated in any manner? Yes____ No____ If yes explain.

Are the warranties transferable? Yes____ No____ If yes explain.

Has the bidder modified the manufacturers warranties? Yes____ No____ If yes explain.

If yes was chosen above, has the bidder included modified written warranties? Yes____ No____ If no explain.

If 'yes' was chosen above, has the bidder included financial statements, for the last five (5) years, of the warranty modifier? Yes____ No____ If 'no' explain.

Bidder shall initial that this section is understood and has been answered truthfully. Initials: _____

Note: Bidders who are found to be untruthful in this, or in any other section of this bid, will have their bid automatically rejected.

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SERVICE AVAILABILITY:

Service will be a major factor in the award of this proposal. Convenience and experience will be determining factors in defining acceptable service. A Manufacturer or Manufacturers Dealer service facility within a radius as described below will be required. Personnel performing the service shall be trained by the manufacturer with emphasis in the area of electrical service. Third party service centers will not be accepted. In order to evaluate the proposed service facility the following information shall be provided on the appropriate lines.

Radius from purchaser: Not more than _____ miles.

Facility name: _____

Address: _____

City: _____ State: _____

Contact: _____

Phone #: 1-(____)-____-_____

Training Description: _____

ENGINEERING SUPPORT:

Due to the complexity of the design of the vehicle, proposals will be accepted only from manufacturers that utilize well-defined engineering techniques. Computer Aided Design (CAD) drawings of both the interior of the patient area and the overall layout of the module body will be mandatory. At a minimum these drawings shall include all exterior elevations, all interior views (4), and a plan view of the roof/ceiling. All options and elements required within these specifications shall be depicted on the prints. The purpose of this requirement is to assure this purchaser that vehicle proposals indeed meet the stated requirements as set forth in these specifications. Generic CAD drawings are not acceptable. The drawings, as submitted, shall accurately depict the exact vehicle that is being proposed. Bidders not including the required drawings will be considered non-responsive and will, therefore, be rejected.

Are the required drawings included with this bid? Yes_____ No_____

'D' SIZE DRAWINGS:

The above-referenced drawings shall be furnished in 2' x 3' size (D size). Standard 8" x 11" drawings are not deemed sufficient. Proposals that do not include the 2 x 3 drawings meeting the criteria set forth in the Engineering Support section above will be considered non-responsive and will, therefore, be rejected. Likewise, bids stating that drawings "will be furnished at a later date" will be rejected on the basis of non compliance.

Are the 2 x 3 drawings included with this bid? Yes_____

No_____ Initial: _____

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SAFETY CERTIFICATION:

The verification of construction techniques used throughout the building process must be furnished by the manufacturer/bidder. The installation methods and construction techniques associated with seat belt retention, cabinet construction and installation, oxygen cylinder retention and module to chassis mounting systems must be verified through a controlled Hygee sled test that simulates an actual impact condition. This test must be performed, under both side and frontal impact conditions, to a minimum force of 30 G's. All testing must be performed by a testing agency that is independent of the manufacturer.

As proof of this verification process being performed, the bidder must provide the following information (leave blank if this is not a sled test being verified):

Testing Facility Name: _____
Date Tested: ____/____/____ 'G' Force
Tested To: _____ G's

The bidder must perform and certify to dynamic sled or impact testing run on the ambulance body to a load of 30 G's. The body tested shall include normally installed components for each of the following areas of the vehicle. The body structure and installed components shall not show evidence of structural failure or separation from its mounted position as a result of the test. All test results must be witnessed and verified by a Registered Professional Engineer.

Test Required	Date Tested	Force Applied	Signed By
1. Body to Chassis Mounting	_____	_____	_____
2. Access Door Latching	_____	_____	_____
3. Oxygen Cylinder Mount (Main)	_____	_____	_____
4. Oxygen Cylinder Mount (Portable)	_____	_____	_____
5. Attendant Seat Mount	_____	_____	_____
6. Attendant Seat Belt	_____	_____	_____
7. CPR Seat Belt	_____	_____	_____
8. Squad Bench Seat Belt	_____	_____	_____
9. Retention of Main Cabinet Wall	_____	_____	_____
10. Crash Restraint Wall At Head of Bench	_____	_____	_____

Certification of Registered Professional Engineer

I _____ attest that I am a Registered Professional Engineer registered in the State of _____. My Registry Number is _____.

I hereby certify that I and my company, its affiliates and subsidiaries

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are completely independent of all manufacturers, suppliers, and vendors in the ambulance industry.

Signature_____

Company_____

Date_____

Affix Stamp Above

Documentation Furnished with Proposal: Yes_____ No_____

Finally, a manufacturer is desired that has had an ongoing testing program. The testing, as described above, is to have been performed on a body built using the same materials and designs as those currently used by the manufacturer. Furthermore, the testing program must have been conducted on a continuous basis for a period of time not less than ten (10) years. Therefore, the bidder is required to answer the following questions and to initial the response to confirm that the question is understood and answered truthfully.

How many total sled tests has your company performed? _____ Initials _____

What was the date of the last test: _____ Initials _____

Has this specified body construction method been tested?

Yes_____No_____ Initials _____

If not, what body construction method was tested? _____

Initials _____

Has the testing program been in place for a period of at least ten (10) years? Yes_____ No_____ Initials_____

If the program has not been in place for at least ten (10) years, then how long has the testing program been in place?

_____ Initials _____

Note: This requirement is in addition to the current minimum KKK requirements. The KKK requirements do not suffice as a substitute for this requirement as they do not address impact crash testing. It should also be noted that neither photographs of vehicles involved in accidents nor written observations of accident damage suffice to fulfill this requirement. This requirement will be fulfilled only when testing verification, signed by an accredited independent engineer, is furnished with the bid. The testing being described takes place in a controlled environment where meaningful data can be collected and used to further the design and safety of the vehicle. Actual accidents present too many variables that hinder the collection of meaningful data. Bidders who submit photographs or written observations, from customers or manufacturers representatives, should note that such information is considered invalid and will not be a factor in the purchase decision.

Does the bidder understand these requirements?

Yes_____ No_____ Initials: _____

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If the bidder does not perform sled testing, then the bidder is asked to take exception to this requirement so that the purchaser may evaluate bids on a legitimate basis. Bidders not taking exception shall have all appropriate documentation, as described above, included with the proposal. Bidders who do not take exception, and who do not include all appropriate documentation will be considered non-responsive and will, therefore, be rejected. This also applies to any subsequent sections of this specification that require sled testing where the bid response indicates that no exception has been taken.

Does the bidder understand this requirement? Yes____No____ Initials: ____

Is the bidder certifying sled test compliance and/or Federal KKK compliance?

Sled Testing ____ KKK compliance ____ Initials: ____

BODY INTEGRITY VERIFICATION:

In addition to the testing described in the preceding section the bidder must also ensure the integrity of the patient compartment of the vehicle in the event of an accident by performing dynamic testing to demonstrate compliance to International Standard ECE R29 and SAE Standards SAE J2422 and SAE J2423 applied to the rear of the body. Testing shall involve a Dynamic Preload side impact on a 20 degree fixture at 13,000 foot lbs, a 22,000 roof load and a rear impact at 32,600 foot lbs. Impact shall be provided by a 13,000 lb platen cart moving at the speeds prescribed to achieve the necessary impact energy. The impact cart shall include DAS, a propulsion system capable of +/-0.25 mph speed control, remote braking and Ethernet communication in concert with an installed barrier facility.

During the above described testing, two Hybrid III 50th percentile mannequins shall be installed, one in the standard attendant's seat, and one on the squad bench area. Bidder will be required to demonstrate via photos or other evidence as may be approved by this agency that the mannequin restraint systems worked properly and that the mannequins remained in their original positions.

Does the bidder comply with this requirement? Yes____ No____
Initial_____

Full documentation, signed by a professional engineer from the testing laboratory shall be provided with the bid proposal.

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REFERENCES:

The proven durability and reliability of this product is of the utmost concern. Each bidder submitting a proposal must furnish references consisting of in-service units of similar chassis make and conversion processes being proposed.

All references shall include owner, address, contact name and phone number, and the model owned. A minimum of ten (10) references shall be provided:

1. Owner: _____
Address: _____
Contact: _____
Phone #: 1-(____)-____-_____ Model: _____
Year: _____
2. Owner: _____
Address: _____
Contact: _____
Phone #: 1-(____)-____-_____ Model: _____
Year: _____
3. Owner: _____
Address: _____
Contact: _____
Phone #: 1-(____)-____-_____ Model: _____
Year: _____
4. Owner: _____
Address: _____
Contact: _____
Phone #: 1-(____)-____-_____ Model: _____
Year: _____
5. Owner: _____
Address: _____
Contact: _____

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Phone #: 1-(____)-____-____ Model:

____ Year: _____

1. Owner: _____
Address: _____
Contact: _____
Phone #: 1-(____)-____-____ Model:
____ Year: _____
2. Owner: _____
Address: _____
Contact: _____
Phone #: 1-(____)-____-____ Model:
____ Year: _____
3. Owner: _____
Address: _____
Contact: _____
Phone #: 1-(____)-____-____ Model:
____ Year: _____
4. Owner: _____
Address: _____
Contact: _____
Phone #: 1-(____)-____-____ Model:
____ Year: _____
5. Owner: _____
Address: _____
Contact: _____
Phone #: 1-(____)-____-____ Model:
____ Year: _____

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LIABILITY:

The bidder shall defend, indemnify, and save harmless the purchaser and its officials from all claims, demands, payments, suits, actions, recoveries, and judgments of every description, whether or not well founded in law, brought or recovered against it, by reason of any act or omission of said bidder, his agents or employees, in the execution of the contract or in consequence of insufficient protection or for the use of any patented invention by said bidder, and a sum sufficient to cover aforesaid claims may be retained by the purchaser from money due or to become due to the bidder under this contract, until such claims have been discharged or satisfactorily secured.

Each bidder must furnish a Certificate of Insurance showing aggregate total of insurance which shall not be less than twenty-five million dollars (\$25,000,000).

Certificate of Insurance included with proposal? Yes_____ No_____

In addition, the bidder is to assume any risk of loss to the ambulance until the ambulance is delivered to this purchaser.

Does the bidder understand this requirement? Yes_____ No_____

INSPECTION TRIP:

An inspection trip shall be provided by the bidder. The inspection trip shall take place during the latter stages of the manufacturing process. The trip shall include transportation, room, and board for one day/night stay. A trip requiring travel of more than 350 miles shall be via commercial air carrier. Under no circumstances shall air travel be via private or corporate aircraft.

Number of personnel: _____

Inspection trip included in bid: Yes_____ No_____

PAYMENT:

Payment shall be made on delivery of the purchased item, or upon completion of all work contracted for (whichever occurs later) and performed to the satisfaction of the purchaser. Clauses requiring prepayment of any portion of the contract amount will render the bid non-responsive whereupon it will be rejected.

Does the bidder comply with this requirement? Yes_____ No_____ If no explain:

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DELIVERY PROCESS:

The vehicle shall be delivered to the purchaser at the Manufacturers Delivery Center to ensure the quality of the vehicle at acceptance. Delivery shall be stated in number of calendar days after award of contract. The purchaser has the right to reject the vehicle if it does not conform to these specifications to the satisfaction of the purchaser.

Does the bidder understand this requirement? Yes_____ No_____

PRICE AND TAXES:

All prices quoted shall be for a definite fixed price unless otherwise specified. Prices shall exclude Federal, State, and other taxes to the extent that this purchaser is exempt. All pricing shall be F.O.B.

F.O.B. : _____

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SPECIFICATION DESIGN:

The following specifications were created by the purchaser in order to best describe a need. However, it is not the intent of the purchaser to exclude any manufacturer from submitting a bid on these specifications. In many places required equipment or features are identified by brand name. The bidder shall note that the use of brand names within this document is meant to describe a required level of quality or performance. The bidder may substitute equipment or features provided that the substitutions meet the intent of the specification. The bidder shall note, however, that substitute components shall be included in the list of exceptions. Exceptions should be listed per the following bid completion requirements.

BID COMPLETION REQUIREMENTS:

1. All proposals shall be submitted to:

Purchaser: Westfield Fire Department
Address: 17535 Dartown Rd.
City: Westfield State: IN Zip Code: 46074
Attention: Capt. Joseph Lyons

Proposals must be submitted by: August/15th/2008 at 16:00

2. All proposals shall be submitted in a sealed envelope with the following information marked on the outside of the envelope:

BID FOR NEW EMERGENCY MEDICAL VEHICLE

3. All proposals shall be submitted in a hard-bound binder. In order to facilitate evaluation, the binder shall be divided by header into the following minimum sections:

A. Proposal: Bidders proposal showing product bid, model year, price, and delivery date.

B. Specification: Purchasers advertised specifications completed as required.

C. Design: CAD generated drawings of both interior and exterior of the product being proposed.

D. Warranty: Complete written certificates of Modular, Electrical, Paint, and Conversion warranties.

Bidders proposal meets all of the requirements listed above. Yes_____

No_____ Initials: _____

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TYPE OF BIDS TO BE SUBMITTED:

In the event that the bidder represents more than one ambulance manufacturer meeting the manufacturer requirements outlined herein, then the bidder shall only bid the highest quality vehicle that the bidder represents. Under no circumstances will multiple bids from the same bidder on different manufacturers be accepted. Should a bidder submit two or more bids representing more than one manufacturer, then all bids submitted by that bidder will be rejected as being non-compliant with the requirements of this specification. This purchaser is seeking quality equipment. Bidders are asked to bid only the product of the highest level of quality represented by that bidder.

Is this requirement understood and met?

Yes_____ No_____ Bidder's initials: _____

INFORMATION TO BE SUBMITTED WITH PROPOSAL:

The information requested within this bid must be furnished in full. Any bidder not completing this proposal or not furnishing any required information will not be considered. If a bidder will not furnish a material or fabrication process exactly as described in this specification, then that difference must be designated in the list of exceptions. If a substitution is being proposed, then the bidder must note the section to which the alternative is being proposed and provide technical data, supported by a registered engineer, supporting the fact that the substitute is equal to or better than the item as specified. If this data is not submitted with the bid, then the bid shall be rejected as being non-compliant. Bidder added narrative describing a substitution as being a clarification, exceeding, being equal to, etc. will not be accepted. Statements such as these, with or without the technical data described in this section, will cause the bid to be rejected as being non-compliant. This purchaser reserves the right to require samples of any deviating material to be provided for evaluation.

Does the bidder comply with these requirements?

Yes_____ No_____ Initial: _____

DIRECTIONS FOR RESPONDING TO EACH SECTION:

Each individual section of the specification shall be followed by three (3) response lines. The lines shall read as follows:

Above section bid exactly as written. _____
Section not provided. _____ Bidder is offering an
alternative to this section. _____

On the line to the right of each statement the bidder shall mark an X to signify the appropriate response. If a bidder is offering an alternative to the written section, then an exception must be taken for the section. The exception must be accompanied by data supported by a registered engineer to demonstrate the equivalency of the alternate item. The bidder shall note that the data submitted must correspond with the substitutions offered. If the data submitted does not cover all substitutions offered, then the bid shall be rejected as being non-compliant.

Does the bidder understand this requirement?

Yes_____ No_____ Initial: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

EXCEPTIONS TO SPECIFICATIONS:

Exceptions to these specifications shall be noted below. All exceptions taken shall be recorded per the guidelines defined above. Each exception shall be noted by page number and item header. If additional space is required for exceptions, then the bidder shall use additional paper as necessary, however the same format shall be used.

