
INVITATION TO BID

Medium Duty Type I Ambulance

Sealed bids, invited by the City of Knoxville, will be received by the Purchasing Division of the City of Knoxville, in Room 667-674, City County Building; 400 Main Street; Knoxville, Tennessee, until **11:00:00 a.m.** (Eastern Time) on **Friday, July 1, 2022** at which time they will be opened and publicly read aloud and a contract awarded as soon thereafter as practicable for a **Medium Duty Type I Ambulance**.

The bid opening may be viewed virtually on Zoom through this link:

Join Zoom Meeting

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Passcode: 587482

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Scope of Work:

The City of Knoxville Fire Department is seeking to purchase: a Medium Duty Type I Ambulance.

It is not the intent of these specifications to limit competitiveness based on a single brand or manufacturer. Rather, it is the intent of these specifications to clearly describe the furnishing and delivery to the City of a complete apparatus equipped as specified. The primary objective of these specifications is to obtain the most acceptable apparatus for service in the City of Knoxville Fire Department (KFD). These specifications cover specific requirements as to the type of construction and tests the apparatus must conform, together with certain details as to finish, material preferences, equipment and appliances with which the successful Bidder must conform. Throughout this specification, Bidder is to note that "street side" is to designate the driver's side of the vehicle and "curb side" is to designate the passenger side of the vehicle.

Note: Excepting specifications where “or equal” is stated, no substitutions will be accepted for brand named components/parts in order to ensure repair flexibility and uniformity of parts inventory.

Specifications:

The design of the apparatus will embody the latest approved automotive engineering practices. The workmanship will be of the highest quality in its respective field. Special consideration will be given for service access to areas needing periodic maintenance, ease of operation, and symmetrical proportions. Construction must be heavy-duty and provide ample safety factors to carry loads as specified. The construction method employed will be in such a manner as to allow ready removal of any component for service or repair.

The apparatus must conform to the National Fire Protection Association standard for automotive ambulances, NFPA 1917, CASS GVS V.1.0 and KKK-A-1822 unless otherwise specified in this document.

The apparatus must further conform to all current federal motor vehicle safety standards with no exception.

Each bid must be accompanied by a set of detailed contractor's specifications consisting of a thorough description of the apparatus and equipment being bid.

Each bidder will furnish satisfactory evidence of their ability to design, engineer, and construct the apparatus specified and will state the location of the factory producing the apparatus.

Delivery Requirements

The successful bidder will provide a minimum of three (3) full days of hands-on training to the Knoxville Fire Department and Knoxville Fleet Services Department on operation, care, and maintenance of the apparatus beginning at time of delivery.

Bidder is to state time for delivery of the apparatus below. Due to this procurement being purchased through funds granted by the American Rescue Plan Act (ARPA), proposed delivery time may be considered in conjunction with the bid price when making an award.

Time to delivery following issuance of City of Knoxville purchase order: _____

Exceptions

The following apparatus specifications are considered minimum design and construction standards against which the apparatus will be inspected. It is the intent to receive bids on equipment/apparatus that meets the attached detailed specifications in their entirety. **All deviations, no matter how slight, must be clearly explained on a separate cover sheet entitled "Exceptions to Specifications."** Each exception or variation must be set forth on a separate sheet, **indicating page number(s) of the original specification**, and must be submitted with the proposal. Any proposals deemed as taking total exception to these published specifications may result in immediate rejection of the bid. Any bids taking exception to any specification noting “No exceptions allowed” within these published specifications may result in immediate rejection of the bid.

Failure to follow this format, provided for the convenience of the City of Knoxville, may render the vendor's bid non-responsive and ineligible for award of contract.

Additional Items

The City would like to reserve the right to exercise the option of purchasing additional vehicles as well as any and all associated equipment as specified herein at the same terms and conditions within the (12) twelve month period following award. Vendor will be given sufficient time, based upon the nature of the items being acquired, to meet the requirements of the City in a reasonable manner. The City does not guarantee nor does it commit to the purchase of additional vehicles.

Bidder agrees to extend this right to the City of Knoxville YES _____ NO _____

ISO Compliance

The manufacturer must operate a quality management system meeting the requirements of ISO 9001.

The International Organization for Standardization (ISO) is a recognized world leader in establishing and maintaining stringent manufacturing standards and values. The manufacturer's certificate of compliance affirms that these principles form the basis for a quality system that unswervingly controls design, manufacture, installation, and service.

The manufacture's quality systems will consist of, but not be limited to, all written quality procedures and other procedures referenced within the pages of the manufacturer's quality manual, as well as all work instructions, workmanship standards, and calibration administration that directly or indirectly impact products or processes.

In addition, all apparatus assembly processes must be documented for traceability and reference. The manufacturer must also engage the services of a certified third party for testing purposes where required and will provide evidence of such third party testing to the City upon request.

If the manufacturer operates more than one manufacturing facility, each facility must be ISO certified. By virtue of its ISO compliance the manufacturer will provide an apparatus that is built to exacting standards, meets the City's expectations, and satisfies the City's requirements. A copy of the manufacturer's certificate of ISO compliance for each manufacturing facility must be provided with the proposal.

Bidder fully complies without exception or deviation YES _____ NO _____

Apparatus Drawing

Bidder must provide a drawing of the front, rear, both sides, and each interior walls of the apparatus included with the bid. Compartment dimensions must be listed on the drawing or on a separate page.

Bidder fully complies without exception or deviation YES _____ NO _____

Warranty Repairs by City of Knoxville

In order to ensure timely repairs, the manufacturer will authorize the City of Knoxville Fleet Services Department to perform all warranty repairs and will reimburse the City at an agreed upon labor rate. Winning bidder must allow the City of Knoxville to become Warranty Certified through the manufacturer of the apparatus, not the distributor.

All necessary repairs will be pre-approved by the manufacturer's warranty center.

Bidder fully complies without exception or deviation YES _____ NO _____

NFPA Compliance

The manufacturer, Bidder, and/or third party-supplied components of the apparatus must be compliant with NFPA 1917, current edition.

Bidder fully complies without exception or deviations

YES _____ NO _____

Overall Height Restriction

The apparatus will not exceed 9' 5" in height.

Bidder MUST fully comply without exception

Overall Length Restriction

The apparatus will not exceed 27 feet in length.

Bidder MUST fully comply without exception

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 sled test (HYGE or equal) that simulates an actual impact condition. This test must be performed, under both side and frontal impact conditions, by a testing agency that is independent of the manufacturer.

The bidder must perform and certify to dynamic sled or impact testing run on the ambulance body. The body tested must include normally installed components for each of the following areas of the vehicle. The body structure and installed components must 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.

The following are the tests required:

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

Bidder MUST fully comply without exception

Warranty

The bid will 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 must define warranties on specific components. All warranties detailed in this specification are to be considered the minimum acceptable warranty periods. In the blank lines the bidder will note the terms of the warranties that apply to the manufacturer being proposed.

MODULAR BODY STRUCTURAL WARRANTY: 30 years/Unlimited 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.

ELECTRICAL WARRANTY: 7 years/100,000 Miles

CONVERSION WARRANTY: 2 Years/24,000 Miles

PAINT WARRANTY: 7 Years/84,000 Miles

The following schedule will apply in regard to any claims submitted for paint under this warranty:
0 – 4 years = 100% / 5 years = 50% / 6 years = 35% / 7 years = 20%
(No paint vendor warranties will be accepted)

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

Warranties will be transferable for their duration. All warranties will be from the manufacturer as opposed to a distributor or service center. This is necessary for the protection of the City, and to guarantee a certain known level of service and warranty. If, however, the bidder feels that it is necessary to modify the manufacturer's warranties, then the bidder must state why this modification is necessary. In addition, the bidder must 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 will be considered invalid and the manufacturer's warranty will 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 provided by the bidder, despite being in writing, will automatically be rejected.

Bidder fully complies without exception or deviation YES _____ NO _____

Chassis Specification

Bidder will supply a 2023 Freightliner M2 106 174" chassis. The chassis will be per the below chassis specification.

1. Interior Convenience / Driver Retention Package

- Interior convenience package

2. Vehicle Configuration

- M2 106 Conventional Chassis
- 2023 model year specified
- Set back axle – truck
- Straight truck provision
- LH primary steering location

3. General Service

- Rescue and emergency service
- Emergency vehicles business segment
- Fixed load commodity
- Terrain/duty: 100% (all) of the time, in transit, is spent on paved roads
- Maximum 8% expected grade
- Smooth concrete or asphalt pavement - most severe in-transit (between sites) road surface

- Expected front axle(s) load : 9880.0 lbs
- Expected rear drive axle(s) load : 12000.0 lbs
- Expected gross vehicle weight capacity : 21880.0 lbs

4. Truck Service

- Ambulance body
- Expected truck body length : 16.0 ft
- Expected body/payload cg height above frame 32.0 inches

5. Engine

- Cummins L9 300EV HP @ 2200 RPM, 2200 Gov RPM, 880 LB-FT @ 1200 RPM R/F/E

6. Electronic Parameters

- 75 mph road speed limit
- Cruise control speed limit same as road speed limit
- PTO mode engine rpm limit - 1100 rpm
- PTO mode brake override - service brake applied
- PTO rpm with cruise set switch - 700 rpm
- PTO rpm with cruise resume switch - 800 rpm
- PTO mode cancel vehicle speed - 20 mph
- PTO governor ramp rate - 250 rpm per second
- One remote PTO speed
- PTO speed 1 setting - 900 rpm
- PTO minimum rpm – 700 rpm
- Regen inhibit speed threshold - 5 mph

7. Engine Equipment

- Cummins CM2450 with on engine acumen
- 2016 onboard diagnostics/2010 EPA/carb/GHG21 configuration
- No 2008 carb emission certification
- Standard oil pan
- Engine mounted oil check and fill
- Side of hood air intake with firewall mounted air cleaner
- LN 12v 320 amp 4962PA pad mount alternator
- Three (3) DTNA genuine, flooded starting, min 2250cca, 510rc, threaded stud batteries
- Battery box frame mounted with standard battery jumpers
- LH battery box mounted as far aft as possible, no greater than 60 inches back of cab
- Wire ground return for battery cables with additional frame ground return
- Non-polished battery box cover
- Positive and negative posts for jumpstart located on frame next to starter
- Cummins turbocharged 18.7 cfm air compressor with internal safety valve
- Standard mechanical air compressor governor
- Air compressor discharge line
- GVG, fire and emergency service vehicles engine warning
- Cummins engine integral brake with variable geometry turbo on/off with brake lamps
- RH outboard under step mounted horizontal aftertreatment system assembly with LH horizontal tailpipe exiting forward of rear tires
- Engine aftertreatment device, automatic over the road active regeneration and dash mounted single regeneration request/inhibit switch
- Standard exhaust system length