Page #: _____
Header: _____ Exception: _____

AMBULANCE SPECIFICATIONS

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Page #: _____
Header: _____ Exception: _____

CONSTRUCTION PHOTOGRAPHS:

The bidder shall include the following photographs with the completed proposal. Proposals not including these photographs will be considered incomplete and will, therefore, be rejected. These prints shall be submitted for evaluation purposes. This purchaser shall compare the photos of the different bidders and shall be the sole decision maker as to which design best suits the specific needs to be fulfilled. Commentary on the photos is not desirable. Photographs shall be in color and shall be large enough and clear enough to supply ample detail. The photographs shall be provided in the exact numerical order listed below. The photographs to be submitted shall include:

1. Interior upper corner showing gusset and extrusion detail.
2. Interior side wall including horizontal frame member.
3. Roof section showing 2" x 2" structural supports on 12" centers.
4. Detail of vertical side wall substructure to include gussets.
5. Floor superstructure prior to installation of the aluminum sub floor.
6. Interior of rear door less Formica trim
7. Interior of rear door detailing door latch linkage
8. Electrical distribution panel complete and wired.
9. Backside of front console switch panel complete and wired.
10. Interior aluminum cabinet modules prior to installation.
11. Light head attachment point detailing threaded nylon hole insert.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

CHASSIS:

The chassis required for this project is specified in detail below. Failure of the bidder to provide the chassis exactly as specified will be grounds for rejection of the bidder's proposal as being non-responsive. Exceptions will be made only if the bidder can prove that a required feature is unavailable from the chassis O.E.M.

CHASSIS SPECIFICATION:

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

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CHASSIS SUPPLIER:

It is the intention of the Westfield Fire Department to seek cost savings when at all possible to the taxpayers of Westfield, Indiana. The Westfield Fire Department would like the opportunity to compare pricing on the chassis between chassis supplied by the ambulance builder and chassis supplied by the Westfield Fire Department. Include in the bid the two prices for our comparison. The chassis shall meet the conversion guidelines as set by the successful bidder. Delivery of the chassis shall be coordinated with the successful bidder

Year: _____
Selling Dealer: _____ Delivery
Date: _____

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

CHASSIS INTERIOR COLOR:

The chassis interior shall be O.E.M. gray.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

CHASSIS HARDWARE AND ACCESSORIES:

The items to follow represent chassis modifications, hardware, and accessories that are required. Failure to provide these features will be cause for rejection of the bidder's proposal as being non-responsive.

WHEEL HUB AND LUG NUT COVERS

Polished stainless steel wheel hub and lug nut covers shall be installed on each of the four outside wheels.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

MUD FLAPS, FRONT:

The vehicle converter shall install mud flaps behind the front wheels. The mud flaps shall attach to the chassis front fenders and shall protect the cab body panels from road debris.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

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MUD FLAPS, REAR:

The vehicle converter shall install individual rubber mud flaps behind each rear wheel. The mud flaps may incorporate the converter's corporate logo provided that the logo is made out of stainless steel or equivalent and attached to the mud flap. Logos either printed on, or otherwise incorporated into the mud flap are not desirable as they cannot be removed and possess a tendency to fade.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

DOCK BUMPERS, REAR:

The rear step end caps shall include two heavy duty rubber dock bumpers installed on the outer face of the diamond plate. These bumpers shall serve to protect the diamond plate from damage due to minor contact.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

REAR STEP/BUMPER ASSEMBLY:

The rear of the vehicle shall be equipped with a step/bumper assembly to be fabricated from .125" polished aluminum diamond Treadplate. The assembly shall be spaced out from the rear kick plate a minimum of 1.5". The center section of the assembly shall pivot up and over center on two (2) .5" bolts to stay in the 'up' position. This section shall be a minimum of 9.5" deep and shall be constructed with grip-strut on the stepping surface to provide for better footing. The ends of the assembly shall be fixed diamond tread plate. The distance between the top of the step and the ground shall not be less than 16". The fold-up portion of the step shall be firmly held down with two (2) pin and socket holders to prevent rattling while the vehicle is in motion.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

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RECESSED REAR STEP/ BUMPER ASSEMBLY:

The rear of the vehicle shall be equipped with a step/bumper assembly to be fabricated from .125" polished aluminum diamond Treadplate. The center section of this assembly shall be hinged to flip up for patient loading. A diamond plate pocket shall be fabricated into the rear riser. When the rear step is in the 'up' position it will be nearly flush with the outer surface of the riser to assist in patient loading. The center section shall be constructed with grip-strut on the stepping surface to provide for better footing. The ends of the assembly shall be fixed diamond tread plate. The distance between the top of the step and the ground shall not be less than 16". The fold-up portion of the step shall be firmly held down with two (2) pin and socket holders to prevent rattling while the vehicle is in motion.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

FRONT BUMPER EXTENSION:

The front bumper of the chassis specified above shall be extended by the vehicle manufacturer as noted below.

Length: 12"

Above section bid exactly as written: _____
Section not provided: _____ Bidder
is offering an alternative to this section: _____

The mirror set shall be OEM supplied, and installed by the chassis manufacturer.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

DIAMOND PLATE STEP WELL COVERS:

Diamond plate step well covers shall be installed on both the curb side and street side cab step wells. The covers shall be made of .125" thick polished diamond tread plate with a minimum 3003-H14 alloy. The street side cover shall include a Kwikiee pull out tray for chassis batteries.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

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AIR SUSPENSION OVERRIDE SWITCH:

A manual air dump override switch shall be installed as noted below. This switch shall override the air dump activated by opening of the left rear patient compartment entry door.

Switch Locate: Inner panel of right load door.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

DELCO 1150 SERIES BATTERY SYSTEM:

A Delco 1150 Series (3) battery system shall be installed on the vehicle.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

REVERSE ALARM:

An audible alarm shall be installed to activate when the vehicle is placed into reverse gear. There shall be, installed on the front console and wired through the vehicle electrical system, a momentary cutoff switch to disable the alarm. This switch shall automatically reset each time the vehicle is placed into reverse gear.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

DUAL CAMERA SYSTEM:

The vehicle shall be equipped with a Voyager VCCS130 backup camera mounted over the rear doors. A second identical camera shall be installed on the vehicle interior as noted below. The driver area monitor shall be a Voyager AOM711 wide format LCD style with a 7" non-glare color screen. The monitor shall be capable of handling two camera inputs with manual or automatic source selection. It shall have an auto power-on feature when the vehicle is shifted into reverse.

Second camera location: Looking rearward

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

WEATHER BAND/AM/FM/CD PLAYER:

The OEM AM/FM/CD player shall be installed in the cab and wired to the OEM cab speakers. This unit shall also be capable of being wired to patient area speakers should they be required within this specification.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

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CONVERSION:

The following section describes the required body design, manufacturing process, and materials. Adherence to this section is of extreme importance to this purchaser due to space requirements and safety concerns. The bidder must meet this section as closely as possible without utilizing experimental or prototype designs in order to be considered for bid award.

MINIMUM BODY DIMENSIONS:

The completed vehicle shall have the following minimum dimensions:

(Exterior)-Height: 93" -Width: 96.25" -Length: 173"
(Interior)-Height: 74" -Aisle 48" -Length: 169" OVERALL
DIMENSIONS (Including Chassis, Module and Step):-Height:
114" (to top of vent) -Width: 100" -Length: 296"

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

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MODULAR BODY STRUCTURAL DESIGN REQUIREMENTS:

The module body shall be designed and fabricated with the following key elements in mind:

1. The greatest possible load carrying capacity is desired.
2. The safety of all vehicle occupants is of paramount concern.
3. The body design, including construction materials and fabrication techniques shall be proven to be durable.
4. The body shall be easily retrofitted to a new chassis should that need ever arise.

With these concerns in mind the following requirements have been established for the purposes of this specification:

The vehicle converter shall design and construct its own module bodies, and maintain an engineering staff at its manufacturing facility to handle any custom body changes that may be necessitated by this design. It is the intent of this purchaser to receive a finished product of the highest standards of quality available. Vehicle manufacturers who design and build their own bodies and who have the expertise of an engineering staff will possess a greater capacity as far as handling a custom project of this type than manufacturers who purchase their bodies from an outside vendor. Accountability and quality of the design and construction of the body are enhanced when the vehicle converter manufactures the body.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

GENERAL BODY DESCRIPTION:

The construction process described within this specification will ensure that the body shall remain structurally intact. However, to achieve this level of quality and durability, the module body, including all doors, must be constructed correctly initially. This specification requires that the module body, including all doors, be built within a tolerance of one five-thousandths of one inch. To achieve this the vehicle manufacturer must use, as standard practice, precision computerized equipment such as found in Strippet machines and microprocessor controlled milling machines and chop saws. Use of precision equipment will ensure that all door openings, door handles and latches, body windows, and warning light assembly installation locations are of the correct size and square to the body. Cutting done by hand, such as with a jigsaw, is not desired unless it involves the chassis, or unless a warning light assembly must be located in such a way that it depends on the layout of the finished vehicle. (E.g. when a light must be centered within a paint stripe since the exact stripe location will not be determined until the module is built and mounted.) In addition, utilization of computerized equipment will simplify the production of replacement body panels in the event of an accident since the computer can duplicate a given part exactly. This includes documentation of all body light locations.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

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PAYLOAD REQUIREMENTS:

The vehicle payload shall meet or exceed that called for in the current KKK-A-1822 specification. The vehicle manufacturer shall, upon notice by this purchaser, provide a written statement from an independent engineer that the model being offered has met this set of criteria. Before delivery of the completed unit the manufacturer shall weigh the vehicle. A written statement of those weights shall be affixed to the inside of the street side front #1 compartment door. This purchaser reserves the right to have the finished vehicle weighed independently upon delivery. If it is found that the written statement of weight provided by the manufacturer is inaccurate beyond what may be reasonably explained as a slight difference in the calibration of the scales, then the vehicle will be rejected. It should be noted that this purchaser, while interested in attaining the greatest possible payload, is unwilling to compromise on the structural requirements of a strong, durable, and safe body. All bidders must understand these factors supercede concern over payload, and that the lightest body (greatest payload) will not necessarily be deemed sufficient to meet the stringent quality and safety requirements set forth herein.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

MODULE BODY CONSTRUCTION AND WARRANTY:

The module body shall be constructed per the following detailed specifications. Generally speaking the body shall be of all-aluminum construction. Aluminum is shown to reduce weight over several other materials. It also possesses anti-corrosion properties that are essential for a vehicle of this type. The exact aluminum material requirements are explained in further detail below. The choice of materials and the design shall allow the manufacturer to warrant the materials and workmanship of the module body for a period of fifteen (15) years as set forth in the warranty section of this specification. The manufacturers structural warranty shall specifically cover:

-The continued and correct alignment of both compartment and access doors.-Seam or joint separation in door construction.-Aluminum interior cabinetry.

The warranty shall be fully transferable to a new owner should the vehicle ever be sold. In addition, should the manufacturer bidding this proposal re-chassis the vehicle within the period of the initial structural warranty, then an additional 5 years shall be added to the remaining amount of warranty coverage left at the time of re-chassis. This warranty shall be revalidated in five-year increments each time the body is mounted to a new chassis provided that the warranty has not expired, that this purchaser authorizes any necessary repairs, and provided that the original manufacturer performs the re-chassis.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

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CORNER POST SUPPORTS:

The body structure must be able to support the loaded weight of the vehicle in the unlikely event of a rollover. A structure is required that will enhance the safety of both patients and attendants in the event of an accidental collision. The foundation of a solidly built module body is the utilization of strong corner posts in both the sidewalls and the roof. A one-piece 90-degree radius post is required. The posts shall include a full length W shaped extrusion that forms a fully encased web inside the post for strength. This reinforcing member shall angle inward just before it joins the radius to form a small slot where the edges of the aluminum skin will be inserted prior to the final welding. Because the structural integrity of a body is derived from the corner posts, subfloor, and framework, corner posts that are a part of the exterior body skin (e.g. rolled corner posts) will not be considered, nor will corner posts which do not have an integral center reinforcement as part of the extrusion.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

CORNER POST STRENGTH:

The corner post extrusions shall possess a minimum ultimate tensile strength of 27,000 psi (6063-T5).

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

The horizontal roof extrusions shall conform to the same construction description as the vertical wall extrusions. They will, however, include an extruded drip rail as a part of the one-piece posts. Because the drip rail is a part of the post itself there will be no seams between the rail and the body above the rail. In addition there shall be drip rails installed above all body doors that are not full height. These rails shall attach via a durable adhesive.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

WALL AND ROOF SKIN SUPPORTS:

The exterior wall and roof skins shall be supported on the inside by 2" square tubing with .125" wall. These structural supports shall be strategically located at the load bearing points of the module body. The roof structural support beams shall be spaced on minimum 12" centers for adequate load support. Wall tubing of .090" thickness or less will not be acceptable.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

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HORIZONTAL WALL SUPPORT:

In addition to the vertical wall supports there shall be a horizontal beam, located in the beltline area, to provide additional protection in the event of a side body collision.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

throughout the vehicle for added strength. Each gusset shall be a minimum

GUSSET ENHANCEMENT:

Gusset supports, made from 2" square tubing, shall be installed of 5" long at its longest point. A minimum of twenty-four (24) of these gussets shall be welded into the vehicle support structure. Areas of installation shall include but not be limited to: all door openings, all body corners, and above all wheel wells. Designs that utilize no gussets, or gussets of lesser material size or strength, are not acceptable.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

EXTERIOR BODY PANELS:

The materials selected for the body skin have been chosen because of this vehicles expected heavy-duty cycle and the good wear characteristics that this material has shown in the field. The material shall be a minimum 5052-H34 alloy with an ultimate tensile strength of 38,000 psi. This material has been chosen because it is less prone to fail due to stress than other weaker materials such as 5052-H32 alloy.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

EXTERIOR BODY PANELS (PART 2):

The thickness required for exterior body panels is:-Side, front, and rear walls: .125" -Ceiling and floor panels: .090" Note: The roof shall be constructed with a single sheet of 5052-H34 .090" thick aluminum. This one-piece construction is preferred over a multiple piece design. The roof shall incorporate a 3/8" crown designed to allow water to drain.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

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FLOOR CONSTRUCTION:

Floors that are uneven or are incapable of adequately supporting the load being carried on the vehicle are unacceptable. For that reason thin floor panels and/or a lack of floor supports are not desirable. To prevent buckling, sagging, oil canning or any other structural breakdown of the flooring system a detailed description of the required construction process is provided.

The body subfloor shall be constructed of .090" 5052-H34 aluminum. The floor, from the front to the rear and from curbside to street side shall be supported by a minimum 2" x 3" tubular beams with a .25" wall. The floor just behind the axle shall be supported by a minimum 1.5" x 3" tubular beam with a .25" wall. All beams shall be strategically located at the load bearing points of the floor and welded into place. The interior of this vehicle shall contain no wood or wood products of any kind. The subfloor, above the aluminum sheet shall be specially constructed to provide both acoustic and thermal protection for the patient interior. It shall consist of the .090" aluminum with tubular understructure as noted above. The underside of this area is to be sprayed with a sound reduction coating. In addition, a .125" damping pad, a .125" sound barrier sheet, and a .625" composite floor panel shall be installed prior to installation of the vinyl floor covering. The purchaser reserves the right to inspect the process proposed by the bidder and to make determinations regarding the acceptability of that process. The resultant subfloor shall have no organic, wood, or wood products and shall be guaranteed against rotting or water absorption for a minimum of fifteen years. It shall not support or attract mold or fungus.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SKIN TO SUPPORT ATTACHMENT:

All exterior aluminum body panels shall be attached to the underlying structural supports via high performance polyurethane two sided tape. The tape shall have a polyurethane foam core for environmental resistance and an acrylic adhesive for a durable bond. The tape will be used as an insulating agent to hold the panels tightly against the structural supports, thus eliminating vibration and oil-canning. In addition to the tape attachment system, all panels shall be welded to structural members at the perimeters only. Welding in the center of the panels is not desired as the process will cause heat distortion of the body panels and lessen the overall quality of the finished appearance. Use of the tape, as described here, will eliminate heat distortion without damaging the structural integrity of the module body.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

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OUTER DOOR SKIN:

The door facing and edges shall be formed from a single sheet of aluminum. The aluminum used for the doors shall not be less than 5052-H34 alloy with an ultimate tensile strength of 38,000 psi. The material shall be .125" thick. All module doors shall be flush fit to the body side. The door panel must be welded at the corners.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

INNER DOOR REINFORCEMENT:

Each door shall include an internal extrusion for added reinforcement. The extrusions shall extend around the entire perimeter of the door. Additional reinforcement shall be installed through the center of the door and around each window where applicable. In addition to the extrusions reinforcing each outer door pan, the extrusions themselves shall be reinforced through a dual joining method. First, each mitered corner, where the frame corners join, shall be fitted with a one-way solid aluminum insertable key. This key shall prevent the corner from pulling apart, and shall act as a solid aluminum internal gusset. Secondly, each corner where the frame joins shall be welded to further prevent any separation. The end result will be a rigid door that will not bend or flex and that will eliminate the other commonly seen structural defects described above.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

INNER DOOR PAN:

An inner door pan shall fit flush with the inner edges of the door. Inner door pans that do not fit flush will have sharp or ragged edges exposed and will not be acceptable. The panels must be attached to the door structure with machine screws and Nutserts to prevent stripping. Sheet metal screws or rivets will not be accepted. Lastly, a closed cell cross-linked polyolefin foam tape shall be used beneath the inner door panels to isolate the panels from the door frames. This process will prevent door rattling.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

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DOOR SEAL:

All module doors shall incorporate an extruded rubber seal located around the perimeter of the door. The seal shall insert into a groove in the inner door extrusion. Seals that are installed around compartment openings will be easily torn by the movement of equipment across them. In addition, glue will not be permitted except in the case of a double door compartment. The requested design does not include a groove on the underlying door edge of a double door compartment. That edge alone will require an adhesive. Glue for all seals is not desirable because of increased replacement time and insufficient durability.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

DOOR JAMB:

All doorjamb must be separate from the body skin and must be welded to the 2" x 2" tubular body frame members so as to ensure continued door alignment and proper latching. The compartment frame shall be designed in such a manner as to provide extra protection around the compartment openings. The reinforcement tube shall be at least 1" wide. For added strength, the frame shall be at least .188" thick where screws are attached.

Prior to door installation the doors shall be true fit to the doorjamb. The fitting, prior to installation, shall provide added assurance that the door aligns properly with the doorjamb.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

HINGING:

All doors shall have full-length stainless steel hinges. The hinges shall be .070" thick and shall incorporate a .25" diameter pin.

All hinges shall have un-slotted mounting holes for an exact and permanent installation. Hinges that utilize slotted mounting holes are unacceptable because of the continued adjustments that they require.

There shall be an insulating material installed along the length of the hinge where the hinge meets the door frame to separate the stainless hinge from the aluminum body. This material shall be transparent so as not to be visible at any point while the door is being used.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

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HOLD-OPEN DEVICES:

The following door hold-open devices shall be installed:

-Compartment doors: Gas filled, 100-degree extension actuator -
Side access door: Gas filled, 110-degree extension actuator -Rear
doors: Cast Products grabber style devices

Spring-loaded devices are not desired because of their weaker holding capabilities and a lack of smooth door operation.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

DOOR HANDLES AND LATCHING SYSTEM:

A door latching system is required that provides safety to all on-board personnel and security to all stored equipment. The patient area must be capable of being quickly secured. The following minimum features are to be designed into the module door latching system:

- All door handles shall be rugged automotive style handles that are near flush with the outer door panel. Each handle shall actuate a Nader rotary safety latch.
- The handle and latching system shall be designed by their manufacturer to accommodate electromagnetic activation. Paddle style or D ring style handles that must be retrofitted for this application are unacceptable.
- The entire exterior handle assembly shall be Tri/Mark Series 2100 cast metal that is chrome plated and buffed to a high luster.
- All doors shall have an exterior key lock.
- All three patient area access doors shall include both interior and exterior latch activators. The rear doors shall have an activator installed on the outside of each door. The interior activators shall be located in a recessed pan on the door. A manual lock/unlock device shall be located within the pan. This pan shall be powder coated cast aluminum for extra durability and for ease of decontamination. No plastic products shall be used for this application.
- Exterior double door compartments shall include two exterior latching devices, one on each door.

The latching system shall be a proven system that has been subjected to the simulated sled tests as described elsewhere in this specification. Latching systems that have not been subjected to these tests will not have reliable data available as to installation and retention characteristics. Again, only controlled testing fulfills this requirement. Neither pictures of accidents, nor common observations gathered from damage surveys will suffice.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

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PATIENT AREA DOOR OPENINGS:

REAR DOORS:

Two (2) doors shall be provided at the rear of the module body. The overall opening of the access to be a minimum of 60.4" in height x 46.75" in width. Both inside and outside door handles shall be installed on each rear door. Left rear doors that can only be activated from the inside are not acceptable.

SIDE DOOR:

One (1) side door shall be provided on the curb side of the module body. The opening shall have minimum overall dimensions of 80.6" in height x 30" in width.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

MODULE TO CHASSIS MOUNTING SYSTEM:

This purchaser requires a mounting system that provides a stable and durable attachment of the module body to the chassis frame. To accomplish this requirement the following body attachment method shall be used:

A minimum of (5) five Mounting platforms shall be attached along the outside of each chassis frame rail for a total of (10) ten. Each platform shall consist of (1) top plate of .375" thick steel and (2) side reinforcement plates made of .25" steel. There shall be a .375" full backing plate where the mount attaches to the frame rail. The plates shall be welded along all seams with a heavy continuous weld. The body substructure shall include a 1" by 3" solid aluminum tie down bar welded to each sub structure cross member. To complete the body to chassis attachment, a VI-Tech tuned mounting system shall be used. The elastomer mount shall be custom-tuned to the specific chassis type for vibration reduction, structure borne noise attenuation and to provide low profile, low frequency isolation necessary for ideal patient compartment conditions. Standard chassis furnished mounting donuts will not meet the requirements of this specification. The VI-Tech mount shall be attached to each platform by (2) .625" Grade 8 bolts with washers and locking nuts. The platform shall be attached to the chassis frame rail with (3) .625" diameter Grade 8 bolts with washers and locking nuts. The fail safe elastomer isolation mount shall then attach to the aluminum body tie down bar with a .75" diameter Grade 8 bolt, a washer, and a locking nut.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

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INSULATION:

The patient area, including the doors, shall be insulated with 2" Technicon polyfiber for both thermal and acoustic insulation. The headliner area of the vehicle shall also include a barrier insulation of

Reflectix material for increased protection.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

STREETSIDE FRONT COMPARTMENT (#1):

The compartment described above shall feature the following
minimum dimensions: _____
Actual Dimension: 21.4" wide x 83.6" high x 21.5" deep
Clear Door Opening: 18.7" wide x 80.6" high

This compartment shall be accessed through a single hinged door meeting the standards for door construction, hinging, and latching outlined within this specification. The compartment shall house the vehicle's primary O2 cylinder and shall be vented to the outside in such a way as to prevent moisture from entering the compartment. Under no circumstances shall vents be installed within the compartment door. The compartment itself shall be constructed as an individual box and welded into the body structural framing. The material used shall be .125" polished aluminum diamond plate that is continuously welded at all seams. The compartment shall include two strips of LED lights, one to either side of the compartment door, to provide lighting inside the compartment.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ZICO QR-OTS ELECTRIC CYLINDER LIFT/BRACKET:

A Zico model QR-OTS electrically operated cylinder lift/bracket shall be installed as noted below. This equipment will allow for loading and unloading of the onboard O2 cylinder by lifting the cylinder from the ground to the compartment floor, thus eliminating the need for personnel to physically lift the cylinder. Once inside the compartment the equipment shall feature a lever to lock it into place. The electrical controls for this lift/bracket shall be located on the inside panel of the oxygen compartment door.

Cylinder Size:
Compartment:

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

LOCATION OF O2 TANK TRACK:

The O2 tank track shall be located as follows:

Locate: For Zico Lift

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

STREETSIDE INTERMEDIATE COMPARTMENT (#2):

The compartment described above shall feature the following minimum dimensions:

Clear Door Opening: 51.8" wide x 39.8" high 55.5" wide x 43"
Actual Dimension: high x 21.5" deep

This compartment shall be accessed through double hinged doors meeting the standards for door construction, hinging, and latching outlined within this specification. A portion of this compartment shall house the vehicle's required onboard electrical components as specified for use on this vehicle. The remainder of the compartment shall be utilized for storage of miscellaneous items as required by this purchaser. This compartment shall be vented to the outside in such a way as to prevent moisture from entering the compartment. Under no circumstances shall vents be installed within the compartment door unless they are required for airflow to equipment installed within this compartment. The compartment itself shall be constructed as an individual box and welded into the body structural framing. The material used shall be .125" polished aluminum diamond plate that is continuously welded at all seams. The compartment shall include two strips of LED lights, one to either side of the compartment door, to provide lighting inside the compartment. All electrical equipment is to be installed on the compartment ceiling and covered with an expanded metal guard.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

PULL OUT TRAY FOR EXTERIOR COMPARTMENT:

A slide-out tray shall be installed in the location(s) noted below. The tray is to be fabricated from 3003-H14 aluminum diamond plate. This material shall be .125" thick. The tray is to be fabricated with a 2" integral lip to prevent equipment from sliding off of the tray. The tray shall be installed on Accuride slides with a minimum 250 lb load capacity. The tray shall also include a latching device to lock the tray into position.

Quantity: 1 Locate: Center in compartment opening.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

STREETSIDE REAR COMPARTMENT (#4):

The compartment described above shall feature the following minimum dimensions:

Clear Door Opening: 32" wide x 39.8" high Actual Dimension:
37.4" wide x 43" high x 21.5" deep

This compartment shall be accessed through double hinged doors meeting the standards for door construction, hinging, and latching outlined within this specification. This compartment shall be utilized for storage of miscellaneous items as required by this purchaser. This compartment shall be vented to the outside in such a way as to prevent moisture from entering the compartment. Under no circumstances shall vents be installed within the compartment door. The compartment itself shall be constructed as an individual box and welded into the body structural framing. The material used shall be .125" polished aluminum diamond plate that is continuously welded at all seams. The compartment shall include two strips of LED lights, one to either side of the compartment door, to provide lighting inside the compartment.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SHELVING FOR VERTICAL EXTERIOR COMPARTMENT:

A shelf shall be installed in the location(s) noted below. All shelving is to be fabricated from 3003-H14 aluminum diamond plate. This material is to be .125" thick. All shelving is to include a 2" integral lip to prevent equipment from sliding off of the shelf. The compartment light shall meet the lighting criteria as described elsewhere within this specification.

Quantity: 4 Locate: (1)locate for
inside/outside access. Locate: (3)below and
spaced evenly.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

CURBSIDE REAR COMPARTMENT (#5):

The compartment described above shall feature the following minimum dimensions:

Clear Door Opening: 25" wide x 80.6" high Actual Dimension: 29.6" wide x 83.6" high x 21.5" deep

This compartment shall be accessed through a single hinged door meeting the standards for door construction, hinging, and latching outlined within this specification. This compartment shall be utilized for storage of miscellaneous items as required by this purchaser. This compartment shall be vented to the outside in such a way as to prevent moisture from entering the compartment. Under no circumstances shall vents be installed within the compartment door. The compartment itself shall be constructed as an individual box and welded into the body structural framing. The material used shall be .125" aluminum that is continuously welded at all seams. The compartment shall include two strips of LED lights, one to either side of the compartment door, to provide lighting inside the compartment.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

DIVIDER FIXED, VERTICAL COMPARTMENT

A 16" vertical divider shall be installed as noted below. The divider shall be non-adjustable and shall be fabricated from the same material used in the construction of the compartment in which it is to be installed.

Quantity:Lo 2 (1) 10" from left wall. (1) 8"
cate: from left divider.
Locate:

Above section bid exactly as written: _____
Section not provided: _____ Bidder is _____
offering an alternative to this section: _____

SHELVING FOR VERTICAL EXTERIOR COMPARTMENT:

A shelf shall be installed in the location(s) noted below. All shelving is to be fabricated from 3003-H14 aluminum diamond plate. This material is to be .125" thick. All shelving is to include a 2" integral lip to prevent equipment from sliding off of the shelf. The compartment light shall meet the lighting criteria as described elsewhere within this specification.

Quantity: 1 Locate: Between the
fixed dividers.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

CURBSIDE FRONT COMPARTMENT (#6):

The compartment described above shall feature the following minimum dimensions:

Clear Door Opening: 22.1" wide x 83.6" high Actual Dimension:
26.7" wide x 83.6" high x 30" deep

This compartment shall be accessed through a single hinged door meeting the standards for door construction, hinging, and latching outlined within this specification. This compartment shall also be accessible from the vehicle interior front wall area. This compartment shall be utilized for storage of purchaser-supplied jump kits and other miscellaneous items as required by this purchaser. The compartment itself shall be constructed as an individual box and welded into the body structural framing. The material used shall be .125" aluminum that is continuously welded at all seams. The compartment shall include two strips of LED lights, one to either side of the compartment door, to provide lighting inside the compartment.

Above section bid exactly as written: _____ Section not
provided: Bidder is offering an alternative _____
to this section: _____

KKK-A-1822 CERTIFICATION LABEL:

The vehicle shall have weight/payload, electrical load, and the current KKK-A-1822 certification stickers installed in the O2 compartment. Failure to provide these certification labels will be cause for rejection of the completed vehicle. Labels that are found to be falsified will also be cause for rejection of the completed vehicle. The purchaser reserves the right to request documentation showing that all required testing has been completed at the time of the bid opening. Failure to provide this documentation, if requested, will result in the bid being rejected without further consideration.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SPECIAL BODY REQUIREMENTS:

The requirements set forth in the following section of this specification represent items and features that may not be offered as standard by the bidder. If the bidder is unable to furnish any items listed in this section, then that inability must be listed and explained in the bidder's list of exceptions. Failure to do so will result in rejection of the bidder's proposal as being non-responsive.

INTERIOR HEADROOM:

The interior headroom of the finished vehicle shall be: 74.00"

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

6" DROP SKIRT DESIGN:

The curbside skirt, forward of the rear wheel well shall be dropped six (6) inches. Two integral aluminum diamond plate steps shall be installed within the side access door step well for improved accessibility to the patient compartment. Under no circumstances shall this be accomplished by bolting an additional step to the step well. The design must be such that all steps are integral. The use of bolts, rivets, or any other type of fastener is prohibited.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

STREETSIDE OF BODY LOWERED 6":

The street side body skirt, forward of the rear wheel well, shall be dropped six (6) inches. The extra room is to be provided inside the compartments in this area.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

BODY MOLDING:

The body skin shall be smooth and continuous. No exterior body moldings shall be installed to cover or trim seam joints of exterior body wall skin.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

SOUNDPROOFING:

To insure good working conditions and to create a stable patient environment, the vehicle shall be manufactured with particular attention paid to sound control. The following process must be performed throughout the manufacturing cycle of the vehicle:

- 1 Underbody shall be completely sprayed with sprayable, non-flammable latex sound control coating
- 2 Body Interior walls, roofs and interior compartment walls shall be sprayed with sprayable non-flammable latex sound control coating
- 3 The interiors of all access and compartment doors shall be sprayed with sprayable non-flammable latex coating
- 4 The backs of all interior cabinets shall be wrapped in antiphon damping material
- 5 Door interiors are to be lined with polydamp intefoam extensional damping pad
- 6 The body structural tubes shall filled with non-resonating dampening material
- 7 Side stepwell areas are to be backed with PT Damping Pad
- 8 All walls shall be insulated with 2" Technicon polyfiber acoustic insulation. Headliners shall be double insulated with 2" Technicon Polyfiber and a Reflectix barrier.
- 9 A .125" damping pad, a .125" sound barrier sheet, and a .625" composite floor panel shall be installed prior to installation of the vinyl floor covering.
- 10 A chassis tuned VI-Tech mounting system shall be used to provide vibration reduction and structure borne noise attenuation.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

MODULE BODY HARDWARE:

The following section lists hardware items that are to be installed on the vehicle body.