- LH horizontal tailpipe, exit forward of rear tires
- 6 gallon diesel exhaust fluid tank
- 100 percent diesel exhaust fluid fill
- LH medium duty standard diesel exhaust fluid tank location
- Standard diesel exhaust fluid pump mounting
- Standard diesel exhaust fluid tank cap
- Horton Drivemaster on/off engine fan clutch
- Automatic fan control with dash switch and indicator light, non engine mounted
- Cummins spin on fuel filter
- Full flow oil filter
- 700 square inch aluminum radiator
- Antifreeze to -34f, ethylene glycol pre-charged SCA heavy duty coolant
- Blue stripe coolant hoses
- Constant tension hose clamps for coolant hoses
- Radiator drain valve
- Lower radiator guard
- 750 watt/115 volt block heater
- Chrome engine heater receptacle mounted under LH door
- Aluminum flywheel housing
- Electric grid air intake warmer
- 12v 38mt HD starter with integrated magnetic switch

8. Transmission & Transmission Equipment

- Allison 3000 EVS automatic transmission with PTO provision
- Allison vocational package 198 - available on 3000/4000 product families with vocational model EVS
- Allison vocational rating for fire truck/emergency vehicle applications available with all product families
- Primary mode gears, lowest gear 1, start gear 1, highest gear 6, available for 3000/4000 product families only Primary shift schedule recommended by DTNA and Allison, this defined by engine and vocational usage
- Secondary shift schedule recommended by DTNA and Allison, this defined by engine and vocational usage
- Primary shift speed recommended by DTNA and Allison, this defined by engine and vocational usage
- Secondary shift speed recommended by DTNA and Allison, this defined by engine and vocational usage
- Engine brake range preselect recommended by DTNA and Allison, this defined by engine and vocational usage
- Engine brake range alternate preselect recommended by DTNA and Allison, this defined by engine and vocational usage
- Fuel sense 2.0 disabled - performance - table based
- Driver switch input - default - no switches
- Maximum engine speed for PTO engagement 1000 rpm
- Vehicle interface wiring connector with blunt cuts, at back of cab
- Electronic transmission customer access connector firewall mounted
- Customer installed Chelsea 270 series PTO
- PTO mounting, LH side of main transmission
- Magnetic plugs, engine drain, transmission drain, axle(s) fill and drain
- Push button electronic shift control, dash mounted. Automatic neutral with selector override with multiplexed park brake
- Transmission prognostics - disabled (n/a) 2013, for use in 1000/2000 only

- Water to oil transmission cooler, in radiator end tank
- Transmission oil check and fill
- Synthetic transmission fluid (tes-295 compliant)

9. Front Axle and Equipment

- Detroit DA-F-10.0-3 10,000# ff1 71.5 KPI/3.74 drop single front axle
- Bendix ADB22X air disc front brakes
- Fire and emergency severe service, non-asbestos front lining
- Front disc brake rotors
- Front oil seals
- Vented front hub caps with window, center and side plugs – oil
- Standard spindle nuts for all axles
- Front air disc brake internal adjusters
- TRW THP-60 power steering
- Power steering pump
- 2 quart see through power steering reservoir
- Mineral SAE 80/90 front axle lube

10. Front Suspension

- 10,000# Taperleaf front suspension
- Maintenance free rubber bushings - front suspension
- Front swaybar
- Front shock absorbers

11. Rear Axle and Equipment

- Detroit DA-RS-17.5-2 17,500# r-series single rear axle
- 4.10 rear axle ratio
- Iron rear axle carrier with standard axle housing
- MXL 16t Meritor extended lube main driveline with half round yokes
- Bendix Disc Plus EX225 Air Disc Brakes
- Fire and emergency severe service non-asbestos rear brake lining
- Brake cams and chambers on forward side of drive axle(s) with auxiliary support brackets
- Cast iron outboard rear brake drums
- Rear oil seals
- Mineral SAE 80/90 rear axle lube

12. Rear Suspension

- Airliner 12,000# rear suspension
- Airliner low position ride height
- Standard axle seats in axle clamp group
- Ignition controlled electric dump switch for air suspension with autofill override valve
- Rear air suspension dump valve with autofill for ignition off and >5 mph, light, buzzer, body switch wiring and override control
- Dual instant response rear suspension leveling valves with ping tank and reserve tank for 10/12/15,000# airliner
- Transverse control rods
- 10,000/15,000# airliner rear suspension stabilizer bar
- Rear shock absorbers - one axle (air ride suspension)

13. Brake System

- Air brake package
- Wabco 4s/4m ABS
- Reinforced nylon, fabric braid and wire braid chassis air lines
- Fiber braid parking brake hose
- Standard brake system valves
- Standard air system pressure protection system
- Standard U.S. front brake valve
- Relay valve with 5-8 psi crack pressure, no rear proportioning valve
- Air Dryer, Wabco System Saver 1200 IWT, Heated
- Air dryer mounted under hood
- Steel air brake reservoirs mounted inside rail
- Clear frame rails from back of cab to front rear suspension bracket, both rails outboard
- BW DV-2 auto drain valve without heater on all tank(s)

14. Trailer Connections

- Upgraded chassis multiplexing unit
- Upgraded bulkhead multiplexing unit

15. Wheelbase and Frame

- 4425mm (174 inch) wheelbase
- 9/32x3-7/16x10-1/16 inch steel frame (7.14mmx255.6/0.281x10.06 inch) 80ksi
- 1600mm (63 inch) rear frame overhang
- Frame overhang range: 61 inch to 70 inch
- Calculated back of cab to rear suspension c/l (CA) : 108.66 in
- Calculated effective back of cab to rear suspension c/l (CA) : 105.66 in
- Calculated frame length - overall : 276.18 in
- Calculated frame space LH side : 67.59 in
- Calculated frame space RH side : 136.61 in
- Calculated space available for deckplate : 102.45 in
- Square end of frame
- Front closing crossmember
- Standard weight engine crossmember
- Standard crossmember back of transmission
- Standard midship #1 crossmember(s)
- Standard rearmost crossmember
- Standard suspension crossmember

16. Chassis Equipment

- Three-piece 14 inch chromed steel bumper with collapsible ends
- Front tow hooks - frame mounted
- Bumper mounting for single license plate
- Fender and front of hood mounted front mudflaps
- Grade 8 threaded hex headed frame fasteners

17. Fuel Tanks

- 34 gallon/128 liter short rectangular aluminum fuel tank - LH
- Rectangular fuel tank(s)
- Plain aluminum/painted steel fuel/hydraulic tank(s) with painted bands

- Fuel tank(s) forward
- Plain step finish
- Fuel tank cap(s)
- Raycor Inline Fuel water Separator
- Equiflo inboard fuel system
- High temperature reinforced nylon fuel line

18. Tires

- Michelin XZE 245/70r19.5 16 ply radial front tires
- Michelin XDS2 245/70r19.5 16 ply radial rear tires

19. Hubs

- Conmet preset plus premium iron front hubs
- Conmet preset plus premium iron rear hubs

20. Wheels

- Alcoa 77362x 19.5x7.50 10-hub pilot 5.23 inset aluminum disc front wheels
- Alcoa 77362x 19.5x7.50 10-hub pilot aluminum disc rear wheels
- Polished front wheels; outside only
- Polished rear wheels; outside of outer wheels only
- Forcematch (or equivalent) tire/wheel runout check/mark and static balancing - all tires/wheels
- Front wheel mounting nuts
- Rear wheel mounting nuts
- No pusher/tag wheel mounting nuts
- Nylon wheel guards front and rear all interfaces

21. Cab Exterior

- 106 inch BBC flat roof aluminum conventional cab
- Rubber cab mounts
- Cab roof reinforcements for roof mounted components
- LH and RH exterior grab handles with single rubber insert
- Hood mounted chromed plastic grille
- Chrome hood mounted air intake grille
- Fiberglass hood
- Tunnel/firewall liner
- Dual 25 inch round stutter tone hood mounted air horns with dual lanyards
- Dual electric horns
- Dual horn shields
- Door locks and ignition switch keyed the same
- Key quantity of 4
- Rear license plate mount end of frame
- Integral headlight/marker assembly with chrome bezel
- LED aerodynamic marker lights
- Headlights on with wipers, with daytime running lights
- Omit stop/tail/backup lights and provide wiring with separate stop/turn wires to 4 feet beyond end of frame
- Standard front turn signal lamps
- Dual west coast bright finish heated mirrors with LH and RH remote
- Door mounted mirrors

- 102 inch equipment width
- LH and RH 8 inch bright finish convex mirrors mounted under primary mirrors
- RH down view mirror
- Standard side/rear reflectors
- No rear window
- Tinted door glass LH and RH with tinted operating wing windows
- RH and LH electric powered windows, passenger switches on door(s)
- 1-piece roped-in solar green glass windshield
- 2 gallon windshield washer reservoir without fluid level indicator, frame mounted

22. Cab Interior

- Vinyl interior (opal gray preferred)
- Molded door panel with upper vinyl inserts
- Molded door panel with upper vinyl inserts
- Floor mats with single insulation (black preferred)
- Forward roof mounted console with upper storage compartments, additional center compartment
- In dash storage bin
- Two (2) cup holders LH and RH dash
- Gray/charcoal flat dash preferred
- Smart switch expansion module
- Heater, defroster and air conditioner
- Standard HVAC ducting
- Main HVAC controls with recirculation switch
- Standard heater plumbing
- Denso heavy duty and one (1) Sanden compact refrigerant compressors
- Binary control, r-134a
- Premium insulation
- Solid-state circuit protection and fuses
- 12v negative ground electrical system
- Dome door activated LH and RH, dual reading lights, forward cab roof
- LH and RH electric door locks
- 12 volt power supply in dash
- Premium Isringhausen high back air suspension driver seat with 2 air lumbar, integrated cushion extension, tilt and adjustable shock
- Premium Isringhausen high back air suspension passenger seat with 2 air lumbar, integrated cushion extension, tilt and adjustable shock
- LH and RH integral door panel armrests
- Vinyl with vinyl insert driver seat
- Vinyl with vinyl insert passenger seat
- High visibility orange seat belts with driver indicator light and audible alarm
- Adjustable tilt and telescoping steering column
- 4-spoke 18 inch (450mm) steering wheel
- Driver and passenger interior sun visors