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

ELECTRONIC PRIVACY WINDOWS, DOORS:

The patient area door windows shall include liquid crystal privacy control. When privacy is needed, a switch shall be activated to turn the windows solid so they cannot be seen through even at a very close distance. The windows shall return to clear with a second touch of the switch. All door windows to have fixed glass. Additional programming settings shall default the window settings to opaque with the battery switch off, and transparent when the battery switch is turned on. The switch shall be labeled "PRIVACY" and shall be the same type of switch as described in the electrical section of this specification.

Switch Location: Adjacent to side patient door, in the front and rear control panels.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SPLASH SHIELDS:

Stainless steel splash shields are to be installed on the lower front face of the module body just aft of the cab access doors. These shields are to have a #8 mirror finish and shall match the height of the diamond plate corners guards that are to wrap around the lower corner posts on the side of the body.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

STAINLESS STEEL FENDERS:

Polished stainless steel fender flares shall be installed above each wheel well opening. The mounting of these flares shall provide for no contact between the stainless steel fender, fasteners, and the aluminum body skin. This is done to eliminate any contact between dissimilar metals and the electrolysis that may result.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

RUB RAILS:

Polished stainless lower body rub rails shall be installed on each side of the module body. Each rail shall be securely installed yet simple to remove and replace in the event of damage. Each rail is to be a three piece assembly to include a channel style rub rail and two removable end caps. These rails are to have a #8 mirror finish. Rubber rub rails are not acceptable to this purchaser.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

EXTENDED CORNER GUARDS:

Extended stainless steel stone guards and polished aluminum diamond plate corner guards shall be installed as noted below. The guards shall be extended and shall terminate where noted.

Locate: Front of body Configure:
Extend to bottom of stripe

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

REAR ACCESS DOOR HOLD-OPEN DEVICES:

Cast Products "Grabber" style rear door hold-open devices shall be installed to maintain the rear access doors in the 'open' position. One loop shall be installed on each door, and the appropriate socket shall be installed on the body. These devices are to be chrome finish in lieu of Cast Products' standard finish.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ELECTRIC LOCKS, COMPARTMENT DOORS:

Power activated door locks shall be installed on all exterior compartment doors. Locks shall be activated by switches located at each patient area access door and in the front radio console. Each lock may be individually overridden by the use of a key.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ELECTRIC LOCKS, ACCESS DOORS:

Power activated door locks shall be installed on patient area access doors. Locks shall be activated by switches located at each patient area access door and in the front radio console. Locks may be overridden by a manual slide lever or by the door key.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

CONCEALED DOOR LOCK SWITCH:

A concealed weatherproof switch shall be installed as indicated below to operate the power door locks specified above. The switch shall be wired to unlock only.

Locate: Driver side of grill.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

DOOR LOCKS WIRED THROUGH OEM SWITCHES:

The power door locks specified above are to be wired to the O.E.M. chassis door lock switches. The converter-added switches in the module shall operate the module body only. They are not to operate the cab door locks.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

RECESSED LICENSE PLATE BRACKET:

A Cast Products recessed license plate bracket shall be installed as noted below. The bracket will include lighting in the top to illuminate the license plate.

Locate: Right side-rear riser.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

REFLECTORS ON ENTRY DOORS:

Red reflectors shall be installed on the inside on the patient area doors.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

DOOR REFLECTION:

Red Scotchlite strips, 2" x 12", shall be installed horizontally across the top of each entry door. This material is in addition to the reflectors listed above.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

MATEFLEX IN EXTERIOR COMPARTMENTS:

Mateflex material shall be cut to size and installed on the bottoms of all exterior compartments and shelves.

Color: Black

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SPRAY- IN COVERING IN ALL COMPARTMENT:

The entire compartment shall be covered with spray-in rubber material to protect the compartment and the equipment stored in this area from any damage.

Color: Red

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

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PAINT AND STRIPING:

An acrylic urethane paint process is required on the module body. This process shall extend to the chassis if the vehicle converter must perform paint or body work to the chassis. The acrylic urethane process is required so that the highest possible gloss will be provided. Acrylic urethane possesses superior color and luster retention characteristics when compared to other types of paint. In addition, an acrylic urethane process provides a higher resistance to chemical sprays, salt sprays, humidity, and temperature changes. Lastly, this process, given the expected life of the vehicle and its heavy-duty cycle, will best resist chipping. The final paint application shall be free of material application imperfections such as orange peel, streaking, or a dull finish. Once painted, the vehicle shall be inspected under a black light to bring any small imperfections, not seen with the naked eye, to attention. Any such imperfections shall be repaired prior to the conclusion of the paint inspection process. The final application shall provide a high gloss on all body surfaces including the roof and excluding the underside.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

PREPARATION:

To produce an acceptable paint finish, the following paint process must be used:

All body doors and hardware must be removed prior to any wash, prime, or final paint application. All material impurities and oils must be removed from the bare aluminum body. The entire module body, excluding the underside, will have all visible welds ground down and all material imperfections filled. All holes (e.g. for hinge mounting, etc.) shall be plugged at this stage to prevent any cleaning agents from entering the module body framework. The body shall be prepared for paint by spraying with a phosphoric acid-based cleaner to remove dirt and oil and to etch the body for superior paint adhesion. The application of the cleaner shall be followed with a water rinse. Next, a chromium-free titanium composite coating shall be applied to the body to enhance paint adhesion and to prevent corrosion. The body shall be rinsed with de-ionized water to prevent salts from accumulating on the surface. The body will, then, be baked dry prior to the application of three (3) coats of Sikkens Colorbuild primer. The primed body shall be finish sanded and made ready for the final paint application. All module doors, though handled separately from the body, shall undergo the same process as described above.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

PAINT MANUFACTURER'S INSPECTIONS:

The manufacturer shall maintain an outside paint audit system. As part of that audit the paint manufacturer shall regularly receive and test sample paint panels that are painted along with module bodies. The paint manufacturer shall also provide regular onsite inspections of the vehicle manufacturers paint process to assure a consistent level of quality. Audit reports from these inspections shall be provided to management.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ADDITIONAL CORROSION PREVENTION MEASURES:

All locations where fasteners penetrate the outer skin of the module body shall be coated with ECK anti-corrosion agent. In addition, all fasteners that penetrate the outer skin of the module body shall be treated with an anti-corrosion agent to assure the maximum protection against vehicle corrosion and electrolysis.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

NON-METALLIC HOLE INSERTS:

All locations where light heads and fenders attach to the aluminum body shall utilize threaded Nylon inserts to isolate the fasteners from the aluminum module body skin and structure. This practice, along with the other measures described above, shall act to minimize the threat of electrolysis.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

PAINT WARRANTY:

The paint warranty provided by the converter must meet all warranty standards as set forth elsewhere within this specification. At a minimum this warranty will be 4 years/48,000 miles. The warranty MUST NOT be prorated in any manner. Bidder must submit a manufacturer's paint warranty certificate with the bid. Failure to do so will result in automatic rejection of the bidder's proposal.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

CHASSIS PAINT COLOR:

The chassis shall be painted by the ambulance converter with Sikkens Autocryl acrylic urethane paint. The paint shall meet the following requirements:

Color: Pierce #90 Red

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

BODY PAINT COLOR:

The final paint application to the vehicle body shall be made with Sikkens Autocryl acrylic urethane paint.

Color: Pierce #90 Red

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

VEHICLE STRIPING:

An 6" wide Scotchlite reflective beltline stripe shall be applied to the vehicle. The successful bidder shall provide, prior to any material application, CAD drawings that depict the required stripe as it will appear on the finished vehicle. The color shall be as follows:

Color: White Material:
Scotchlite

-To be waist high on cab and zig-zag on forward compartment doors to centerline of body sides wrapping around rear vertical extrusions. - Stripe is not to extend onto rear body face.-To align with rear face chevrons.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

PIN STRIPE:

Scotchlite pin striping, 1" wide, shall be installed per the instructions listed below:

Quantity: 2 Color: Gold

-To be the top and bottom of a 1-1-8-1-1 stripe.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SAMPLE PAINT PANEL:

The successful bidder shall provide a painted test panel, prepared with the specified paint color and number. This process shall confirm correct paint selection, and acceptable color match with the purchaser's current vehicles.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

CABINET DOORS, PLEXIGLAS, HANDLES AND HARDWARE:

Information relative to interior door materials, handles, and hardware is provided below:

HANDLES FOR PLEXIGLAS DOORS:

All sliding Plexiglas doors within the patient compartment of the vehicle are to have extruded handles installed the full height of each door at the outermost edge.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

LATCHES FOR HINGED DOORS:

The hinged doors within the patient compartment are to utilize Southco Stainless Steel flush-style latches as noted below. These latches shall feature recessed pull ring style handles. The latches shall be both positive (mechanical latching) and passive (latches automatically).

Locking: Non-Locking:

Note: Locking latch locations are to be noted on the drawings.

Above section bid exactly as written: _____ Section not provided: _____ Bidder is offering an alternative to this section: _____

INVENTORY CONTROL SYSTEMS:

Provisions for inventory control shall be provided where specified. Sliding door cabinets will have a small footman's loop attached to the trim adjacent to the handle on the door. The handle will be drilled so the security tag can be attached between the trim and the handle so the cabinet cannot be opened without destroying the inventory tag. Hinged cabinet doors will have a small footman's loop on the door as well as the trim where applicable.

Locate: All cabinets except front wall.

Above section bid exactly as written: _____ Section not provided: _____ Bidder is offering an alternative to this section: _____

PLEXIGLAS COLOR:

The Plexiglas interior cabinet doors shall be clear.

Above section bid exactly as written: _____ Section not provided: _____ Bidder is offering an alternative to this section: _____

STAINLESS-INHALATION AREA WALLS:

The rear and side walls bordering the inhalation area shall be covered with stainless steel. The stainless steel used shall have a brushed finish.

Above section bid exactly as written: _____ Section not provided: _____ Bidder is offering an alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

STAINLESS-INHALATION PANEL:

The inhalation panel shall be fabricated using stainless steel. The stainless material used shall have a brushed finish. No panels made of wood or wood-based products will be acceptable.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AVONITE COUNTERTOP:

The patient area countertop(s) shall be constructed of Avonite solid surface material. The countertops shall incorporate a 1" retention lip around the perimeter of the material. A radius cove molding shall be installed at either end of the countertops where the material meets the cabinet wall. The rear edge of the material, adjoining the side wall of the vehicle, shall be sealed with silicone. In addition, any and all areas that require seams due to manufacturing processes shall be sealed with silicone. This material shall be uniform throughout so that scratches can be buffed out without causing adverse effects on the appearance of the material. The Avonite color required is noted below:

Color: To be determined at pre-build.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

INTERIOR COLORS, UPHOLSTERY AND SEATING:

The patient area interior design is specified below:

INTERIOR COLOR SCHEME:

The patient area interior shall feature the materials and colors listed below.

- To be determined at pre-build.

Floor Material:

Floor Color:

Risers

Material/Color: Wall

Material/Color:

Cabinet Color:

Upholstery Color:

Piping Color:

Button Color:

Accent Stripe Color:

Countertop:

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

INTERIOR STORAGE AREAS:

All interior storage cabinets, including the interior of the squad bench, shall be painted for ease of cleaning. Under no circumstances shall carpet be used within these storage cabinets as it is impossible to decontaminate. The paint color is listed within the "Interior Color" section of this specification. The paint shall be treated with an antimicrobial agent.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

RISERS:

The interior of this vehicle shall be constructed without the use of wood or wood-based products. The risers shall be constructed of a reinforced structural composite consisting of a high density polypropylene core laminated between two layers of .024" aluminum skin. The composite shall then be covered by a Formica laminate to match the interior of the vehicle. The finished riser panels shall be impervious to water or other forms of moisture and must be guaranteed against rotting or decomposition.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

STAINLESS STEEL STREETSIDE RISER:

The street side riser beneath the main cabinet wall shall be covered with a single sheet of stainless steel. If the "Interior Color" section of this specification calls for an accent stripe, then the stainless steel shall stop at the bottom of this stripe. The stainless material shall be installed flush with the riser and trimmed at the top and both sides so as to cover the edges. The bottom of the material shall be formed at a 90 degree angle so that, upon installation, the 4" rolled floor will seal against the stainless steel. Designs that do not include this stainless steel riser will not be considered as they will not be capable of protecting the riser from damage due to cot movement, Etc. In addition, stainless steel risers that have exposed edges, or that are more than one piece, will not be acceptable.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

STAINLESS STEEL CURBSIDE RISER:

The curbside riser beneath the squad bench shall be covered with a single sheet of stainless steel. The stainless material shall be installed flush with the riser and trimmed at the top and both sides so as to cover the edges. The bottom of the material shall be formed at a 90 degree angle so that, upon installation, the 4" rolled floor will seal against the stainless steel. Designs that do not include this stainless steel riser will not be considered as they will not be capable of protecting the riser from damage due to cot movement, Etc. In addition, stainless steel risers that have exposed edges, or that are more than one piece, will not be acceptable.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

STAINLESS STEEL LOWER DOOR PANELS:

The lower portion of the patient area entry doors shall be covered with single sheets of stainless steel. If the "Interior Color" section of this specification calls for an accent stripe, then the stainless steel shall stop at the bottom of this stripe. Designs that do not incorporate this feature will not be considered as they will not be capable of protecting the door panels from damage due to cot movement, foot traffic, Etc.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ATTENDANT SEAT:

An attendant's seat base shall be fabricated from aluminum and shall be installed in a position at the head of the cot. The base shall house the vehicle's heat/AC unit as described in that section of this specification. The material shall be perforated to promote airflow to the unit. An EVS model 1800 bucket type seat with a built-in child safety seat shall be installed on the seat base in the rear-facing position. The seat shall be upholstered to match the vehicle interior, and shall be capable of adjustment from front to rear. Under NO circumstances shall this seat be installed in any manner that allows it to swivel due to the lack of stability and weaker structural characteristics inherent in such designs. A seatbelt shall be installed at this location for the occupant of this seat.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

ALUMINUM INTERIOR CABINETS, STREET SIDE:

This specification requires an all aluminum modular cabinet design. Aluminum, a minimum of .063" thickness, is required over wooden cabinetry due to its lighter weight, greater durability, and the ease with which it can be decontaminated. The main cabinet wall shall be of modular construction. All individual cabinets shall be of welded construction. To insure the safety of patients and attendants in the rear of the vehicle, the main cabinet wall installation shall have been tested to a minimum frontal impact of 30 G's per the requirements of the Safety Certification section of this specification. The main cabinet wall may not be constructed of any wood or wood product. Wooden cabinetry can warp, expand, contract, splinter, separate, or crack. Wood will also harbor bloodborne pathogens whereas aluminum can be easily cleaned. Aluminum will remain stable and securely mounted (no fibers to compress) over many years and miles of continuous service. For these reasons, wooden cabinets, even when laminated with another material, will not be acceptable. Bids received that utilize any material other than that which is specified above will be considered non-responsive and will be rejected without further consideration.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative to _____
construction. Methods of cabinet construction that utilize rivets or _____
this section: _____ adhesives of any type will not be considered.

INTERIOR CABINETRY, STREET SIDE

All of the aluminum cabinetry within the vehicle shall be of welded

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ALUMINUM CABINET WARRANTY:

The all aluminum cabinet construction, as described within this section, shall be warranted against any structural defects for a period of time not less than 15 years. This warranty shall be stated within the manufacturer's structural warranty document, and shall not be subject to any mileage limitations.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

CABINET BEHIND ATTENDANT SEAT:

A vertical storage cabinet shall be located behind the attendant seat. The upper storage area shall house the primary electrical distribution area. The lower section shall be used for miscellaneous storage. The left and right cabinet walls shall be fitted with Unistrut shelf track for an aluminum adjustable shelf. Each area shall be accessed through hinged doors. The electrical distribution area shall include a Southco key lock/latching device. The entire cabinet shall be fabricated from aluminum. The interior of the cabinet shall be painted and trimmed as described in the cabinet construction section of the specification.