23. Instruments and Controls

- Gray driver instrument panel preferred
- Gray center instrument panel preferred
- Engine remote interface with park brake and neutral interlocks
- Black gauge bezels preferred
- Low air pressure indicator light and audible alarm

- 2 inch primary and secondary air pressure gauges
- Dash mounted air restriction indicator with graduations
- Electronic cruise control with switches in LH switch panel
- Key operated ignition switch and integral start position; 4 position off/run/start/accessory
- Icu3s, 132x48 display with diagnostics, 28 LED warning lamps and data linked
- Heavy duty onboard diagnostics interface connector located below LH dash
- 2 inch electric fuel gauge
- Engine remote interface with preset fast idle
- Engine remote interface connector in engine compartment
- Electrical engine coolant temperature gauge
- 2 inch transmission oil temperature gauge
- Engine and trip hour meters integral within driver display
- Dash mounted PTO switch with indicator lamp - park brake and neutral interlock
- Electric engine oil pressure gauge
- AM/FM/WB world tuner radio with SiriusXM, Bluetooth, iPod interface, USB and auxiliary inputs, j1939
- Dash mounted radio
- Two (2) radio speakers in cab
- AM/FM antenna mounted on forward LH roof
- Interoperable SDAR antenna
- Electronic mph speedometer with secondary kph scale, without odometer
- Standard vehicle speed sensor
- Electronic 3000 rpm tachometer
- Ignition switch controlled engine stop
- Two (2) overhead mounted lanyard controls: one (1) officer air horn and one (1) driver air horn
- Digital voltage display integral with driver display
- Single electric windshield wiper motor with delay
- Marker light switch integral with headlight switch
- Alternating flashing headlamp system with body builder controlled engagement
- One valve parking brake system with warning indicator
- Self-canceling turn signal switch with dimmer, washer/wiper and hazard in handle
- Integral electronic turn signal flasher with hazard lamps overriding stop lamps

24. Design

- Paint: one solid color

25. Color

- Cab color a: I0006ey white elite EY
- Black, high solids polyurethane chassis paint
- Standard e coat/undercoating

26. Certification / Compliance

- U.S. FMVSS certification, except sales cabs and glider kits
- Secondary factory options
- Corporate PDI center in-service only

27. Raw Performance Data

- Calculated effective back of cab to rear suspension c/l (ca) : 105.66 in
- Calculated space available for deckplate : 102.45 in

Bidder fully complies without exception or deviation YES _____ NO _____

Rear Suspension Liquid Spring Upgrade

The rear suspension will be equipped with a Liquid Spring system.

Bidder fully complies without exception or deviation YES _____ NO _____

Hub and Lug Nut Covers for Ten (10) Lugs

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

Bidder fully complies without exception or deviation YES _____ NO _____

Valve Extension, Alum Wheels

The rear wheels will include braided stainless steel filler extensions. The extensions will be fastened to the center wheel hub with stainless steel brackets. Designs that do not incorporate the filler extensions will be unacceptable as they hinder inflation of the inner tires.

Bidder fully complies without exception or deviation YES _____ NO _____

Tire Size, 19.5", Medium Duty

The requested chassis is to include 19.5" tires. The body is to be designed for use with 19.5" tires.

Bidder fully complies without exception or deviation YES _____ NO _____

Chassis is Equipped with Horizontal Exhaust

The specified chassis is to include horizontal exhaust. Should the vehicle manufacturer require any body modifications to allow for the exhaust routing then those modifications must be included in the bid. Notification of required accommodations for the vehicle exhaust after the opening of the bids, whether resulting in additional charges or not, will not be accepted.

The exhaust tip should be fitted with a magnetic Plymo-Vent compatible end.

Bidder fully complies without exception or deviation YES _____ NO _____

Standard Cab Height

The body design and placement of components mounted either to the chassis or to the front of the body must take into account the cab height for the chassis selected.

Bidder fully complies without exception or deviation YES _____ NO _____

Mud Flaps, Rear, Large

Install individual rear mud flaps behind each set of rear wheels. Mud flaps to be made of a durable heavy duty rubber and are to be securely attached to the vehicle. Mud flaps are to be sized appropriately for the chassis selected so as not to drag the ground.

Bidder fully complies without exception or deviation YES _____ NO _____

Chassis Ordered with Alum Wheels

The specified chassis will include OEM aluminum wheels in lieu of steel.

Bidder fully complies without exception or deviation YES _____ NO _____

Pass Through for Chassis

The chassis cab must be modified by the successful bidder to allow for passage between the cab and the patient compartment. The required opening will be cut out of the back of the cab. A flexible weather-tight bellows will be installed around the perimeter of the opening between the back of the cab and the front of the module body. All of the work required under this section must be performed by the successful bidder. The work will not be performed by a third party vendor.

Bidder fully complies without exception or deviation YES _____ NO _____

Rear Dock Bumpers

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

Bidder fully complies without exception or deviation YES _____ NO _____

Reinforce Rear Bumper End Caps

The rear bumper end caps will be reinforced so as to improve impact resistance.

Bidder fully complies without exception or deviation YES _____ NO _____

Step/Tank Trim Single Cab FL, Std. Height

Diamond plate step well covers will be installed on both the curb side and street side cab step wells. The covers will be made of .125" thick polished diamond tread plate with a minimum 3003-H14 alloy. These covers will extend from forward of the front cab doors to the rear of the standard cab and will be constructed as one piece. Stepping surfaces are to be designed to enhance proper footing. This is to be integral to the design itself without the use of adhesive products or spray type materials.

Bidder fully complies without exception or deviation YES _____ NO _____

Tank Cover Closeout

Diamond plate covers are to be installed over the lower step hangers.

Bidder fully complies without exception or deviation YES _____ NO _____

Rear Step/Bumper Assembly

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

Bidder fully complies without exception or deviation YES _____ NO _____

Tire Chains

OnSpot Automatic tire chains with locking switch will be installed on the chassis.

Bidder fully complies without exception or deviation YES _____ NO _____

Ambulance Body

The completed vehicle body will have the following **minimum** dimensions:

- Height: 90"
- Width: 96"
- Length: 172"
- Interior Height: 72"
- Interior Aisle: 48"
- Interior Length: 168"

Bidder fully complies without exception or deviation YES _____ NO _____

Design Requirements

The module body will 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, must be proven to be durable.
4. The body must be easily retrofitted to a new chassis should the need ever arise.

Body Construction

The construction process used must ensure that the body will remain structurally intact. It is heavily preferred that the vehicle manufacturer utilize CNC machinery to provide for both accuracy and repeatability within the manufacturing process. Repeatability must translate to interchangeability between parts of the same construction. Parts manufactured via this method will be interchangeable with like parts to the extent that all extrusions, jambs, mounting holes, and any other fabricated component or characteristic can be directly installed in place of an existing like part on another unit. In addition, utilization of CNC 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.

Manufacturing processes that do not utilize CNC machinery **must** be able to guarantee the same level of repeatability and interchangeability within the manufacturing process. Alternate manufacturing processes **must** provide the same level of strength and support achieved through manufacturing via CNC per the processes detailed below.

It will be the responsibility of the successful bidder to maintain records and drawings of all constructed elements to guarantee exact duplication of a part when a replacement is required.

Bidder MUST fully comply without exception.

Payload Requirements

The vehicle payload must meet or exceed that called for in the current KKK-A-1822 specification or NFPA 1917 standard. The vehicle manufacturer must provide a written statement from an independent engineer

that the model being offered has met this set of criteria. Before delivery of the completed unity, the manufacturer must weigh the vehicle. A written statement of those weights will be affixed to the inside of the street side front #1 compartment door.

Bidder fully complies without exception or deviation YES _____ NO _____

Module Body Construction and Warranty

The module body must be constructed per the following specifications.

The body will be of all-aluminum construction and possess anti-corrosion properties that are essential for a vehicle of this type. The manufacturer must warrant the materials and workmanship of the module body for no less than a period of thirty (30) years as set forth in the warranty section of this specification. The manufacturer structural warranty will specifically cover:

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

Should the manufacturer re-chassis the vehicle within the period of the initial structural warranty, then an additional five (5) years will be added to the remaining amount of warranty coverage left at the time of re-chassis. This warranty will be revalidated in five-year increments each time the body is mounted to a new chassis provided that the warranty has not expired, that the City authorizes any necessary repairs, and provided that the original manufacturer performs the re-chassis.

Bidder fully complies without exception or deviation YES _____ NO _____

Corner Post Supports

The body structure must support the loaded weight of the vehicle in the unlikely event of a rollover. A structure is required to enhance the safety of both patients and attendants in the event of an accidental collision. A one-piece 90-degree radius post is required. The post will include a full-length W-shaped extrusion that forms a fully encased web inside the post for strength. This reinforcing member will 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 that do not have an integral center reinforcement as part of the extrusion.

Bidder fully complies without exception or deviation YES _____ NO _____

Corner Post Strength

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

Bidder fully complies without exception or deviation YES _____ NO _____

Roof Extrusions

The horizontal roof extrusions will conform to the same construction description as the vertical wall extrusions. 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 will be drip rails installed above all body doors that are not full height. These rails will attach via a durable adhesive.

Bidder fully complies without exception or deviation YES _____ NO _____

Wall and Roof Skin Supports

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

Bidder fully complies without exception or deviation YES _____ NO _____

Horizontal Wall Supports

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

Bidder fully complies without exception or deviation YES _____ NO _____

Gusset Enhancement

Gusset supports, made from 2" square tubing, will be installed throughout the vehicle for added strength. Each gusset must, at its longest point, be no less than 5" in length. A minimum of twenty-four (24) of these gussets will be welded into the vehicle support structure. Areas of installation will 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.

Bidder fully complies without exception or deviation YES _____ NO _____

Exterior Body Panels

The body skin material must be a minimum of 5052-H34 alloy with an ultimate tensile strength of 38,000 psi.

Bidder fully complies without exception or deviation YES _____ NO _____

Exterior Body Panel Material

The below thickness is required for exterior body panels.

- Side, front, and rear walls: .125"
- Ceiling and floor panels: .090"

Note: It is **preferred** that the roof will be constructed with a single sheet of 5052-H34 .090" thick aluminum over a multiple piece design. The roof will incorporate a 3/8" crown designed to allow water to drain.