Number of Doors: 2 (Including Electrical Cabinet)
Number of Shelves (Adjustable): 2 Number of Shelves (Fixed): 1

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

STREET SIDE CABINET WALL:

The street side main cabinet wall shall be constructed from aluminum as described above. Each cabinet within the cabinet wall shall be designed and constructed as an individual welded aluminum box. Each box shall be insulated and soundproofed. The boxes shall then be bolted together to form the main cabinet wall. This design will allow for future modifications to the cabinetry should equipment storage requirements be updated. The cabinet wall assembly shall be further insulated against noise and temperature extremes. The entire assembly shall be bolted to the module body structure. Cabinets that are welded or otherwise permanently affixed to the module body structure will be unacceptable. Such permanent installation methods limit the ability to make design updates at a later time. They also increase the time and cost involved with regard to remounting the body onto a new chassis should that occasion ever arise. Likewise, cabinets mounted with the use of either rivets or adhesives of any kind will not be considered without exception.
Cabinet wall design: See Drawings

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

CABINET SHELVING:

All interior cabinet shelves shall be fabricated from aluminum. The shelves shall utilize mini Unistrut adjustable shelf track.

Quantity: 2 Locate:
Upper cabinets

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

TESTING AND STRUCTURAL INTEGRITY:

The cabinet wall shall not be, in any way, responsible for any portion of the module body's structural integrity. However, the cabinet wall, as well as the methods and materials used to attach the wall to the vehicle, must be structurally sound in the unlikely event that this vehicle is involved in an accident. This testing is required as an added assurance that the vehicle interior is crash-stable and safe for all vehicle occupants. Proposals that include cabinet wall designs that have not been subjected to this testing will be rejected on the basis of being non-responsive.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ADJUSTABLE VERTICAL DIVIDERS:

Adjustable shelf tracks shall be recessed into the upper and lower walls of the cabinet(s) listed below. Plexiglas dividers shall be fabricated and shall fit vertically into the recessed tracks. The dividers shall be adjustable within the track and held into position with cushioned track shelf supports. Note the quantity and location information provided below:

Locate: Inhalation cabinet, above and below shelf
Qty: 10

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

RESTOCKING CABINET FRAMES, STREETSIDE:

The street side cabinet(s) listed below shall feature sliding Plexiglas doors that hinge upward for cleaning and restocking of the cabinet in addition to the normal sliding mode of operation. The extruded door frame shall be installed at the top with a full length piano hinge. This will allow the entire frame to flip upwards providing complete access to the cabinet. The door and frame shall be held in the "up" position with two gas-charged cylinders, and in the down position with two sliding dead bolt type latches. The remainder of the door construction shall adhere to the appropriate section of this specification.

Locate: Upper cabinet doors.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

CPR SEAT STORAGE:

The CPR seat cushion shall be hinged upward to allow for access to the area beneath it. This area shall provide miscellaneous storage. The storage area shall be fabricated with aluminum diamond plate and shall be as large as is possible given the location of the exterior compartmentation and wheel house.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

HEATED IV STORAGE CABINET:

In order to maintain IV solutions at the proper temperatures the cabinet designated below shall include a Minco heat pad. The heat source shall be capable of raising the cabinet 40 degrees above ambient temperature and maintaining the solutions at near body temperature. The heat source shall operate on the 12V electrical system and shall also be powered through the shoreline noted elsewhere within this document. The cabinet shall be fabricated as an insert cabinet, not larger than 1' x 2', that is installed in the front wall cabinet as noted below.

Locate: Over refrigerator
Door Type: Hinged Plexiglas

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SHARPES/WASTE DISPOSAL:

A sharps/waste disposal area shall be installed in a recessed area, fabricated from aluminum, in the inhalation counter top. The lid for this area shall include a spring-loaded hinged-down door through which access will be made to the waste container. The neck of the sharps container will protrude through the top surface of the lid for sharps disposal access. The hinged aluminum lid will provide access to both containers for removal and replacement.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ALUMINUM INTERIOR CABINETS, CURB SIDE:

All of the cabinets located within this section shall meet the same standards for construction, design, materials, and testing as designated in the previous section. Failure of the bidder to provide aluminum cabinets meeting these criteria shall be grounds for rejection of the bid as being non-responsive.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

SQUAD BENCH STORAGE:

A storage area, fabricated from .063" 5052-H32 aluminum, shall be installed beneath the squad bench cushions. This storage area shall be painted and trimmed per the cabinet construction section of this specification. Access to this area shall be gained by raising the bench cushion. This area shall be as large as possible given the design mandates present in the federal 'K' specifications, and the presence of the wheelhouse directly beneath this area. Note that storage areas made of wood, whether or not they are laminated or otherwise covered with

another material, will not be acceptable.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

BENCH HOLD OPEN:

24lb. Gas piston style hold-open devices shall be installed on the flip-up squad bench cushions. These devices will provide for smooth and simple operation. For that reason substitute hold-open devices, such as ratchet style devices, will not be acceptable.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

BENCH HOLD DOWN:

Paddle style latches shall be installed on each flip-up bench cushion to hold the cushions in the 'closed' position. The operation of these latches shall be passive and shall required intentional unlatching in order to raise the squad bench cushion. Each latch is to be flush mounted in the face of the squad bench riser.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SQUAD BENCH EDGE PROTECTION:

An aluminum angled trim piece shall be installed along the bottom edge of each bench cushion. Each piece shall be bent to follow the contour of each cushion on the horizontal plane. These trim pieces shall provide added protection for the upholstery against extensive wear.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

BENCH CEILING CABINET:

A cabinet shall be installed at ceiling level over the full length of the squad bench. This cabinet is to be fabricated from .063" 5052-H32 welded aluminum. The interior of the cabinet shall be painted per the cabinet construction description listed elsewhere within this specification. The cabinet is to be accessed through hinged Plexiglas doors that are held in the 'open' position by gas piston hold-open devices. This cabinet is to be a maximum of 9" H to allow enough clear space between the bottom of the cabinet and the top of the seat below to meet current KKK-F requirements.

Above section bid exactly as written: _____ Section not provided: _____ Bidder is offering an alternative to this section: _____

GLOVE CABINET:

A Glove storage cabinet shall be above the entry door. It shall hold 3 boxes of gloves. The cabinet shall have flip up door constructed of plexiglass and have 3 oval openings in order to pull the gloves from the boxes.

INSIDE/OUTSIDE ACCESS:

An inside/outside dual access storage area shall be provided as indicated below. This area shall be accessible through both an exterior compartment door, and an interior cabinet door.

Locate: _____ Curb side rear
Door Style: Hinged Plexiglas

SPECIAL INSTRUCTION, CURBSIDE CABINETRY:

Above section bid exactly as written: _____
Section not provided: _____ Bidder is offering an alternative to this section: _____

There shall be an insert cabinet at the foot of the bench. It is to be fabricated from aluminum. There shall be two adjustable shelves. It is to have a hinged Plexiglas door. Dimensions: To be determined at pre-build.

ALUMINUM INTERIOR CABINETS, FORWARD WALL:

Like all other cabinets in the patient area that are to be fabricated and installed by the manufacturer, the cabinets on the forward wall are to be fabricated from aluminum as dictated in the appropriate section above. Again, failure of the bidder to meet the criteria established within this specification with regard to cabinet design, construction, materials, and testing will be cause for rejection of the bid as being non-responsive.

Above section bid exactly as written: _____ Section not provided: _____ Bidder is offering an alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

FRONT WALL CABINET:

A cabinet shall be provided on the front wall of the patient area just inside the side access door. This cabinet shall run from floor to ceiling and shall be fabricated from .063" welded aluminum. The cabinet shall be anchored at both the top and bottom for stability. Under no circumstances shall this cabinet be welded to any module body structural member. This storage area shall be used to house purchaser supplied

bagged equipment and supplies.

Finish Material: texture painted surface per interior color
Color: Shelf scheme section 3 (.125" thick material) 1 fixed, 2
Quantity: Shelf adjustable rubber matting
Type: Shelf
Liner:

Above section bid exactly as written: Section not _____
provided: Bidder is offering an alternative _____
to this section: _____

FRONT WALL CABINET HINGED DOORS:

Access to the front wall cabinet, as described above, shall be provided per the description below.

Door Type: Hinged Plexiglas Quantity:
4 (Equal size) Locate: Front
wall cabinet Latch Style: Southco

Note: The hinges on the front wall cabinet shall be
304 polished stainless steel stamped from Grade
stainless steel to prevent corrosion.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

MODULE INTERIOR ACCESSORIES AND TRIM:

The following section addresses interior accessories and trim features. All installation locations, as noted below, shall be strictly adhered to by the bidder. The items in this section will directly influence the quality of care given to the patient, as well as the safety of the attendants. For these reasons the installation locations listed below must be met without exception.

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

IV HOOKS:

Cast Products recessed swing-down IV hangers shall be installed per the instructions listed below. These hangers are to be near flush mounted into the patient area ceiling to reduce their interference with the walkway when not in use. The arms of each hanger shall be rubberized so as to reduce the possibility of injury that may occur if contact is made with them. This style IV hanger shall be sufficient to meet Federal KKK 1822-E.

Quantity: L 2 Mid body over squad bench Mid body
ocate: over cot
Locate:
Locate:

Above section bid exactly as written:
Section not provided: Bidder is _____
offering an alternative to this section: _____

CEILING GRAB RAIL WITH ANTI-MICROBIAL COATING:

A grab rail shall be installed in the ceiling as noted below. This rail is to be constructed of stainless steel. Integral stanchions shall be welded into place at fixed points along the length of the rail for attachment to the ceiling. The rail shall attach through aluminum mounting plates that are welded to the module roof structure for strength and durability. Because contamination occurs most often as a result of contact, this feature must be treated with an anti-microbial agent consisting of an inorganic ceramic coating embedded with silver ions. This coating shall be effective against a broad range of microbes including bacteria, molds, algae and fungi.

Size: 8' Locate: Wall edge
of cot Locate: Bench edge
of cot

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

PATIENT AREA DOOR GRAB RAILS:

Angled door handles shall be installed on the interior door panels of each access door. The handles shall be one-piece and shall be constructed of stainless steel. The handles shall feature smooth radius corners and flange mounts at each attachment point. Because contamination occurs most often as a result of contact, this feature must be treated with an anti-microbial agent consisting of an inorganic ceramic coating embedded with silver ions. This coating shall be effective against a broad range of microbes including bacteria, molds, algae and fungi.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

COVE MOLDING:

A radius cove molding shall be installed at all areas of the floor that may have seams.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

PROTECTIVE EDGE TRIM:

The 90 degree edges of the squad bench, the attendant seat riser, and the front wall cabinet shall be protected by a chamfered trim angle.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

CEILING:

The patient area ceiling shall be constructed of a bright white Alcopla aluminum composite material consisting of a polyethylene core laminated between two sheets of coated aluminum. The headliner shall be smooth, impervious to moisture, easy to clean and durable. It shall have the same rate of expansion and contraction as the aluminum body. Headliner that is padded or upholstered in any way will not be considered, nor will any headliner made of wood or wood products due to the lower degree of durability and the risk of contamination inherent in such materials. Plastic, fiberglass or ABS headliner material is not acceptable due to the cracking commonly caused by the differing rates of expansion. Lastly, the headliner material shall be treated with an antimicrobial agent. The bidder, at the request of the purchaser, may be required to submit proof of the application along with a detailed description of the agent used and the types of organisms that it affects.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

FIRE EXTINGUISHER:

One (1) 10# ABC fire extinguisher, with vehicle mounting bracket, shall be supplied on the completed vehicle per the notations below.

Quantity: 1 Note:
Ship Loose

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

COT MOUNTS AND ACCESSORIES:

The following cot mounting hardware shall be installed per the instructions listed below. The installation shall meet the hardware manufacturer's installation guidelines.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

COT MOUNT:

One (1) Ferno Washington #175-3 cot mount shall be installed per the instructions and recommendations of the hardware manufacturer. The cot mount shall be installed for a single position as noted below. The cot mount installation must meet all requirements for cot retention as set forth in the current federal specification.

Cot mount location: Center mount Cot Model:
Ferno Power FlexX

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

F. W. #601 ICS CHARGING SYSTEM:

A Ferno Washington model 601 ICS charging system shall be installed to power a F.W. POWERFlexx cot. The system includes the power connection to the cot, floor cup and electrical connection to the shoreline circuit. Unless otherwise specified it will be installed in the center location.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

COT SAFETY HOOK:

Install a yellow cot safety hook just inside the trailing rear door of the vehicle. This hook shall be the type recommended for the cot being used.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

LIGHTBARS:

Lightbar information, as may be required, is noted below:

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

FRONT LIGHTBAR FOR 96" BODY:

The lightbar specified below shall be installed per the lightbar mounting instructions that follow. This lightbar shall be a maximum of 88" wide for installation with a 96" wide body.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

FRONT LIGHT BAR MOUNTING:

The light bar specified above shall be installed per the instructions listed below. The light bar model is also provided for clarification purposes.

Light Bar Location: Front face of module body
Light Bar Model: Whelen 4500

Note: In all cases the light bar shall be installed so that it is below the module body roofline.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

FRONT LIGHT BAR:

Whelen 4500, 88" custom front lightbar. Designate all light components and lens colors for each of the (10) sections.

Layout: [R][R][R][C][R][O][C][R][R][R]

Legend: R=red C=white O=Opticom Mount W/prewire Lighthouse
Type: Super LED 400 Series modules. Lens Color: All Clear Special
Instructions: Builder to install a 3M HP792 Opticom Emitter. It is to be programmed for the Indianapolis Metro frequency.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ELECTRICAL EMERGENCY VISUAL WARNING SYSTEMS:

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

HEADLIGHT FLASHER:

The vehicle headlights shall alternately flash through the activation of the appropriate switch on the cab control console. This feature shall be accomplished through a solid state flashing device that is a part of the primary electrical control board.

A programmable phase control shall be built into the system board to allow alteration of the light flashing sequence. The flash pattern must be capable of being switched from an alternating pattern to a pulsating pattern.

The phase of "on" time can be programmed to flash when desired for an effective light pattern. For instance: If the left grill light is flashing "on", the right flashing headlight is desired to be "on". Different flash patterns may be achieved through programming.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

L.E.D. LIGHTING:

Whelen M9 Series red super L.E.D. lighting shall be installed per the quantity and location requirements listed below. All lighting is to include the optional chrome flange.

Quantity: 8 Clear

ns Color:

Locate: (2) street side

(2) curbside

Locate: (2) rear face at window level

(2) rear face at

Locate: upper corners

Locate:

Locate:

Above section bid exactly as written: _____
Section not provided: _____ Bidder _____
is offering an alternative to this section: _____

L.E.D. LIGHTING:

Whelen M6 Series red super L.E.D. lighting shall be installed per the quantity and location requirements listed below. All lighting is to include the optional chrome flange. To be stop/warning only.

Quantity: 2 Lens Color: Clear Location:

Rear doors, lower section.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

AMBER SUPER L.E.D. KKK REAR LIGHT, 600 SERIES:

A Whelen M6 Series amber super L.E.D. light assembly shall be installed as noted below to function as a KKK light. The light is to include the optional chrome flange.

Quantity: 1 Clear

Color:

Locate: Centered above rear doors

Above section bid exactly as written: _____
Section not provided: _____ Bidder _____
is offering an alternative to this section: _____

INTERSECTION LIGHTS:

One pair of Whelen M4 series red super L.E.D. light assemblies shall be installed. One light shall be installed on each chassis front fender. Each light is to include the optional chrome flange. At the time of writing, there is not an angled fender mount for this lamp.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

GRILLE LIGHTS:

One pair of Whelen M7 series red super L.E.D. light assemblies shall be provided and installed on the left and right sides of the chassis grille. The installation shall be done in such a way as to not impede airflow through the chassis manufacturer's O.E.M. grille. Aftermarket, modified, or improvised grille work will not be acceptable. Lens Color: Clear

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AUDIBLE EMERGENCY WARNING SYSTEMS:

The following audible emergency warning features shall be installed on the vehicle:

AIR HORNS:

One pair of 12" Buell air horns shall be installed and activated per the information provided below by the chassis O.E.M.

Trumpet Location: One on each side of the bumper Switch Location:
Steering wheel and passenger's side of dash

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

114547

The vehicle manufacturer shall supply and install a Federal Q2B mechanical siren as noted below. **SIREN:**

Siren Location: Center of front bumper

Above section bid exactly as written: Section not
provided: Bidder is offering an alternative to _____
this section: _____

114757

The vehicle manufacturer shall supply and install a siren as noted below.
Manufacturer: Carson Model: SA441 MagForce Siren Location:
Cab Radio Console Quantity: 1 **SIREN:**

Above section bid exactly as written: Section not
provided: Bidder is offering an alternative to _____
this section: _____

114897

The electronic siren specified above shall be installed in the designated location and wired for operation through the speakers noted below. **SIREN INSTALLATION:**

Above section bid exactly as written: Section not
provided: Bidder is offering an alternative to _____
this section: _____

115137

Whelen Underpro speakers shall be installed on the chassis per the instructions listed below. The speakers shall be wired for operation through the siren listed above. Quantity: 2 Locate: Mounted beneath bumper **SIREN SPEAKERS:**

Above section bid exactly as written: Section not
provided: Bidder is offering an alternative to _____
this section: _____

115220

The siren speakers specified above shall be bumper mounted and wired for operation. **SIREN SPEAKER INSTALLATION:**

Above section bid exactly as written: Section not
provided: Bidder is offering an alternative to _____
this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

SIDE BODY RUNNING LIGHTS:

One Whelen 700 Series L.E.D. light with a red lens and a chrome flange shall be installed on each side of the vehicle towards the rear of the body. These lights shall function as both running lights and turn signals.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

EXTERIOR COMPARTMENT LIGHTING:

The compartment lighting for the exterior compartments noted above shall consist of LED lighting strips. Strips of LED lights shall be installed on each side of the compartment opening on the inside of the door jamb and shall direct the light back into the compartment. These light strips shall fit securely into clips installed in this location. These strips shall be semi rigid. Please note that rope lighting is not an acceptable alternative to this requirement.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ICC MARKER LIGHTS:

The required ICC marker lights for this vehicle are to be LED. Bidder should note that some lightbars have ICC lights already installed. In that case those lights shall be installed in lieu of the lights described here unless denoted within this document.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

SCENE LIGHTS:

Weldon 7862-0000-33 HID 7" X 9" scene lights shall be installed in the quantity and locations noted below. These lights shall be activated by right and left side switches located within the front electrical control console. Additional means of activation, if any, are listed in the electrical section of these specifications. These lights are to provide 250 candlepower, 3200 Lumens.

Quantity: 6 Locate: (2)
curbside Locate: (2)
streetside Locate: (2)
rear load

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

LED GROUND LIGHTING BENEATH MODULE BODY:

LED ground lighting shall be provided fore and aft of the rear axle on both sides of the vehicle. Lights shall be activated from an automatic switch auto when a compartment door is opened on that side of the vehicle. Lights may also be activated by a separate switch on the driver control panel. Lights shall include a snap-in 45 degree clip for light dispersion and ease of replacement. LED's shall be spaced a minimum of 1" apart.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

TAIL LIGHTS:

Whelen 600 Series L.E.D. tail/brake, back-up, and turn signal lights shall be installed on the rear of the module body per the instructions listed below. All six of these lighting assemblies shall include the optional chrome flange. The tail/brake and turn signals shall be L.E.D. style lights. The back-up light shall be L.E.D.

Locate: Vertical stack in rear face
Top: Turn Center: Stop/tail Lower: Reverse

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SPECIAL INSTRUCTION, NON-EMERGENCY LIGHTING:

The chassis headlights are to operate whenever the engine is running. Therefore, an automatic headlight activation system is to be used. Daytime running lights will not be accepted as they do not activate the marker and running lights.

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

SPECIAL INSTRUCTION, NON-EMERGENCY LIGHTING:

There shall be LED strip style step lighting installed on the cab. They are to activate whenever the cab doors are opened.

ELECTRICAL POWER GROUP:

The vehicle electrical system is extremely important to this purchaser. The requirements for the onboard electrical system are noted in detail below. The bidder's electrical system, should it deviate in any way from that which is specified, shall be explained in great detail. This explanation shall present facts relative to the bidder's system only. The bidder shall not draw any comparisons between the electrical system being offered, and the system being specified. Any comparisons or decisions regarding one system versus another will be made solely by the purchaser and shall be based entirely on the written description as provided by the bidder at the time the proposal is submitted. All decisions made by the purchaser as to the merits of one system over another will be final and will not be subject to discussion, either verbal or written, at any point.

CONVERTER ADDED ELECTRICAL SYSTEM STANDARDS:

The converter added electrical system must meet all current KKK ambulance design standards. The converter added electrical system has proven to sometimes be the most complex and troublesome system on this type of vehicle. A system is desired that is simple in design so that electrical problem diagnosis and repair time can be minimized. The electrical system must be thoroughly engineered and manufactured to allow simple personnel operation. Finally, the system must be designed so that the probability of experiencing dead batteries, shorted electrical components and engaging in lengthy troubleshooting procedures will be reduced. Past experience has shown that the electrical output provided by the chassis charging system can be marginal and under certain circumstances the electrical load can exceed the alternator output. In addition, some electrical systems have not provided proper circuit protection and at times have not provided adequate wiring for the load. To address the above objectives, the following minimum electrical system design is required:

CONVERTER ADDED CHASSIS CHARGING ENHANCEMENT:

The basic design for the chassis electrical output system must include equipment that provides adequate electrical needs to operate the vehicle's electrical components. In addition, a system is desired that continually monitors the chassis voltage and amperage outputs. The end result of the desired electrical output system is longer battery life, less down time associated with charging system repairs, and the fulfillment of each and every emergency response.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

BATTERY SELECTOR SWITCH:

A two-position power selector, turning the battery power to the ambulance systems either On or Off shall be furnished. The switch shall be located on or near the drivers seat base. Unless otherwise specified, the battery switch shall not disconnect power to the OEM chassis systems. Note: Ford products are not permitted to disconnect chassis power with this switch.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

Variable Throttle Advance:

In order to reduce the number of component parts and unnecessary throttle linkages, the factory electronic throttle control shall be utilized to activate the throttle advance system. The controls shall require that the chassis be placed in Park or Neutral with the Module Disconnect switch in the On position and the Park Brake engaged before activation of the throttle advance. A digital display warning on the driver console, accompanied by an audible tone, must instruct the driver to Set Park Brake or Release Park Brake to engage or disengage the automatic throttle control. No Exceptions.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

AUTOMATIC LOAD MANAGEMENT:

In order to insure that onboard personnel attention is focused on victim care rather than being occupied with monitoring vehicle systems, an automatic load management system is required. The bidder must provide a system that continually monitors the vehicles charging system while it is sitting on scene. The system design shall have the ability to automatically shut down not less than ten pre-programmed electrical circuits to prevent a deficit charging condition while the vehicle is sitting at idle. The system shall be programmed to automatically scan the electrical system on one-minute intervals.

If a deficit charging condition continues for more than one minute, a pre-programmed circuit shall shut down, correspondingly reducing the electrical draw. If the deficit condition continues, a second circuit shall automatically shut down. This process shall continue to repeat at one-minute intervals until at least ten circuits are shut down with corresponding load reductions. In the event any circuits are being controlled (disabled) by the load management system, the driver must be informed in two ways. First, a digital display warning shall appear on the driver information panel indicating Load Management Active. At the same time, the L.E.D. switch indicator light shall begin to flash for each specific circuit that is being disabled. Systems that cannot indicate specific circuits being affected by the Load Management System are not acceptable.

Load management systems must be programmed through a microprocessor based logic and memory system rather than a series of mechanical relays. Systems that require manual activation of Load Management will not be acceptable. Once the deficit condition ceases to exist, the system must be capable of restarting any disabled circuit without any action required by the driver.

The bidder is required to furnish a system that permits the end user, if he so desires, to determine prior to production the order of priority for shedding loads. Although the entire system must function automatically, it must also be designed so that it can be set by the end user to a System Off mode for restocking, training, or maintenance convenience. The System Off setting shall not be merely a switch which would permit the operator to easily turn off Load Management. The intent is to keep the system active at all times when the vehicle is in operation.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

LOW AMPERAGE SWITCHING:

Electrical devices that are not activated automatically shall be controlled from either the cab or patient area control panels through the use of manual switches. A low amperage switch that sends only an on/off signal to the central electrical distribution area is required. The switches provided shall have documented durability ratings at a minimum of fifty million (50,000,000) cycles. The switch design shall include magnetic technology to attain the required durability ratings. Membrane or rocker style switches will not be acceptable due to their tendency to degrade and fail in continued field use. To eliminate loose or poor contacts, it is unacceptable to have soldered or terminal type connections for the switches. The switches must be an inherent part of the panels.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SWITCH "ON" INDICATOR LIGHT:

All switches (unless otherwise noted) on the panels described below shall include a red L.E.D. indicator light that will indicate when power is being applied to a circuit. Designs that have indicator lights that activate to indicate switch position only are not acceptable. In addition, the indicator lights shall be independently programmable to flash or steady burn as required to meet the end user specification.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

SWITCH PANEL DESIGN:

Each console shall contain a combination of control switches as described above and also an integral digital vacuum florescent message center. The message center shall provide driver/attendant information as described below. The message center is required over the use of buttons, lights or gauges because of the ease in acknowledging the specific information. The drivers display shall be capable of displaying at least four sets of 20 character messages at one time. The rear display shall be capable of displaying two sets of 20 character messages at the same time. Both the cab and patient area switch panels shall be fabricated on a pre-printed circuit board. The circuit boards must be common in design and must be interchangeable between all models offered by the manufacturer being proposed. Switch panels that are not standard in design and are not interchangeable from one unit to another will not be considered.

The switch panels shall be fabricated so that they can be removed for service in less than three minutes. The removal of each panel shall be facilitated by the use of a single four-wire connector for panel control and communication. An optional rear AM/FM speaker system will have its own six-wire connector in addition to the standard panel connection. Volume control must not have any protruding knobs. It shall be flush to the panel surface and shall meet the following requirements for decontamination and spill resistance.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

SWITCH PANEL DECONTAMINATION AND SPILL RESISTANCE:

Both the driver and the patient area switch panels must be designed so they can be easily decontaminated. Current designs make decontamination impossible when an attendant must use a contaminated glove to operate the switch panel while treating a patient. These areas become breeding grounds for bacteria. For this reason, the switch panels must be built in such a manner that there are no openings or crevices on the panel faces. The entire switch panel must be sealed with a protective overlay material. There shall be no printing or labeling on the face of this material. Holes in the panel through which switches, backlighting, or legends are inserted will be unacceptable. The panels must be cleanable with any commercially available spray type cleaner or disinfectant commonly used by fire and EMS services with no damage created by fluids leaking through openings onto the circuit boards or switch contacts.

The panel surface must be covered with a polyester film laminate for enhanced solvent resistance, strength, and durability. Both front and rear switch panels shall have been tested to at least a 24 hour exposure under DIN 42 115 Part 2 for the following commonly used chemicals: hydrogen peroxide <25%, bleach <20%, glycol, isopropanol, xylene, benzene, phosphoric acid <30%, ammonia <2%, hydrochloric acid <10%, acetic acid <50%, sulphuric acid <10%, diesel fuel, silicone oil, linseed oil, Windex, Formula 409, Fantastic, Wisk, Downey, washing powders, fabric conditioner, Ajax, and glycerin. The bidder shall be required, if asked, to provide the appropriate documentation showing that the above chemicals produced no visible damage after at least a 24 hour exposure. Bidders should be cautioned that commonly used polycarbonate or vinyl membrane fascia and nameplate substrates for electrical panels will not meet this requirement.

The panels shall be spill resistant to shed accidental moisture from spilled soft drinks or coffee cups. In addition, the surfaces of the panels shall be antimicrobial. This purchaser reserves the right to request documentation showing that the panel surfaces will kill microbes on contact. This antimicrobial property is to be inherent in the surface material itself and shall not need to be reapplied at any point in the future. Products offered that include aftermarket treatments of the panel surfaces will not be considered.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

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SWITCH PANEL BACKLIGHTING:

Both switch panels shall have backlight with fiber optic technology, powered with high intensity L.E.D. lights. All switch perimeters shall be lighted and raised for ease of switch location at night. In addition, the drivers control panel shall include a red color-coded area to further distinguish warning and emergency controls as well as specific blue color-coded areas for vehicle operation and maintenance systems. The remainder of the switch perimeters shall be green for easy nighttime visibility.

The switch panels shall include, on each panel, an individual intensity control. Switch panel lighting that operates at the same level as the cab instrument panel or that illuminates both the front and rear panels at the same intensity will not be considered. The bidder must provide totally independent control for each panel.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

CAB CONTROL SWITCHING AND DIGITAL DISPLAY:

Switch Activation:

The cab control center shall include 34 switches installed in a backlight aluminum control panel. The following minimum circuits shall be provided on the switch panel:

-Module Disconnect -Master Warning Circuit-Light Bars-Red Flashing Lights-Primary/Secondary Override (Each position shall have a red On

indicator light-Right Scene Light-Left Scene Light-Rear Loading Lights-Rear Heat/AC with temperature adjustment-Single Button Vehicle Electrical Diagnostics-Horn/Siren-Vehicle Trip Odometer

Digital Message Center:

The following digital displays will appear on the faceplate of the cab console when selected:

-Voltage (to the nearest 0.10 volt)-Amperage (to the nearest amp)-Engine Tachometer-Inside Patient Area Temperature-Access or Compartment Door Open Warning Message-Oxygen Warning For Both Tank and Line Pressure-Electrical System Diagnostics-24 Hour Clock -Trip Odometer-Emergency Brake Warning-The System Shall be Capable of Displaying Specific Verbiage As Directed

By The Customer

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

PATIENT AREA CONTROL SWITCHES AND DIGITAL DISPLAY:

Switch Activation:

The patient area control center shall include 28 switches installed in a backlight aluminum control panel. The following circuits shall be provided on the switch panel:

-Rear Heat/AC Activation and Separate Temperature Control-Rear Heat/AC Fan Speed Control-Power Vent -Cot Dome Lights and Bench Dome Lights-Oxygen and Suction-Patient Status -Stop Clock-Oxygen Line Pressure-Oxygen Cylinder Pressure-Radio Volume Control (when required)-Electronic Privacy Glass Activation (when required)

Digital Message Center:

The following digital displays shall appear on the faceplate of the patient area control console when selected:

-Patient Area Temperature-Thermostat Setting-Oxygen Tank Pressure-Oxygen Line pressure-Oxygen Warning-Stop Clock-The System Shall Be Capable Of Displaying Specific Verbiage As Directed

By The Customer

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SPARE SWITCHES:

Any spare or unused switches must be capable of being programmed later for additional functions including the ability to act as macro switches (one switch activating multiple features) without the need for rewiring.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

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MODULE COMPARTMENT AND ACCESS DOOR SWITCHES:

Exterior circuits such as loading lights, side scene lights and compartment lights shall be activated by low amperage, non-mechanical switches. The type of switch desired is a magnetic sensitive switch that activates the circuit when the magnetic plane is broken. Plunger type switches are not acceptable because of their short useful life and higher amperage requirements.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

DOOR OPEN INDICATOR:

A Door Open warning indicator, with accompanying audible chime shall be installed in the cab. There shall be a silence for the audible alarm. A digital display shall appear on both consoles indicating which specific door has been left ajar. In the case of access doors, the display will read Front Access Door Ajar or Rear Access Door Ajar. In the case of a module compartment door, the display will read Compartment #1 Ajar etc.