Bidder fully complies without exception or deviation YES _____ NO _____

Floor Construction

The body subfloor must be constructed of .090" 5052-H34 aluminum. The floor, from the front to the rear and from curbside to street side, will be supported by a minimum of 2" x 3" tubular beams with a .25" wall. The floor just behind the axle will be supported by a minimum of 1.5" x 3" tubular beam with a .25" wall. All beams must be strategically located at the load bearing points of the floor and welded into place. The interior of this vehicle will contain no wood or wood products of any kind. The subfloor, above the aluminum sheet will be specially constructed to provide both acoustic and thermal protection for the

patient interior. It will 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 must be installed prior to the installation of the vinyl floor covering. This panel must be hydrophobic so as to resist mildew and degradation. It must also utilize Royal Watson surfaces featuring BioStat technology or any other similar treatment so as to prohibit bacterial or fungal growth over the life of the product. The material manufacturer must have tested the material including ASTM D 3040-3 point bend and 25#slug 8' and 24' drop test. The subfloor must have been tested and certified by a third party for compliance to AMD 020 Floor Distributed Load Test. The City reserves the right to inspect the process proposed by the bidder and to make determinations regarding the acceptability of that process. The resultant subfloor must have no organic, wood, or wood products and must be guaranteed against rotting or water absorption for a minimum of fifteen years. It must not support or attract mold or fungus.

Bidder fully complies without exception or deviation YES _____ NO _____

Skin to Support Attachment

All exterior aluminum body panels will be attached to the underlying structural supports via high performance polyurethane two sided tape. The tape will 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 will 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.

Each body panel will be welded to all horizontal frame members, including the roof extrusions. In addition, the panels will be welded to the vertical corner posts. In the case of the roof, the perimeter of the one-piece roof sheet will be stitch welded. This method of attachment will provide a total welding application to the entire perimeter of the body skin and a taped/insulating application to the interior surfaces of all walls. Methods of panel attachment that utilize rivets will not be acceptable.

Bidder fully complies without exception or deviation YES _____ NO _____

Outer Door Skin

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

Bidder fully complies without exception or deviation YES _____ NO _____

Inner Door Reinforcement

Each door will include an internal extrusion for added reinforcement. The extrusions will extend around the entire perimeter of the door. Additional reinforcement will be installed through the center of the door and around each window. In addition to the extrusions reinforcing each outer door pan, the extrusions themselves will be reinforced through a dual joining method. First, each mitered corner, where the frame corners join, will be fitted with a one-way solid aluminum insertable key. This key will prevent the corner from pulling apart, and will act as a solid aluminum internal gusset. Secondly, each corner where the frame joins will 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.

Bidder fully complies without exception or deviation YES _____ NO _____

Inner Door Pan

An inner door pan will 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 "T" style nutserts to prevent spinning and stripping. Sheet metal screws or rivets will not be accepted. Lastly, a closed cell cross-linked polyolefin foam tape will be used beneath the inner door panels to isolate the panels from the door frames. This process will prevent door rattling.

Bidder fully complies without exception or deviation YES _____ NO _____

Door Seal

All module doors will incorporate an extruded rubber seal located around the perimeter of the door. The seal will 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.

Bidder fully complies without exception or deviation YES _____ NO _____

Door Jamb

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

Bidder fully complies without exception or deviation YES _____ NO _____

Hinging

All doors will have full-length stainless steel hinges. The hinges must be .070" thick and must incorporate a .25" diameter pin. All hinges will 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 must be an anti-corrosive 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 must be transparent so as not to be visible at any point while the door is being used.

Bidder fully complies without exception or deviation YES _____ NO _____

Hold-Open Devices

The following door hold-open devices will be installed.

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

Bidder fully complies without exception or deviation YES _____ NO _____

Door Handles and Latching

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:

1. All door handles will be rugged automotive style handles that are near flush with the outer door panel. Each handle will actuate a Nader rotary safety latch.
2. The handle and latching system will 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.
3. The entire exterior handle assembly will be Tri/Mark Series 2200 or an equal cast metal handle assembly. The installed handle assembly will be chrome plated and buffed to a high luster.
4. All doors will have an exterior key lock
5. All three patient area access doors will include both interior and exterior latch activators. The rear doors will have an activator installed on the outside of each door. The interior activators will be located in a recessed pan on the door. A manual lock/unlock device will be located within the pan. This pan will be powder coated cast aluminum for extra durability and for ease of decontamination. No plastic products will be used for this application.
6. Exterior double door compartments will include two exterior latching devices, one on each door.
7. The entry doors must incorporate emergency release levers located at each rotary latch. The emergency release handle will allow emergency exit if a latch failure would occur. The latching system must be a proven system that has been subjected to the simulated sled test as described elsewhere in this specification.

Bidder fully complies without exception or deviation YES _____ NO _____

Patient Area Door Openings: Rear Doors

Two (2) doors will be provided at the rear of the module body. The overall opening of the access to be a minimum of 54.3" in height x 46.75" in width. Both inside and outside door handles will be installed on each rear door. Left rear doors that can only be activated from the inside are not acceptable. These doors are to incorporate emergency release levers as described above.

Bidder fully complies without exception or deviation YES _____ NO _____

Patient Area Door Openings: Side Door

One (1) side door will be provided on the curb side of the module body. The opening will have minimum overall dimensions of 71.1" in height x 30" in width.

Bidder fully complies without exception or deviation YES _____ NO _____

Patient Area Door Openings: Insulation

The patient area, including the doors, will be insulated with 2" thick thermal and acoustic insulation. The headliner area of the vehicle will also include a barrier insulation such as Reflectix material for increased protection.

Bidder fully complies without exception or deviation YES _____ NO _____

Crash Barrier Safety Configuration

In order to provide a fully welded stable crash barrier at the head of the squad bench, the vehicle will be built with the side access door located at the forward most part of the curb side of the vehicle. The cabinet normally located in that position will be relocated to the head of the squad bench. The compartment is to include LED strip lighting meeting the requirements for all exterior compartments.

Bidder fully complies without exception or deviation YES _____ NO _____

Headroom

The interior headroom of the finished patient area will be 72"

Bidder fully complies without exception or deviation YES _____ NO _____

Alum. Diamondplate at Side Stepwell

The side door stepwell is to be fabricated from .125" 3003-H14 polished aluminum diamond tread plate.

Bidder fully complies without exception or deviation YES _____ NO _____

Double Step Curb Side Entry, 3" Drop Skirt

The curb side body skirt, forward of the rear wheel well, will be dropped three (3) inches. Two integral aluminum diamond plate steps will be installed within the side access door step well for improved accessibility to the patient compartment. The design must be such that all steps are integral. The use of bolts, rivets, or any other type of fastener is not acceptable.

Bidder fully complies without exception or deviation YES _____ NO _____

Street Side 3" Drop Skirt

The street side body skirt, forward of the rear wheel well, will be dropped three (3) inches. The extra 3" is to be added to the applicable compartments in this area.

Bidder fully complies without exception or deviation YES _____ NO _____

Sound Proofing/Acoustic Enhancement Package

To insure good working conditions and to create a stable patient environment, the vehicle must be manufactured with particular attention paid to sound control. The following process must be performed throughout the manufacturing cycle of the vehicle. All brands stated under this section are for illustrative purposes and products of equal quality are acceptable.

1. Underbody will be completely sprayed with non-flammable latex sound control coating.
2. Body Interior walls, roofs, and interior compartment walls will be sprayed with non-flammable latex sound control coating.
3. The interiors of all access doors will be sprayed with non-flammable latex coating.
4. The backs of all aluminum interior cabinets will be wrapped in antiphon damping material.
5. Door interiors are to be lined with polydamp intefoam extensional damping pad.
6. The body structural tubes will be filled with non-resonating dampening material.
7. Side stepwell areas are to be backed with PT Damping Pad.
8. All walls will be insulated with 2" Technicon Polyfiber acoustic insulation.
9. Headliners will be double insulated with 2" Technicon Polyfiber and a Reflectix barrier.
10. A .125" damping pad, a .125" sound barrier sheet, and a .625" composite floor panel sandwiched between aluminum sheets will be installed prior to installation of the vinyl floor covering.
11. A chassis tuned mounting system will be used to provide vibration reduction and structure borne noise attenuation. Chassis OEM puck style mounts will not be accepted as equivalent to or exceeding this requirement.

Bidder fully complies without exception or deviation YES _____ NO _____

Roof Pocket, Auxiliary Condenser

The roof of the body will be designed with an integral recessed pocket to allow for the specified recessed rooftop condenser. The pocket is to be sealed off except for a drain line to the ground to prevent build-up of water inside the pocket.

Bidder fully complies without exception or deviation YES _____ NO _____

Window for Rear Entry Doors

The patient area rear access doors and side entry door will include fixed windows with privacy tint. The privacy tint will be of a perforated material. Color to be determined at pre-build.

Bidder fully complies without exception or deviation YES _____ NO _____

Emergency Release, Rear Doors

The manufacturer must install emergency release latches at the top and bottom of the interior of the rear entry doors. These will allow egress in the event of a door latch failure. The release knobs are to activate the rotary at the top and bottom of the door. Doors without this feature will not be consider.

Bidder must fully comply without exception

Emergency Release, Side Access Door

The manufacturer must install emergency release latches at the top and bottom of the interior of the side entry door. These will allow egress in the event of a door latch failure. The release knobs are to activate the rotary at the top and bottom of the door. Doors without this feature will not be considered.

Bidder must fully comply without exception

Vi-Tech Mounting, Freightliner

The City 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 will be used: a minimum of four (4) mounting platforms will be attached along the outside of each chassis frame rail for a total of eight (8). Each platform will consist of one (1) top plate of .375" thick steel and two (2) side reinforcement plates made of .25" steel. There will be a .375" full backing plate where the mount attaches to the frame rail. The plates will be welded along all seams with a heavy continuous weld. The body substructure will 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 tuned mounting system will be used. The elastomer mount will 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 mount will be attached to each platform by two (2) .635" diameter Grade 9 bolts with washers and locking nuts. The fail safe elastomer isolation mount will then attach to the aluminum body tie down bar with a .75" diameter Grade 8 bolt, a washer, and a locking nut. The mounting system must have been subjected to a documented sled dynamic frontal impact test of at least 30 G's to verify the integrity of the mounting system in the event of a serious accident.

Bidder fully complies without exception or deviation YES _____ NO _____

Fenders, Stainless, Std, CS 3" Drop Skirt

A polished stainless steel fender flare will be installed above the curb side rear wheel well opening. The mounting of the flare will 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. The fender will be designed for a 3” drop skirt forward of the wheelhouse and will be one piece.

Bidder fully complies without exception or deviation YES _____ NO _____

Fenders, Stainless, Std, SS 3” Drop Skirt

A polished stainless steel fender flare will be installed above the street side rear wheel well opening. The mounting of the flare will 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. The fender will be designed specifically for the specified 3” drop skirt.

Bidder fully complies without exception or deviation YES _____ NO _____

Polished Stainless Rub Rails, Lighted

Polished stainless lower body rub rails will be installed on each side of the module body. Each rail will 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 and will include cutouts for the LED strip lighting specified elsewhere in this document.

Bidder fully complies without exception or deviation YES _____ NO _____

Standard Corner Guards

Polished aluminum diamond tread plate corner guards will be installed on the lower corners of the body. The guards are to be formed to match the contour of the body corner posts.

Bidder fully complies without exception or deviation YES _____ NO _____

Rear Door Hold Opens, Grabber

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

Bidder fully complies without exception or deviation YES _____ NO _____

Entry Door Thresholds, Line-X

The one-piece stainless steel thresholds at both the side and rear entry doors are to be covered with black Line-X material. No anti-slip adhesive tapes are to be used.

Bidder fully complies without exception or deviation YES _____ NO _____

Rear Riser

Install a polished aluminum diamond tread plate riser between the bottom of the rear entry door opening and the bottom of the body. The manufacturer must include any necessary holes to accommodate other items installed in this area.

Bidder fully complies without exception or deviation YES _____ NO _____

License Plate, Street Side Rear Riser

Provisions for installation of the rear license plate will be provided at the location described above. There must be two holes provided, along with the bolts to be used to mount the plate. An LED license plate light is to be installed over the plate location to illuminate the plate once installed. No frames or recessed style license plate bezels are required.

Bidder fully complies without exception or deviation YES _____ NO _____

Door Reflectors

Install red reflectors on the interior panels of all patient compartment access doors. Install in the corners so as to be visually conspicuous when the doors are open. Yellow and red chevron striping on each door will also be acceptable.

Bidder fully complies without exception or deviation YES _____ NO _____

COMPARTMENTATION

Street Side Forward Compartment

The compartment described above will be accessed through a single hinged door meeting the standards for door construction, hinging, and latching outlined within this specification. The compartment must be vented to the outside in such a way as to prevent moisture from entering the compartment. Under no circumstances will vents be installed within the compartment door. The compartment itself will be constructed as an individual box and welded into the body structural framing. The compartment will include two strips of LED lights, one to either side of the compartment door, to provide lighting inside the compartment. The street side forward compartment is to be fabricated from .125" flat aluminum material that is continuously welded at all seams. Line-X textured scratch resistant coating will be applied to the interior of the street side forward compartment.

Bidder fully complies without exception or deviation YES _____ NO _____

Street Side Intermediate Compartment

The compartment described above will be accessed through double hinged doors meeting the standards for door construction, hinging, and latching outlined within this specification. The compartment must be vented to the outside in such a way as to prevent moisture from entering the compartment. Under no circumstances will vents be installed within the compartment door. The compartment itself will be constructed as an individual box and welded into the body structural framing. The compartment will include two strips of LED lights, one to either side of the compartment door, to provide lighting inside the compartment. The compartment is to be full available height to the bottom of the interior countertop. The street side intermediate compartment is to be fabricated from .125" flat aluminum material that is continuously welded at all seams. Line-X textured scratch resistant coating will be applied to the interior of the street side intermediate compartment.

Bidder fully complies without exception or deviation YES _____ NO _____

Street Side Rear Compartment

The compartment described above will be accessed through double hinged doors meeting the standards for door construction, hinging, and latching outlined within this specification. The compartment must be vented to the outside in such a way as to prevent moisture from entering the compartment. Under no circumstances will vents be installed within the compartment door. The compartment itself will be constructed as an individual box and welded into the body structural framing. The compartment will include two strips of LED lights, one to either side of the compartment door, to provide lighting inside the compartment. The compartment is to be half of the available height of the body. The street side rear compartment is to be fabricated from .125" flat aluminum material that is continuously welded at all

seams. Line-X textured scratch resistant coating will be applied to the interior of the street side intermediate compartment.

Bidder fully complies without exception or deviation YES _____ NO _____

Adjustable Shelf Street Side Rear

Shelving will be installed in the street side rear compartment. All shelving is to be fabricated from 3003-H14 smooth aluminum. This material must be .125" thick. All shelving is to include a 2" integral lip to prevent equipment from sliding off of the shelf. The compartment light will meet the lighting criteria as described elsewhere within this specification. Shelving is to be secured using four (4) "C" channels, two (2) each on the right and left hand wall, allowing the shelving to be infinitely adjustable within the compartment.

Bidder fully complies without exception or deviation YES _____ NO _____

Curb Side Rear Compartment

The compartment described above will be accessed through a single hinged door meeting the standards for door construction, hinging, and latching outlined within this specification. The compartment must be vented to the outside in such a way as to prevent moisture from entering the compartment. Under no circumstances will vents be installed within the compartment door. The compartment itself will be constructed as an individual box and welded into the body structural framing. The compartment will include two strips of LED lights, one to either side of the compartment door, to provide lighting inside the compartment. The curb side rear compartment is to be fabricated from .125" flat aluminum material that is continuously welded at all seams. Line-X textured scratch resistant coating will be applied to the interior of the curb side rear compartment.

Bidder fully complies without exception or deviation YES _____ NO _____

Fixed Shelf Curb Side Rear

There will be a fixed shelf 42" from the floor, centered in I/O area. All shelving is to be fabricated from 3003-H14 smooth aluminum. This material must be .125" thick. All shelving is to include a 2" integral lip to prevent equipment from sliding off of the shelf. The compartment light will meet the lighting criteria as described elsewhere within this specification. Shelving is to be secured using four (4) cast brackets, two (2) each on the right and left hand walls, allowing the shelving remain in a fixed position within the compartment. Vertically stored backboards and a stair chair will be placed in this compartment.

Bidder fully complies without exception or deviation YES _____ NO _____

Fixed Vertical Divider, Curb Side Rear

A 16" deep vertical divider will be installed in the curb side rear compartment 14.5" from right wall to create the backboard storage area. The divider will be non-adjustable and will be fabricated from the same material used in the construction of the compartment in which it is to be installed.

Bidder fully complies without exception or deviation YES _____ NO _____

ROK Backboard Strap, Curb Side Rear

An ROK buckle style backboard strap must be installed in the compartment designated above. The straps will attach to the compartment wall/divider through footman's loops that are screwed into place.

Bidder fully complies without exception or deviation YES _____ NO _____

Stair Chair Pocket, Curb Side Rear

A pocket must be recessed into the inner compartment door panel in the curb side rear compartment for stair chair storage. The pocket must be installed as close to the bottom and hinged side of the door as possible. A Stryker #6252 stair chair will be stored in the designated location.

Bidder fully complies without exception or deviation YES _____ NO _____

Stair Chair Model

A Stryker #6252 stair chair will be supplied with this unity. The chair will include the foot support option.

Bidder fully complies without exception or deviation YES _____ NO _____

Pull Out Tray for 3-Battery System

A custom battery tray for three (3) batteries will be installed in the battery storage location. The tray will feature heavy duty slides and a locking mechanism to maintain it in the "closed" position.

Bidder fully complies without exception or deviation YES _____ NO _____

Line-X Liner Color

The Line-X coating used as noted above is to be gray in color.

Bidder fully complies without exception or deviation YES _____ NO _____

Rubber Matting in Exterior Compartments

Black rubber Turtle Tile brand matting, with a ribbed texture, will be provided and installed in the bottoms of all exterior compartments and compartment shelves.

Bidder fully complies without exception or deviation YES _____ NO _____

Rubber Walls in Backboard Compartment

The walls of the backboard compartment will be covered with self-adhesive, textured gray rubber matting to protect the walls and the equipment stored in this area from any damage.

Bidder fully complies without exception or deviation YES _____ NO _____

PAINT AND GRAPHICS

Paint

**CHASSIS AND MODULE PAINT: Sikkens FLNA3225 Red
THE ROOF OF THE CHASSIS COMPARTMENT WILL BE WHITE**

The chassis will be repainted as noted. The paint used is to be Sikkens in the color and pant code specified. The chassis paint is to be covered under the manufacturer's paint warranty.

A paint process is required that provides the highest possible gloss as well as superior color and luster retention characteristics. In addition, the paint process must provide a high 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, must resist chipping. The final paint application must be free of material application imperfections such as orange peel, streaking, or a dull finish. Once painted, the vehicle will be

inspected under a black light to bring any small imperfections, not seen with the naked eye, to attention. Any such imperfections will be repaired prior to the conclusion of the paint inspection process. The final application will provide a high gloss finish.

To produce an acceptable paint finish, it is **strongly** encouraged the manufacturer use the following process:

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. The entire body, including the compartment doors, must be finished with a dual action sander. It is also required that all door jamb areas be sanded to insure that no areas are missed with the dual action sander process mentioned above. All module doors, though handled separately from the body, will undergo the same process as described above.

Immediately after application of the sealer/primer the manufacturer will apply a finish color coat of Sikkens BTLV 650 paint. The color coat is to be immediately followed by a clear coat. Once all coats are applied the unit is to be baked dry.

Following the drying of all paint coats the unit is to be thoroughly inspected as noted above. The unit is to be polished and any blemishes repaired. All paint lines must be sanded and cleaned.

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

Locations where light heads and fenders attach to the aluminum body will 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, will act to minimize the threat of electrolysis.

The paint warranty provided by the converter must meet all warranty standards as set forth elsewhere within this specification. 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.

Bidder fully complies without exception or deviation YES _____ NO _____

Graphics Package

The graphics package will be determined at pre-build. The package will need to be compliant with the State of Tennessee Department of Health Ambulance Regulations.

Bidder fully complies without exception or deviation YES _____ NO _____

Striping

Install the following stripes: 1" 3M 680CR10 White; 1" Paint Gap; 6" 3M680CR10 White; 1" Paint Gap; 1" 3M 680CR10 White. The stripe will be horizontal across the cab door. The stripe will be horizontal across the body at a height slightly higher than that of the cab. A horizontal strip will be placed across the rear doors. Install edge chevrons on the outside edge of doors inside the door.

Bidder fully complies without exception or deviation YES _____ NO _____

Paint 360 Degree Camera Covers

The specified 360 camera covers are to be painted to match the body color.