Under no circumstances will red flashing lights or systems that do not specifically pinpoint a specific open door be acceptable.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

CENTRAL ELECTRICAL DISTRIBUTION AREA:

The converter-added electrical system is to be centered around the use of a logic-controlled microprocessor built into a single circuit board. This logic control system is required to maximize reliability of the electrical system and to minimize downtime. It must be provided in order to match the type of control system used in the chassis and to prevent communication problems caused when dissimilar systems are employed. The design of the system must totally separate chassis operation from converter feature installations. In the unlikely event of converter component failure, the chassis must still remain operable.

The computer based electrical system must utilize components similar in design to the computerized chassis functions such as the OEM cruise control system, fuel feed system, transmission control system and braking system.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

MULTIPLEXED ELECTRICAL COMMUNICATIONS SYSTEM:

Because most chassis manufacturers have chosen multiplex electrical communication technology to operate the chassis system, this purchaser requires the same technology for the converter-added systems. A standardized electrical control and wiring system is required. The central processing distribution board must be pre-printed and must be common in design and interchangeable between all similar models offered by the manufacturer. The vehicle manufacturer must own and control all rights to the electrical system. Standard systems controlled by outside vendors and modified for a specific vehicle or manufacturer will not be acceptable due to the unpredictability for future parts or service. Switch panels or main boards that are not standard in design and are not interchangeable from one unit to another will not be considered. The system must consist of logic-controlled solid state circuitry installed on a pre-printed circuit board. Since solid state logic-controlled technology is commonly available and not proprietary to any one manufacturer and has been proven to be more reliable with greater benefits, a blanket exception or clarification regarding the electrical specification is not acceptable and will be cause for automatic rejection of the bid.

In addition to the main distribution board, the system will consist of a series of input or output control modules to manage and feed information and to control the various circuits required by this specification. All modules shall be pre-printed, solid state devices. Each output module must have 10 or more outputs and shall communicate with the central processing unit over a single wire. The output modules shall be capable of carrying 10 amps load per output or a total load of 50 amps per module. The total system must be capable of expanding to control at least 160 output circuits. Each input module must have 10 or more switch inputs. The total system shall be capable of expanding to handle at least 40 inputs. AMP Mate-Lock connectors shall be used for all load connections. Molex connectors shall be used for data transmission lines. Under no circumstances will systems be acceptable that utilize screw type terminals or card connectors due to their susceptibility to working loose due to vibration normally encountered on a vehicle.

The system shall include as standard 16 analog inputs to manage information such as oxygen pressure, amperage, voltage etc. coming from an analog source. These analog inputs must be capable of being used in logic statements to enhance the operation and control of the vehicle.

Under no circumstances may the operation of the central processing unit or the input or output modules be based upon the operation of mechanical relays. Relay based systems require higher amperage operating current and rely on mechanical contact points designed to degrade with use, creating short duty cycles for the vehicle electrical system. Relay based systems, due to those limited short duty cycles, will not be acceptable for the requirements of this specification.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

CENTRAL PROCESSING UNIT FUNCTION:

The central processing unit shall be fully programmable and shall control a number of functions. The minimum functions to be controlled are as follows:

- No Load Starting Circuit (as defined in subsequent sections of this specification)
- Load Management
- Sequenced Start Circuit Activation
- Electrical System Diagnostics
- Climate Control Heat/AC operation
- Intensity Controls for Patient Dome Lights
- Oxygen Warning System (high and low pressure)
- All Warning Light Flashers and Flash Patterns
- Patient Status System
- Electrical Diagnostics

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

CIRCUIT PROTECTION:

Each converter added electrical circuit must have circuit protection for both over current limit and over temperature condition. The circuit protection shall be provided by solid-state circuit breaker/switching devices (MOSFETS) for both the input and output wire feeds for each circuit. The circuit protection shall require no user intervention such as that required for circuit breakers or fuses. For added protection and system reliability, all MOSFETS shall have heat sinks. Lack of heat sinks will be cause for automatic rejection of the system being offered. The system shall indicate an output fault warning on the digital display in the driver control area. Should a problem occur, the warning shall identify the specific module and the output number for easy troubleshooting and to minimize the down time of the vehicle.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

FIELD PROVEN AND TIME TESTED ELECTRICAL SYSTEM:

The converter-added electrical system represents the most important system in the design of this ambulance. Reliability and proven performance is essential. Therefore, the bidder must be able to demonstrate that he has at least ten years experience with solid state logic-controlled electrical systems installed in emergency vehicles. Further, the bidder must be capable of all programming required by the system without turning to outside vendors. This includes custom-programmed items as may be delineated in this specification.

The bidder may be required to demonstrate an in production or in service vehicle in order to guarantee compliance with this requirement. Prototype or first of a kind electrical systems are not acceptable. The purchaser may require the bidder to furnish specific references to further document compliance.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SPLICE-LESS WIRING:

Each converter-added circuit shall be powered through an individual wire that is free of any splices within the wire harness. For ease of troubleshooting and for greater reliability, one end of the wire shall plug directly into the output module and the other end shall connect to the device or the pigtail of the device being powered.

The use of daisy-chain wiring will not be acceptable. The direct wiring technique described above is the only wiring system that will be accepted.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

WIRING:

The following minimum wiring standards are required:

Identification

By color, by itemized number, and by actual circuit name, stamped every 4-6"

Size:

Size will vary and will be dependent upon each wire being able to carry a minimum of 125% of the actual circuit load.

Protection of Wiring:

All wiring must be run in breakaway wire loom for protection against abrasion or chafing.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

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NO LOAD STARTING:

To assure the ability to start the unit, the vehicle electrical system must have the ability to manage electrical loads during the engine startup or cranking period. The system shall automatically shut down all converter-added electrical loads when the ignition is activated and the engine is cranking. Once the engine has started, the system shall automatically turn back on all loads that were previously in the On condition. This feature must be accomplished by system programming and not by means of a relay or a series of relays which are subject to failure, thereby causing the entire converter-added electrical system to fail. Relay based systems will not be considered.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

SEQUENCED START CIRCUIT ACTIVATION:

To prevent the heavy load burden placed on the alternator and charging system when all emergency warning circuits are activated at the same time by pre-loading the master switch, the vehicle electrical system shall automatically sequence all load-managed warning circuits so they come on one at a time. This sequenced start activation shall be an integral part of the electrical system and shall be accomplished without the use of relays or after market add-on systems.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ELECTRICAL SYSTEM DIAGNOSTIC CHECK:

The electrical system must have built-in capability to self check each converter-added circuit and identify a short or open circuit by means of a single diagnostic switch. The diagnostic system shall be operable from the drivers seat without exiting the vehicle. Diagnostic systems that are incorporated into exterior compartments, patient area interior cabinets, or remote locations will not be acceptable. The relevant information shall be displayed on the digital display on the cab switch panel. When the operator activates the Run Diagnostic switch, the unit will initiate the systems check. The digital display shall flash the message Running Diagnostics while the check is in progress. The system must go through all outputs for the vehicle to check for malfunctions. If a malfunction is found, the display shall stop flashing and steady burn to indicate the message Module #, Output #, Fail. This message will direct the service staff to the correct output module and the correct wire number in order to troubleshoot and repair the system. Once a failure is identified, the operator may continue to run the remainder of the diagnostic by pressing the Warning Reset switch. The bidder shall furnish with the vehicle a detailed diagram indicating each input and output module number and identifying each circuit controlled by the module.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

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WESTFIELD, INDIANA

ELECTRICAL SYSTEM SUPPORT DATA:

Being able to service the electrical system should the need arise is of the utmost importance. To reduce the down time associated with servicing, the following information shall be provided at the time of delivery:

- 1 Electrical system operating instructions
- 2 Patient area heating/AC schematic and parts list
- 3 Oxygen and vacuum system schematic, parts list and leak check instructions
- 4 Battery and alternator schematic and system description
- 5 Radio communications installation instructions
- 6 Wire description list for converter added wiring
- 7 Individual schematics for all converter added electrical circuits

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

MODULE DISCONNECT DEFAULT:

The 'Module Disconnect' circuit shall default to the "on" position when the battery switch is activated. Manual activation of the switch is not acceptable.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

BATTERY SWITCH:

A two position 'On-Off' "Master" battery switch shall be installed on the vehicle within easy reach of the driver. This switch shall control power to the converter-added electrical circuits. Items specified to be wired "Battery Hot" shall not be affected by the Master battery switch. Under no circumstances shall this switch control the chassis O.E.M circuitry. All chassis power (ignition, headlights, etc.) shall remain as designed by the chassis builder.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

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INVERTER/CHARGER:

The vehicle converter shall furnish and install a Vanner 20-1050CUL inverter/charger. The inverter shall be located as noted below and shall power each onboard electrical outlet. There shall also be a Vanner Interface Module, Inverter Status Panel, Charger Status Panel, and Control Switch furnished and installed at the location noted below. The "Charger" portion of this unit shall be wired to the vehicle shoreline circuit.

Inverter Location: Street side intermediate #2 compartment
Switch Location: Inhalation Panel

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

110V INTERIOR OUTLETS:

Duplex 110V interior electrical outlets shall be installed. Quantity and location information is noted below. Each outlet shall be GFI protected and shall illuminate when powered.

Quantity: Loc 2 Inhalation Area
ate:
Locate: Wall Over Bench
Locate:

Above section bid exactly as written: _____
Section not provided: _____ Bidder _____
is offering an alternative to this section: _____

12V OUTLETS:

12 volt electrical outlets shall be installed within the vehicle. Quantity, location, and adapter type are provided below. All 12 volt outlets shall be protected by a Schottky medical isolator. In addition, the 12 volt outlets shall be wired through a 20 amp manual reset circuit breaker. All outlets, unless noted otherwise below, shall be battery switched. All 12 volt outlets shall be labeled.

Adapter Type: Cigarette Lighter Style
Quantity: 3 Locate: Inhalation
Area (2) Locate: Front Wall
Cabinet

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

SHORELINE:

The vehicle shall be equipped with a Kussmaul Auto Eject shoreline. The male shoreline inlet shall be installed as noted below. This inlet shall be a straight three-prong type and shall include the female adapter plug. The shoreline shall be designed so that the plug will automatically eject from the inlet in the event that the vehicle is started while still plugged in. The shoreline shall include a hinged cover to protect it from the elements. The shoreline system shall be designed to handle a 20 amp load, and shall also include a 20 amp inline GFI breaker.

Locate: rear face-street side of module body

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

BLOCK HEATER WIRED THROUGH SHORELINE:

The engine block heater shall be wired through the vehicle shoreline system. The wiring shall include a cutoff switch, to be installed with the onboard electrical components, to disable this feature for seasonal use.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

EXTRA CIRCUIT BREAKER:

A Spare 15 amp manual resetting circuit breaker shall be installed as a provision for the possible installation, at a later time, of additional equipment. This feature is in addition to any prewire that may be included elsewhere within this vehicle specification. The total number of spare breakers is listed below:

Quantity: 1

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

CAB SWITCH PANEL INSTALLATION:

The cab control panel for the converter-added electrical circuits shall be flush mounted in the upper face of the cab console. The mounting surface shall be angled downward so that the digital readout and switches are visible to both the driver and passenger positions.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

REVERSE ACTIVATED REAR SIDE SCENE LIGHTS:

The rear scene lights on either side of the vehicle shall be programmed to be activated when the vehicle is placed into reverse gear. This is in addition to the other modes of operation as described elsewhere within this document. This feature shall be attained through the programming of the onboard electrical system. Systems that require additional wiring in order to provide this feature are not acceptable.

Above section bid exactly as written: Section not
provided: Bidder is offering an alternative _____
to this section: _____

SIDE DOOR ACTIVATED CURB SIDE SCENES:

The curb side scene lighting shall be programmed to be activated when the patient compartment side access door is opened. This is in addition to the other modes of operation as described elsewhere within this document. This feature shall be attained through the programming of the onboard electrical system. Systems that require additional wiring in order to provide this feature are not acceptable.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

REVERSE ACTIVATED LOADING LIGHTS:

The load lighting on the rear of the vehicle shall be programmed to be activated when the vehicle is placed into reverse gear. This is in addition to the other modes of operation as described elsewhere within this document. This feature shall be attained through the programming of the onboard electrical system. Systems that require additional wiring in order to provide this feature are not acceptable.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AUDIBLE LOW VOLTAGE ALARM::

An audible alarm shall be programmed to warn the operator should the vehicle's voltage drop below 11.8 volts for 120 seconds.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

EMERGENCY BRAKE WARNING:

When the vehicle is placed into 'Park' or 'Neutral' with the "Module Disconnect" switch 'On' and the "Red Flashing Light" switch 'On', then an audible alarm, accompanied by a visual readout on the cab console digital display, shall warn the vehicle operator to engage the emergency brake. Likewise, when the vehicle is placed into gear, then the same alarm will sound with a visual display warning the operator to disengage the emergency brake.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

REPORT LIGHT:

Report lighting, as described below, shall be installed within the patient area. The fixture will be wired through a switch on the rear electrical control panel.

Quantity: M 1 Thinlite #111
Model: _____
Locate: Over the inhalation area

Above section bid exactly as written: _____
Section not provided: _____ Bidder is _____
offering an alternative to this section: _____

INTELLITEC LED CLOCK:

An Intellitec Time Manager clock shall be provided and installed as noted below:

Locate: Center over rear doors

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

STEP WELL LIGHT:

A Weldon chrome light shall be installed in the side step well to light the step well area when the side access door is opened. The light shall be activated by a magnetic door switch installed on the door as described elsewhere within this document.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

PROGRAMMABLE LIGHT TIMER:

A momentary switch shall be installed as noted below to operate the specified lighting with the battery switch in the 'Off' position and the shoreline plugged in. The switch shall activate a programmable timer that will automatically shut the lights off after the specified period of time. This timer shall be field-programmable to allow the time to be adjusted after the vehicle has been delivered. The initial time setting shall be as follows:

Locate: Light(s)
Controlled: Initial
Time Setting:

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

FLUORESCENT LIGHTING:

39" Thinlite fluorescent lighting shall be installed in the patient area ceiling. Quantity and location information is provided below. The lighting shall be operable from the inhalation area control console, as well as through any other means that may be outlined elsewhere within this specification.

Quantity: 3 Locate: _____ Space
evenly over cot

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

REFRIGERATOR:

The vehicle shall be equipped with a Norcold DC-0040 refrigerator. The unit shall be wired through the vehicle's 12V electrical system, and run off of the shoreline power, when the unit is plugged into 110V power. Location of installation is noted below.

Locate: _____ Front wall below pass through window.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

DOME LIGHTS:

Whelen LED dome lights shall be installed in the patient area ceiling. Quantity and location information is listed below. The lights shall be recessed into the headliner and shall not protrude from the ceiling more than 1". All dome lighting shall be adjustable and shall be controlled via solid state switching at the patient area electrical control console.

Over Cot: 3
Over Squad Bench: 3 1
Walkthrough:

Above section bid exactly as written: _____ Section not
provided: Bidder is offering an alternative _____
to this section: _____

AUXILIARY PATIENT AREA LIGHT CONTROL:

The lighting defined below shall be controlled as follows. This control is in addition to the method of control dictated in the preceding section.

-A switch on the front control panel can be used to activate the patient area lighting should it be off. The switch can also be used to deactivate the patient area lighting should it be on.

-The patient area lighting shall reset to normal operational programming should a patient area access door be opened, or if the master battery switch is turned 'off', and then 'on' again.

Lights: patient dome lights
Lights: fluorescent lamps

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AUXILIARY LIGHT CONTROL REQUIREMENTS:

Due to the complicated requirements of the auxiliary lighting control, as described above, a circuit using additional switches and relays to achieve the same functionality is not acceptable. Added relays, switches, wires, and connections deviates from the single wire, solid state, microprocessor-based system as outlined in this specification. The above feature, like others that have been specified, may reduce the reliability of a relay-based system. This electrical feature, like all others on this vehicle, must be attained through solid state microprocessor-based technology.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

PANEL LIGHT:

A Hella goose neck panel light shall be installed at the location described below. An 'On/Off' switch shall be incorporated into the light

fixture.