Bidder fully complies without exception or deviation YES _____ NO _____

Rear Graphics

The doors will be painted job color with no chevron. The white 1/6/1 reflective stripe will continue across the rear doors horizontally. "AMBULANCE" in a straight pattering in the 6-inch strip in reflected blue block lettering with two (2) 4-inch star of life, one on either side of the word AMBULANCE.

"KNOXVILLE" in an arch pattern in 6-inch reflective gold block lettering with black outline. "FIRE DEPARTMENT" in a straight pattern in 6-inch reflective gold block lettering with black outline will be on the lower doors.

Oralite Chevron, Rear Panels (Fluorescent Yellow, Red)

Oralite V98 chevron striping will be installed on the panels surrounding the rear access doors on the rear body face inboard of the body corner posts.

Bidder fully complies without exception or deviation YES _____ NO _____

Oralite Chevron, Access Door Panels (Fluorescent Yellow, Red)

Oralite V98 chevron striping will be installed on the bottom sections of all body access door inner door panels.

Bidder fully complies without exception or deviation YES _____ NO _____

Rooftop Graphics

16" Scotchlite Black on Rooftop – "KNOX A-1"

A Mylar laminate will be applied to the emblem's surface in order to protect against scuffing, and to provide longevity.

Star of Life, 36"

The bidder will provide a "Star of Life" emblem on the module body roof. The emblem will be 36" blue Scotchlite with black shade and outline. A Mylar laminate will be applied to the emblem's surface in order to protect against scuffing, and to provide added longevity.

Bidder fully complies without exception or deviation YES _____ NO _____

Side of Unit Graphics

The bidder will provide "Star of Life" emblems on each side of the unit. The emblems will be 18" blue Scotchlite with black shade and outline. A Mylar laminate will be applied to the emblem's surface in order to protect against scuffing, and to provide added longevity.

"KNOXVILLE" in an arch pattern above the Star of Life in 6-inch reflective gold block lettering with black outline. "FIRE DEPARTMENT" in a straight pattern below the Star of Life in 6-inch reflective gold block lettering with black outline.

"AMBULANCE" in a straight pattern in the 6-inch strip in reflected blue block lettering.

One (1) 13" Knoxville Fire Department Maltese Cross on each cab door.

Five-digit Fleet number (TBD) on each cab door in 4-inch reflective black block lettering.

Bidder fully complies without exception or deviation YES _____ NO _____

Access Doors, Red Scotchlite Strip

Red Scotchlite strips, measuring 2" x 12" will be installed horizontally on the interior panels of all patient area access doors near the top.

Bidder fully complies without exception or deviation YES _____ NO _____

INTERIOR FEATURES

Acrylic Color

All acrylic cabinet door material is to be the manufacturer's "light" tint.

Bidder fully complies without exception or deviation YES _____ NO _____

Countertop Material

The patient area countertop material will be a solid surface. The countertop material will incorporate a 1" radiused retention lip around the perimeter. This radiused corner will also be tapered to avoid any sharp edges. A radius cove molding will 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, will be sealed with silicone. In addition, any and all areas that require seams due to the manufacturing processes will be sealed with silicone. This material will be uniform throughout so that scratches can be buffed out without causing adverse effects on the appearance of the material. The material color will be determined at pre-build.

Bidder fully complies without exception or deviation YES _____ NO _____

Painted Standard Inhalation Area Walls

The walls surrounding the work areas within the main cabinet wall are to be painted to match the interior cabinet color.

Bidder fully complies without exception or deviation YES _____ NO _____

Inhalation Panel

To prevent contamination of the inhalation panel, the panel must be fabricated using no wood or wood-based products. The material used must be an aluminum composite material. This material must not absorb liquids and must not attract bacteria, molds, or fungi. The material is to be covered with painted aluminum material in a color matching that required within this document.

Bidder fully complies without exception or deviation YES _____ NO _____

Interior Color

The interior area colors will be determined at pre-build. They will be gray and red.

The interior walls and door panels in the patient area are to be finished with a non-laminate material possessing the following properties:

- Fingerprint resistant
- Resistant to yellowing

- Temperature resistant between -40 degrees and 212 degrees F
- Resistant to oils, greases, weak acids, and salts
- Verified tensile strength of 34mpa
- No wood or wood-based products are to be used within the specified material
- The material will be in color to be determined at pre-build

Bidder fully complies without exception or deviation YES _____ NO _____

Patient Area Floor

The patient area floor is to be covered in Lonseal Londeck. Color will be determined at pre-build.

Bidder fully complies without exception or deviation YES _____ NO _____

Stainless Steel Risers

The interior risers will be covered with a single sheet of stainless steel. The stainless material will 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 will 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. Drawer and tip-out faces within the risers will be constructed with brushed aluminum laminate to mimic the appearance of the stainless and to provide aesthetic continuity.

Bidder fully complies without exception or deviation YES _____ NO _____

Stainless Steel Lower Door Panels

The lower portion of the patient area entry doors will be covered with single sheets of stainless steel. 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.

Bidder fully complies without exception or deviation YES _____ NO _____

Cabinet Color and Paint

All interior storage cabinets, including the interior of the squad bench, will be painted for ease of cleaning. Under no circumstance will carpet be used within these storage cabinets as it is impossible to decontaminate. The paint color is to be determined at pre-build. The paint must be treated with an antimicrobial agent.

The specified cabinet paint is to have a smooth finish.

Bidder fully complies without exception or deviation YES _____ NO _____

Vacu-Form Vinyl Color

The patient area upholstery, including seat cushions, backrests, and vinyl closeouts.

Bidder fully complies without exception or deviation YES _____ NO _____

Vacuformed Upholstery

All seat cushions, including head and back cushions, are to be formed style with a .5” overhang. Cushions are to be installed with Velcro around the full perimeter of the cushion for ease of removal and

cleaning. All closeouts and upholstered trim pieces are to be covered with matching material. Head and backrest cushions do not require Velcro attachment.

Bidder fully complies without exception or deviation YES _____ NO _____

Standard Fixed Seat Base

An attendant's seat base will be fabricated from aluminum and will be installed in a position at the head of the cot. The base will house the vehicle's heat/AC unit as described in that section of this specification. The material will be perforated to promote airflow to the unit. The entire seating assembly, as described here, must be subjected to a sled test of at least 30 G's to test the structural integrity of the design in order to assure a certain level of safety for the vehicle occupants. Swivel or aftermarket seat bases are not substitutes for this requirement.

Bidder fully complies without exception or deviation YES _____ NO _____

Attendant Seat with 4-Point Harness

The attendant seat must be a USSC seat with integrated Infant seat and include a 4-point harness. This 4-point seatbelt, black in color, will be provided and installed on the attendant seat. The belt will include a 4 retractor system to allow all four belts to be fully retractable. The belt will also include a quick one-click design for ease of use. The belt is to be outfitted with a removable vest designed to guide the belt into the proper position, prevent the buckle from moving up or down and side to side, and offer better support and comfort to the seat occupant. The belt design will allow the user to wear the safety belt and still move about freely enough to perform patient functions such as CPR. Installation hardware and wall anchorages are to have been tested and certified to meet all applicable requirements relative to occupant restraints.

Bidder fully complies without exception or deviation YES _____ NO _____

CPR Seat with 4-Point Harness

A CPR seat will be provided on the center of the street side wall. The seat will include a 4-point harness. This 4-point seatbelt, black in color, will be provided and installed on the CPR seat. The belt will include a 4 retractor system to allow all four belts to be fully retractable. The belt will also include a quick one-click design for ease of use. The belt is to be outfitted with a removable vest designed to guide the belt into the proper position, prevent the buckle from moving up or down and side to side, and offer better support and comfort to the seat occupant. The belt design will allow the user to wear the safety belt and still move about freely enough to perform patient functions such as CPR. Installation hardware and wall anchorages are to have been tested and certified to meet all applicable requirements relative to the occupant restraints.

Bidder fully complies without exception or deviation YES _____ NO _____

4-Point Seatbelt Center of Bench

A 4-point seatbelt, black in color, will be provided and installed at the center bench position. The belt will include a 4 retractor system to allow all four belts to be fully retractable. The belt will also include a quick one-click design for ease of use. The belt is to be outfitted with a removable vest designed to guide the belt into the proper position, prevent the buckle from moving up or down and side to side, and offer better support and comfort to the seat occupant. The belt design will allow the user to wear the safety belt and still move about freely enough to perform patient functions such as CPR. Installation hardware and wall anchorages are to have been tested and certified to meet all applicable requirements relative to occupant restraints.

Bidder fully complies without exception or deviation YES _____ NO _____

4-Point Seatbelt Foot of Bench

A 4-point seatbelt, black in color, will be provided and installed at the foot of bench position. The belt will include a 4 retractor system to allow all four belts to be fully retractable. The belt will also include a quick one-click design for ease of use. The belt is to be outfitted with a removable vest designed to guide the belt into the proper position, prevent the buckle from moving up or down and side to side, and offer better support and comfort to the seat occupant. The belt design will allow the user to wear the safety belt and still move about freely enough to perform patient functions such as CPR. Installation hardware and wall anchorages are to have been tested and certified to meet all applicable requirements relative to occupant restraints.

Bidder fully complies without exception or deviation YES _____ NO _____

4-Point Seatbelt Head of Bench

A 4-point seatbelt, black in color, will be provided and installed at the head of bench position. The belt will include a 4 retractor system to allow all four belts to be fully retractable. The belt will also include a quick one-click design for ease of use. The belt is to be outfitted with a removable vest designed to guide the belt into the proper position, prevent the buckle from moving up or down and side to side, and offer better support and comfort to the seat occupant. The belt design will allow the user to wear the safety belt and still move about freely enough to perform patient functions such as CPR. Installation hardware and wall anchorages are to have been tested and certified to meet all applicable requirements relative to occupant restraints.

Bidder fully complies without exception or deviation YES _____ NO _____

Aluminum Interior Cabinets

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 will be of modular construction. All individual cabinets will be of welded construction. Each modular cabinet will then be bolted/welded together to comprise the main wall of cabinets inside the vehicle. All cabinets, including the main cabinet wall, will be throughout insulated against noise and temperature. Each cabinet is to be wrapped on the back side in an insulating layer. Cabinets that are joined together will also be insulated with expandable spray foam in between each cabinet. The face of all cabinets are to be trimmed in an aesthetically pleasing manner to match the patient compartment interior colors.

To insure the safety of patients and attendants in the rear of the vehicle, the main cabinet wall installation must 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 blood borne 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.

All of the aluminum cabinetry within the vehicle will be of welded construction. Methods of cabinet construction that utilize rivets or adhesives of any type will not be considered.

The all-aluminum cabinet construction, as described within this section, must be warranted against any structural defects for a period of time not less than 30 years. This warranty must be stated within the manufacturer’s structural warranty document, and must not be subject to any mileage limitations.

Bidder fully complies without exception or deviation YES _____ NO _____

Tubular Airbag, Attendant Seat

The vehicle must be equipped with a tubular airbag to the right of the attendant’s seat. The bag must be triggered by an electronic roll sensor to inflate and protect the seat occupant against severe head strikes typical in a roll over collision. In addition to being field proven, the system must have been developed using laboratory-controlled roll over testing. The testing must have been done on the manufacturer’s specific ambulance body. Generic testing or “real world” scenarios do not suffice to meet this requirement. The system must be offered by the bidder as standard equipment and must have been in production for a minimum of five (5) years. No prototype systems will be acceptable.

Bidder must fully comply without exception

Head Curtain Airbag, Attendant’s Seat

The vehicle must be equipped with a head curtain airbag to the right of the attendant’s seat. The bag must be triggered by an electronic roll sensor to inflate and protect the seat occupant against severe head strikes typical in a roll over collision. In addition to being field proven, the system must have been developed using laboratory-controlled roll over testing. The testing must have been done on the manufacturer’s specific ambulance body. The system must be offered by the bidder as standard equipment and must have been in production for a minimum of five (5) years. No prototype systems will be acceptable.

Bidder must fully comply without exception

Roll Sensor

The roll sensor used in conjunction with the specified airbag system is to be installed in the street side intermediate compartment on the ceiling. Components are to be covered with a polished aluminum smooth plate closeout attached with tamper-proof screws.

Bidder fully complies without exception or deviation YES _____ NO _____

Cabinet Trim Radiused

The interior of the ambulance module will have radius corner extrusions, wherever possible, to round off cabinet corners. The radius will be a minimum of one and a half inches. The radius trim will also include a removable cap that can be field replaced if damage occurs.

Bidder fully complies without exception or deviation YES _____ NO _____

Technimount Zoll Shelf Mount

A Technimount shelf mount with base plate for a Zoll X Series will be installed adjacent to the CPR seat. This mount must be compliant with Change Notice 10.

Bidder fully complies without exception or deviation YES _____ NO _____

IV Hanger, CP with Rubber Arm Cot Chest

A Cast Products recessed swing-down IV hanger will be installed above the primary cot position near the patient’s chest area. This hanger is to be near flush mounted into the patient area ceiling to reduce interference with the walkway when not in use. The arms of the hanger will be rubberized so as to reduce the possibility of injury that may occur if contact is made with them. This style IV hanger will be sufficient to meet Federal KKK-1822-E.

Bidder fully complies without exception or deviation YES _____ NO _____

IV Hanger, CP with Rubber Arm Bench Rest

A Cast Products recessed swing-down IV hanger will be installed above the squad bench position near the patient's chest area. This hanger is to be near flush mounted into the patient area ceiling to reduce interference with the walkway when not in use. The arms of the hanger will be rubberized so as to reduce the possibility of injury that may occur if contact is made with them. This style IV hanger will be sufficient to meet Federal KKK-1822-E.

Bidder fully complies without exception or deviation YES _____ NO _____

Grab Rail: 6ft Yellow, Over Cot

A 6' long grab rail will be installed, offset toward the main cabinet wall over the cot position, in the patient area ceiling. This rail is to be constructed of stainless steel. Integral stanchions will be welded into place at fixed points along the length of the rail for attachment to the ceiling. The rail will 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 imbedded with silver ions. This coating will be yellow in color and must be effective against a broad range of microbes including bacteria, molds, algae, and fungi. The coating will be integral and will not consist of an agent that will need to be reapplied over time.

Bidder fully complies without exception or deviation YES _____ NO _____

Grab Rail: 6ft Yellow, Over Bench

A 6' long grab rail will be installed, offset toward the bench wall, approximately over the aisle edge of the bench cushions, in the patient area ceiling. This rail is to be constructed of stainless steel. Integral stanchions will be welded into place at fixed points along the length of the rail for attachment to the ceiling. The rail will 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 will be yellow in color and must be effective against a broad range of microbes including bacteria, molds, algae, and fungi. The coating will be integral and will not consist of an agent that will need to be reapplied over time.

Bidder fully complies without exception or deviation YES _____ NO _____

Vertical Grab Rail: 2' Yellow, Bolster

Install a 2' long grab rail on the left side of the side entry door on the squad bench bolster. Install at an angle to assist entry and exit through the side access door. This rail is to be constructed of stainless steel. Integral stanchions will be welded into place at either end of the rail for attachment to the bolster. The rail will attach through aluminum substructure inside the bolster 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 will be yellow in color and must be effective against a broad range of microbes including bacteria, molds, algae, and fungi. The coating will be integral and will not consist of an agent that will need to be reapplied over time.

Bidder fully complies without exception or deviation YES _____ NO _____

Vertical Grab Rail: 2ft Yellow, Main Wall

Install a 2' long grab rail just inside and to the left of the rear entry doors. Install vertically to assist entry and exit through the rear access doors. This rail is to be constructed of stainless steel. Integral stanchions will be welded into place at either end of the rail for attachment to the cabinets and riser. The rail will attach through aluminum substructure at the attachment point 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 will be yellow in color and must be effective against a broad range of microbes including bacteria, molds, algae, and fungi. The coating will be integral and will not consist of an agent that will need to be reapplied over time.

Bidder fully complies without exception or deviation YES _____ NO _____

Vertical Grab Rail: 2' Yellow, Rear Doors

Install a 2' long grab rail just inside and to the right of the rear entry doors. Install vertically to assist entry and exit through the rear access doors. This rail is to be constructed of stainless steel. Integral stanchions will be welded into place at either end of the rail for attachment to the cabinets and riser. The rail will attach through aluminum substructure at the attachment point 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 will be yellow in color and must be effective against a broad range of microbes including bacteria, molds, algae, and fungi. The coating will be integral and will not consist of an agent that will need to be reapplied over time.

Bidder fully complies without exception or deviation YES _____ NO _____

Patient Door Grab Rails: Yellow

Angled door handles will be installed on the interior door panels of each access door. The handles will be one piece and will be constructed of stainless steel. The overall design will incorporate a smooth radius for a "V" shape, but will otherwise mimic the design and appearance of the other grab rails specified to be installed on this vehicle. The handles will feature smooth radius corners and flange mounts at each of three (3) attachment points per rail. 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 will be yellow in color and must be effective against a broad range of microbes including bacteria, molds, algae, and fungi. The coating will be integral and will not consist of an agent that will need to be reapplied over time.

Bidder fully complies without exception or deviation YES _____ NO _____

Ceiling Material: Platinum White Composite

The patient area ceiling will be constructed of a bright white aluminum composite material consisting of a polyethylene core laminated between two sheets of coated aluminum. The headliner will be smooth, impervious to moisture, easy to clean, and durable. It will 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 materials are not acceptable due to the cracking commonly caused by the differing rates of expansion. Lastly, the headliner material must be treated with an anti-microbial agent.

Bidder fully complies without exception or deviation YES _____ NO _____

Fire Extinguishers: 5lb ABC Ship Loose

A new 5# ABC fire extinguisher, with mounting brackets, must be supplied on the completed vehicle. Unit is to be shipped loose to be installed at a later date.

Bidder fully complies without exception or deviation YES _____ NO _____

Inventory Control Systems

Provisions for inventory control must 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.

Bidder fully complies without exception or deviation YES _____ NO _____

Induct 500-12V UV

The vehicle will include an ActivTek Health Solution Systems Induct 500-12V UV light installed in the heat/AC system ductwork. The system will be installed on a removable stainless steel plate to facilitate service. The system is to activate anytime the HVAC blower is operating. A green indicator light is to be provided to provide a visual confirmation that the system is operating.

Bidder fully complies without exception or deviation YES _____ NO _____

STREET SIDE CABINETRY

Linen Cabinet

A vertical storage cabinet will be located behind the attendant seat. The upper storage area will house the primary electrical distribution area. The lower section will be used for miscellaneous storage. Each area will be accessed through hinged doors. The entire cabinet will be fabricated from aluminum. The interior of the cabinet will be painted and trimmed as described in the cabinet construction section of the specification.

Bidder fully complies without exception or deviation YES _____ NO _____

Fixed Shelf, Upper Linen Cabinet

The upper section of the linen cabinet will include a fixed aluminum shelf with 1" integral retaining lips around its perimeter. The shelf is to be painted to match the interior of the cabinet.

Bidder fully complies without exception or deviation YES _____ NO _____

Fixed Shelf, Lower Linen Cabinet

The lower section of the linen cabinet will include a fixed aluminum shelf with 1" integral retaining lips around its perimeter. The shelf is to attach to the side walls of the cabinet at a minimum of two (2) locations per side. The shelf is to be painted to match the interior of the cabinet.

Bidder fully complies without exception or deviation YES _____ NO _____

Solid Laminate-Covered Linen Cabinet Door

The linen cabinet is to include solid vertically hinged doors. The door construction is to utilize aluminum composite material that is laminated with a color coordinating outer layer on its face. Doors constructed of wood or any other type of organic material will not suffice to comply with this requirement due to the danger of contamination, rotting, compression at the attachment points which could lead to loosening and rattling, and the weaker structural characteristics inherent in such materials.

The upper section of the linen cabinet will include a piano style hinge. The middle section of the linen cabinet will include a piano style hinge.

Bidder fully complies without exception or deviation YES _____ NO _____

Locking Flush-Style Latch, Upper Linen, Change 10

The upper linen cabinet door is to utilize a locking stainless steel flush-style latch. The latch will feature a recessed pull ring style handle. The latch must be both positive (mechanical latching) and passive (latches automatically) and is to be Change Notice 10 compliant with a weight rating of 25lbs.

Bidder fully complies without exception or deviation YES _____ NO _____

Flush-Style Latch, Lower Linen, Change 10

The lower linen cabinet door is to utilize a stainless steel flush-style latch. The latch will feature a recessed pull ring style handle. The latch must be both positive (mechanical latching) and passive (latches automatically) and is to be Change Notice 10 compliant with a weight rating of 25lbs.

Bidder fully complies without exception or deviation YES _____ NO _____

Street Side Wall with CPR Seat

The main cabinet wall inside the patient compartment is to be designed per the requirements of this document and must include a CPR seat. The seat area will be approximately 36" wide, not including padding.