Quantity: 1
Locate: Cab Console

Above section bid exactly as written: _____
Section not provided: _____ Bidder is offering an alternative to this section: _____

HAND HELD SPOT LIGHT:

An Optronics 400,000 CP hand-held spot light shall be installed in the cab area. The light shall include a momentary switch for activation. A bracket shall be included to hold the light when it is not in use. This bracket shall provide quick and simple access to the light. Retention designs that require two hands to remove the light for operation will not be acceptable.

Locate: To be noted with the cab console plans

Above section bid exactly as written: _____ Section not provided: _____ Bidder is offering an alternative to this section: _____

PREWIRE FOR FUTURE STREAMLIGHT INSTALLATION:

Prewire shall be provided as noted below for future installation of Streamlight charger bases.

Quantity: 2 Locate: Streetside #2 compartment, right wall.

Dealer to supply and install 2 Streamlight Fire Vulcan hand lanterns with vehicle charger bases and shoulder straps.

Above section bid exactly as written: _____ Section not provided: _____ Bidder is offering an alternative to this section: _____

SPECIAL INSTRUCTION, ELECTRICAL & PROGRAMMING:

Dealer to install a Kussmaul 110V air pump to supplement the air suspension and air powered audible warning devices installed on this vehicle. It is to operate from the shore line power only.

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

HEATING AND AIR CONDITIONING:

A temperature control system is desired that provides quick and simple operation while maintaining a uniform temperature throughout the patient compartment. The unit itself must be located so that it is easy to access for service. This location must also be near the O.E.M. heat/AC connection points when provided so as to increase the overall efficiency of the unit. The following minimum design standards must be adhered to in

order to best meet the needs of this purchaser.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative to _____
this section: _____

SYSTEM CONTROLS:

The climate control functions shall be controlled through a primary location in the inhalation panel, and through a secondary location in the cab electrical control console. The switches used for the operation of this system shall be identical to the switches described in the "Electrical" section of this specification. Switches shall be present in the front console to select either 'Heat', 'A/C', or 'Off' functions and to select the desired temperature. Switches shall be present in the rear control panel to select either 'Heat', 'A/C', or 'Off' functions, 'Automatic' or 'Manual' mode of operation, and to select the desired temperature.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

THERMOSTAT:

The temperature level shall be adjustable from both the front and rear electrical control panels for the 12V system. Two switches at each location shall be used to scroll through desired temperature settings on one degree intervals. Once the desired temperature is set, then the system shall retain that setting regardless of the position of the battery switch. The temperature sensor for the system shall be located at the inhalation panel so as to attain a true patient compartment temperature. The temperature setting and the actual temperature reading shall be viewable from both the front or rear digital displays.

This system is to be controlled through the converter-added electrical system. Under no circumstances shall household type thermostats be acceptable.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

SYSTEM OPERATION:

The system shall allow for both automatic and manual operation. When set to the manual mode the fan speed shall be infinitely adjustable from the rear control panel for extra ventilation. When set to the automatic mode the fan speed shall be controlled by the thermostat setting. The temperature that is selected shall be continuously maintained. When the selected temperature has been reached, then the system shall automatically cycle the fan speed down to reduce unnecessary electrical load.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

HEATER WATER CONTROL:

The flow of hot water from the chassis to the converter-added heat/AC system shall be controlled by an electrically operated valve located under the hood. Water flow to the rear heater shall be activated when either the front or rear heater switch is turned to the 'On' position. It is a requirement of this specification that this type of valve be used unless the converter is supplying a self-contained heat-AC system. The term "self-contained" is defined as being a unit that does not require any water flow from the chassis. Under no circumstances will manual valves be considered. Manual valves are inconvenient and tend to leak.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

UNIT LOCATION AND SERVICE:

It is required that the heat/AC unit be installed inside a custom-made aluminum box beneath the attendant's seat. This box shall be perforated to provide air flow to the heat/AC unit mounted beneath the seat. This is required for efficiency, serviceability, and safety.

Many O.E.M. chassis builders provide tap-in points for the converter-added heat/AC unit behind the driver's seat. Therefore, system efficiency is higher when the hot water from the chassis is pumped to the area beneath the attendant's seat. Efficiency is not lost by pumping the water over an extended distance or up to ceiling level. Such a condition would naturally result in reduced patient area temperature levels as excessive flow resistance would be present.

The attendant's seat shall be installed on a hinged top cover for the aluminum heat/AC system housing. This allows the seat to be hinged forward and out of the way for service work. The unit will be accessible by removing two bolts located behind the seat and lifting the seat forward as opposed to dismantling cabinetry, etc.

In the unlikely event of a system leak the specified installation location will allow the leakage to run out onto the ground. Systems that are installed above cabinetry may leak into the cabinets, thus ruining the cabinets (if they are wood) and the cabinet contents.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

FILTRATION SYSTEM:

A replaceable carbon filter shall be installed at the air intake area of the heat/AC system. Replacement of the filter shall be simple, and shall require very little time so as to assure that the vehicle will not have to be taken out of service. Replacement filters shall be readily available and shall be capable of being cut to the proper size to fit the vehicle.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

AIR FLOW:

The installation of the heat/AC system shall include an air duct system to direct the airflow in such a way as to provide uniform temperature levels throughout the patient compartment. Air intake shall be from the floor level. The air shall be channeled through a duct that is aft of the heat/AC unit. The air shall exit through adjustable vents at the ceiling level above the attendant's seat. This design will allow for a circular flow of air throughout the patient compartment.

The specified design will separate the intake and exhaust ports. Separation of the intake and exhaust will decrease air turbulence and improve overall efficiency of the system. Systems that combine intakes and exhausts within the same grille work will not be acceptable.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

12V HEAT/AC SYSTEM:

The 12V heat/AC system shall be installed per the instructions listed above. This system shall be designed to be independent from the chassis O.E.M. AC system. At no point shall the converter-added A/C system tap into the O.E.M. system. The system provided shall include an evaporator, compressor, and a bottom-mount condenser designed for use with the DT466 engine. The BTU and CFM ratings on this unit shall be as follows:

Heat: 65,000BTU
A/C: 32,000BTU
CFM: 650

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ROOF MOUNTED POWER VENT:

A power vent shall be installed on the roof of the module body and shall be wired through a switch located on the rear control panel. The vent shall also be capable of being manually closed from inside the patient area.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

STATIC ROOF MOUNTED VENT:

A static vent shall be installed on the roof of the module body. The vent shall be capable of being manually closed from inside the patient area.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

CAB CONSOLE AND COMMUNICATIONS:

The vehicle communications and console features are designated below:

ANTENNA COAX #1:

An RG 58U coax shall be installed. A removable access plate in the patient area ceiling shall be provided for access to the exterior termination point located on the module body roof. Under no circumstances shall the vehicle design necessitate disassembly of the interior finish work to access the coax termination point. The coax shall terminate at

the following locations:

Exterior Termination: Forward centerline of roof

Interior Termination: In console

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

ANTENNA COAX #2:

A second RG 58U coax shall be installed. A removable access plate in the patient area ceiling shall be provided for access to the exterior termination point located on the module body roof. Under no circumstances shall the vehicle design necessitate disassembly of the interior finish work to access the coax termination point. The coax shall terminate at the following locations:

Exterior Termination: Mid roof centerline of roof

Interior Termination: In console

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ANTENNA COAX #3:

A third RG 58U coax shall be installed. A removable access plate in the patient area ceiling shall be provided for access to the exterior termination point located on the module body roof. Under no circumstances shall the vehicle design necessitate disassembly of the interior finish work to access the coax termination point. The coax shall terminate at the following locations:

Exterior Termination: Rear roof centerline of roof

Interior Termination: In console

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

RADIO PULL WIRE:

A pull wire shall be installed to aid radio cable installation and prevent removal of interior panels once the vehicle has been completed. The following pull wire shall be installed:

Location:
Terminate:

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

CAB CONSOLE:

A console shall be installed in the cab. The console shall be installed at floor level and shall allow space for siren and radio head installation. The console shall be color coordinated with the cab interior. The top of the console shall be on a slant and shall house the recessed emergency control panel and integral digital display. Under no circumstances shall the console interfere with the OEM vehicle controls or gauges, nor shall the control panel be installed in such a manner as to interfere with either the OEM vehicle controls, gauges, or the driver's line of vision.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

CONSOLE EXTENSION:

An aluminum console extension shall be fabricated and installed in the vehicle cab. The extension shall attach to the front console and shall include a location to mount siren and/or radio heads, as well as three slots for storage of map books and binders. The console extension shall be covered in carpet to compliment the interior cab color.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

RADIO POWER/GROUND:

The vehicle manufacturer shall install heavy gauge cable B positive and ground for radio power. Termination is to be to insulated studs.

Locate: Behind Driver Seat
Status: Battery Switched

Above section bid exactly as written: _____
Section not provided: _____ Bidder is _____
offering an alternative to this section: _____

SPECIAL INSTRUCTION, CAB CONSOLE & COMMUNICATIONS:

Install a 3 station FireCom system with radio interface in the front and rear. Exact part numbers are pending.

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

OXYGEN AND SUCTION SYSTEMS:

Reliability, safety, and ease of operation are essential characteristics of the onboard oxygen and suction systems. System design must meet the following minimum guidelines. Bidders are asked to respond to each section appropriately per the bid requirements and to explain any variations to these requirements.

SWITCHING FOR OXYGEN AND SUCTION:

The rear switch panel shall contain two switches labeled "OXYGEN" and "VACUUM". Each of these switches shall electrically activate those respective systems. That activation shall be instantaneous. Systems that are not instantaneously responsive to their activation will not be considered.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

SYSTEM DESIGN:

A single piece manifold assembly shall serve as the basis for the oxygen delivery system. The manifold assembly shall incorporate ports for installation of O2 lines to all specified outlets, an electrically activated oxygen delivery solenoid, and a manual bypass valve. The assembly shall be installed behind the inhalation panel and shall be easily accessible.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ELECTRICAL OXYGEN ACTIVATION:

The switch, located on the rear control panel and labeled "OXYGEN", shall activate the solenoid. This design will allow for the instantaneous flow of oxygen while eliminating the need to manually turn a valve to initiate oxygen flow.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

MANUAL BYPASS:

The oxygen solenoid shall be equipped with a manual bypass valve. Located behind the inhalation panel, the valve shall be easily accessible so that, in the unlikely event of an electrical failure, administration of oxygen may continue.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

SYSTEM REGULATION:

The patient area shall be free of high pressure oxygen lines. To accomplish this the vehicle converter shall install a KKK approved regulator at the oxygen cylinder. The regulator shall include an integral dial type gauge to monitor the cylinder contents. A single low pressure line shall be installed from the regulator to the O2 manifold assembly. This method shall insure that all high pressure is maintained in an exterior compartment away from the interior patient area.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

OXYGEN LINES:

The O2 line connecting the regulator to the manifold assembly shall be rated at 200 psi working pressure and 1,250 psi burst pressure. The line shall be UL approved. There shall be NO connections installed in the line between the regulator and manifold assembly as these create a possibility for leakage. All connections shall be DISS style and shall be specific to the gas being supplied.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

LINE PROTECTION:

The O2 line shall be protected from crimping through the installation of a flexible spring guard on the portion of the line in the cylinder storage compartment.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

SYSTEM MONITORING:

The condition of the oxygen system shall be continually monitored and reported to the vehicle operators through the vehicle's onboard electrical system. Digital readouts containing the information listed below shall be available primarily at the patient area control console. The secondary location for availability of this information shall be the cab console. The information available shall include the following:

- Cylinder Pressure-Line Pressure

In addition, this system shall be designed to offer a warning, both audible and visual, if the condition of the oxygen system falls outside of the following pre-programmed parameters:

- Low Cylinder Pressure (500 psi or below)
- Low Line Pressure (40 psi or below)
- High Line Pressure (75 psi or above)

These oxygen system warnings shall immediately notify the personnel of a problem, again, via a digital readout and audible alarm. The system shall

require the personnel to acknowledge receipt of the information.

Above section bid exactly as written: _____ Section not
provided: _____ Bidder is offering an alternative _____
to this section: _____

PRELIMINARY SYSTEM TESTING:

The oxygen system shall be tested prior to installation in the vehicle. This test shall be performed by the vehicle manufacturer and shall subject the system to three times (3X) the working pressure. This test shall be conducted for a minimum of four (4) hours.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

FINAL SYSTEM TESTING:

The completed system shall be tested again once it is installed in the vehicle. This test shall be performed at working pressure for a minimum of four (4) hours. After the system has passed the inspection process it shall be capped and tagged per Federal KKK specifications.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

ADDITIONAL OXYGEN AND VACUUM SUPPLIES:

The oxygen and suction systems shall be complete upon delivery with the exception of the O2 cylinder. The cylinder shall be supplied and installed by the purchaser after delivery of the vehicle has taken place. One disposable mask shall be supplied with the completed vehicle.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

OXYGEN BOTTLE MOUNT, VERTICAL TRACK FOR QRM-V:

Vertical track for mounting of a QRM-V O2 bottle mount shall be welded on the back wall of the compartment in the right hand corner. The O2 bottle mount is adjustable for "M" or "H" size tanks.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ZICO QRM-V CYLINDER BRACKET:

A Zico QRM-V oxygen cylinder bracket shall be installed in the main O2 compartment.

Locate:
Tank Size:

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

OXYGEN OUTLETS:

Two oxygen outlets shall be installed in the rear inhalation panel unless otherwise noted below.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

ADDITIONAL OXYGEN OUTLETS:

Additional oxygen outlets shall be installed as noted below.

Quantity: 1 Locate: _____ Wall over
head of bench.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

NCG STYLE OXYGEN AND SUCTION OUTLETS:

The oxygen and suction outlets installed in the vehicle shall be NCG

style
outlets.

Above section bid exactly as written: _____
Section not provided: _____ Bidder _____
is offering an alternative to this section: _____

FLOWMETER:

Dial type flowmeter(s), in the quantity listed below, shall be supplied with the completed vehicle. Each flowmeter shall be supplied with a mating quick connect adapter. The flowmeter shall provide a maximum flow of 25 LPM.

Quantity: 3

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

1

CYLINDER WRENCH:

A cylinder wrench shall be installed inside the oxygen compartment. The wrench shall be installed in such a way as it will not move or rattle. The wrench shall be chained to the compartment so that it cannot be removed, however, the chain must not interfere with the operation of the wrench.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SPARE 'D' BOTTLE STORAGE:

A FW #521 single 'D' bottle bracket shall be provided and installed in the location listed below.

Quantity: 3 Location: In the recess under the head of the bench.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

"D" BOTTLE STORAGE IN HEAD OF BENCH:

Recessed storage for three (2) "D" size bottles shall be provided. These bottles are to be secured using the F.W. #521 bottle brackets specified elsewhere within this document. This storage area shall be installed at the head of the squad bench and recessed into the floor. Access will be provided by an opening in the face of the bench facing the step well.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

AMBULANCE SPECIFICATIONS

WESTFIELD FIRE DEPARTMENT

WESTFIELD, INDIANA

SSCOR ASPIRATOR:

The manufacturer shall furnish and install an SSCOR suction system. The system shall include a #107CDC20 pump, a #22000 wall-mounted regulator, and a #23002 canister holder. The aspirator shall be accessible for use from the inhalation area per the attached prints.

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

1

LETTERING:

Lettering information is noted in detail below:

LETTERING DESIGN:

This specification calls for lettering to be supplied and installed by the successful bidder. The lettering layout is summarized within this section and broken down by location in the sections below. Information relative to lettering material, size, color, font, or any other special requirements is also listed in the following sections. The lettering layout is to be as follows:

Right Side of Module:
Left Side of Module:
Rear of Module: Front
of Module: Cab
Fenders: Cab
Doors: Cab
Hood: Roof:

Above section bid exactly as written: _____ Section
not provided: _____ Bidder is offering an
alternative to this section: _____

SPECIAL INSTRUCTION, LETTERING:

-Install 6" white reflective chevrons on the rear face of the body.-The chevrons are to mate up to the stripe on the body sides.-The chevron stripes are to be 8" apart allowing the red paint to create the contrast.