Bidder fully complies without exception or deviation YES _____ NO _____

Cabinet #1

DIMENSIONS: 54W x 15H x 18D; LOCATION: Upper Area above Action Area, Aft of CPR Seat

The cabinet designated as "Cabinet #1" is to meet all applicable specifications regarding cabinet materials and construction listed throughout this document. The cabinet dimensions are to be noted above. Note that these dimensions represent the measurements on the inside of the cabinet and do not include any trim required for doors or cabinet faces.

The rear facing cabinet wall will be angled away from the CPR seat.

The cabinet notated above is to include sliding polycarbonate doors. The door frame is to be designed with an integral groove that incorporates a nylon/felt insert that allows for smooth and rattle-free operation. A manually operated latch must be incorporated into the face of the door to prevent unintended opening of the doors in compliance with Change Notice 10 requirements.

The specified sliding cabinet doors on the cabinet referenced above will feature a flip-up restocking style door frame. The frame, in which the sliding doors are installed, is to include a piano style hinge to provide a larger clear opening for ease of restocking supplies and cleaning. This feature is in addition to the normal sliding mode of operation. The door frame will be held in the "open" position with two gas-charged cylinders, and in the "down" position with two vertical sliding dead bolt type latches that fasten through the floor of the cabinet. The opening that the bolts slide into will include a stainless trim plate. The latches must meet Change Notice 10 requirements. The remainder of the door construction will adhere to the appropriate section of this specification.

Cabinet #1 will include an adjustable aluminum shelf with 1" integral retaining lips around its perimeter. The shelf is to attach to four (4) tracks, two (2) each installed on the left hand and right hand wall respectively. The shelf is to be painted to match the interior of the cabinet.

Provisions for inventory control will be provided. 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.

Bidder fully complies without exception or deviation YES _____ NO _____

Cabinet #2

DIMENSIONS: 49W x 16H x 18D; LOCATION: Rear Main Wall, Upper

The cabinet designated as "Cabinet #2" is to meet all applicable specifications regarding cabinet materials and construction listed throughout this document. The cabinet dimensions are to be as noted above. Note that these dimensions represent the measurements on the inside of the cabinet and do not include any trim required for doors or cabinet faces.

The cabinet notated above is to include sliding polycarbonate doors. The door frame is to be designed with an integral groove that incorporates a nylon/felt insert that allows for smooth and rattle-free operation. A manually operated latch must be incorporated into the face of the door to prevent unintended opening of the doors in compliance with Change Notice 10 requirements.

The specified sliding cabinet doors on the cabinet referenced above will feature a flip-up restocking style door frame. The frame, in which the sliding doors are installed, is to include a piano style hinge to provide a larger clear opening for ease of restocking supplies and cleaning. This feature is in addition to the normal sliding mode of operation. The door frame will be held in the "open" position with two gas-charged cylinders, and in the "down" position with two vertical sliding dead bolt type latches that fasten through the floor of the cabinet. The opening that the bolts slide into will include a stainless trim plate. The latches must meet Change Notice 10 requirements. The remainder of the door construction will adhere to the appropriate section of this specification.

Cabinet #2 will include an adjustable aluminum shelf with 1" integral retaining lips around its perimeter. The shelf is to attach to four (4) tracks, two (2) each installed on the left hand and right hand wall respectively. The shelf is to be painted to match the interior of the cabinet.

Provisions for inventory control will be provided. 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.

Bidder fully complies without exception or deviation YES _____ NO _____

Cabinet #3

DIMENSIONS: 49W x 18H x 18D; LOCATION: Rear Main Wall, Center

The cabinet designated as "Cabinet #3" is to meet all applicable specifications regarding cabinet materials and construction listed throughout this document. The cabinet dimensions are to be as noted above. Note that these dimensions represent the measurements on the inside of the cabinet and do not include any trim required for doors or cabinet faces.

The cabinet notated above is to include sliding polycarbonate doors. The door frame is to be designed with an integral groove that incorporates a nylon/felt insert that allows for smooth and rattle-free operation. A manually operated latch must be incorporated into the face of the door to prevent unintended opening of the doors in compliance with Change Notice 10 requirements.

The specified sliding cabinet doors on the cabinet referenced above will feature a flip-up restocking style door frame. The frame, in which the sliding doors are installed, is to include a piano style hinge to provide a larger clear opening for ease of restocking supplies and cleaning. This feature is in addition to the normal sliding mode of operation. The door frame will be held in the "open" position with two gas-charged cylinders, and in the "down" position with two vertical sliding dead bolt type latches that fasten through the floor of the cabinet. The opening that the bolts slide into will include a stainless trim plate. The latches must meet Change Notice 10 requirements. The remainder of the door construction will adhere to the appropriate section of this specification.

Cabinet #3 will include an adjustable aluminum shelf with 1" integral retaining lips around its perimeter. The shelf is to attach to four (4) tracks, two (2) each installed on the left hand and right hand wall respectively. The shelf is to be painted to match the interior of the cabinet.

Provisions for inventory control will be provided. 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.

Bidder fully complies without exception or deviation YES _____ NO _____

Cabinet #4

DIMENSIONS: 49W x 16H x 16D; LOCATION: Rear Main Wall, Lower

The cabinet designated as "Cabinet #4" is to meet all applicable specifications regarding cabinet materials and construction listed throughout this document. The cabinet dimensions are to be as noted above. Note that these dimensions represent the measurements on the inside of the cabinet and do not include any trim required for doors or cabinet faces.

The cabinet notated above is to include sliding polycarbonate doors. The door frame is to be designed with an integral groove that incorporates a nylon/felt insert that allows for smooth and rattle-free operation. A manually operated latch must be incorporated into the face of the door to prevent unintended opening of the doors in compliance with Change Notice 10 requirements.

The specified sliding cabinet doors on the cabinet referenced above will feature a flip-up restocking style door frame. The frame, in which the sliding doors are installed, is to include a piano style hinge to provide a larger clear opening for ease of restocking supplies and cleaning. This feature is in addition to the normal sliding mode of operation. The door frame will be held in the "open" position with two gas-charged cylinders, and in the "down" position with two vertical sliding dead bolt type latches that fasten through the floor of the cabinet. The opening that the bolts slide into will include a stainless trim plate. The latches must meet Change Notice 10 requirements. The remainder of the door construction will adhere to the appropriate section of this specification.

Cabinet #4 will include an adjustable aluminum shelf with 1" integral retaining lips around its perimeter. The shelf is to attach to four (4) tracks, two (2) each installed on the left hand and right hand wall respectively. The shelf is to be painted to match the interior of the cabinet.

Provisions for inventory control will be provided. 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.

This cabinet may be modified to include a drawer area for IV fluids.

Bidder fully complies without exception or deviation YES _____ NO _____

Sharps Disposal, Recessed in Action Area

The action area will incorporate an aluminum tip-out door. The door will be painted to match the interior cabinets and will include a recessed face that fits near flush into the riser face. The door will house a sharps container which will be supplied attached to the door with the finished vehicle. The face will be trimmed and will be finished in a material to match the wall color. The door and door face are to be free of wood or other organic materials.

Bidder fully complies without exception or deviation YES _____ NO _____

CURBSIDE CABINETS

Squad Bench

A storage area, fabricated from .125" 5052-H34 aluminum, will be installed beneath the squad bench cushion(s). This storage area will be painted and trimmed per the cabinet construction section of this specification. Access to this area will be gained by raising the bench cushion. This area will be as large as possible given the presence of the wheelhouse directly beneath it. Note that storage areas made of wood, whether or not they are laminated or otherwise covered with another material, will not be acceptable. The bench must meet all applicable testing for crashworthiness. This testing must have been performed by an independent, accredited outside testing facility.

The squad bench lid is to be equally divided into two sections. Cushioned seating surfaces will be provided on each section.

24lb. Gas piston style hold-open devices will be installed on the flip-up squad bench cushion. 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.

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

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

The minimum length of the bench will be 73 inches so that it is capable of carrying a backboard. Straps will be provided to carry a patient on this bench.

Bidder fully complies without exception or deviation YES _____ NO _____

Bench Back Cushion: Full Size

A full backrest cushion will be installed on the wall over the squad bench. The cushion is to extend the full width of the squad bench and will be trimmed to match the interior of the vehicle. The upholstery will be as described in the upholstery section of this document.

Bidder fully complies without exception or deviation YES _____ NO _____

Crash Barrier Layout

A crash barrier will be installed at the front facing end of the squad bench. The barrier will be approximately 20 inches wide and made from painted smooth aluminum. The top of the barrier will be covered with solid surface material. Bidder will install two drawers in the top of the crash barrier. One will open towards the bench and one will open towards the aisle. These will be 6”H and as deep and wide as possible. They will have heavy duty side mounted slides, flush style latches and aluminum faces. Bidder will install two solid doors with self-closing hinges and flush style latches on the I/O. Bidder will install one adjustable shelf at floor level of the crash barrier compartment.

Bidder fully complies without exception or deviation YES _____ NO _____

Sharps/Waste on a Tip-Out Door: Forward Bench

The forward area of the squad bench riser will incorporate an aluminum tip-out door. The door will be painted to match the interior cabinets and will include a recessed face that fits near flush into the riser face. The door will house sharps and waste containers which will be supplied attached to the door with the finished vehicle. The face will be trimmed and will be finished in a material to match the wall color. The door and door face are to be free of wood or other organic materials.

Bidder fully complies without exception or deviation YES _____ NO _____

Bench Cabinet

A cabinet will be installed at ceiling level over the full length of the squad bench, extending the maximum width over the crash barrier to the side door. This cabinet is to be fabricated from .063” 5052-H32 welded aluminum. The interior of the cabinet will be painted per the cabinet construction description listed elsewhere within this specification. The cabinet is to be accessed through hinged 3/8” acrylic 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 clearance between the bottom of the cabinet and the top of the seat below to meet KKK-F requirements.

The hinged doors on the bench ceiling cabinet are to utilize flush-style stainless steel latches. These latches will feature recessed pull ring style handles. The latches must be both positive (mechanical locking) and passive (latches automatically).

The cabinet above the squad bench/curb side seating area will include compression style hinges.

Bidder fully complies without exception or deviation YES _____ NO _____

Med Vault

A KnoxBox Brand (mini) MedVault Model KLS-5230R3R must be installed on the curb side wall high over the crash barrier.

Bidder fully complies without exception or deviation YES _____ NO _____

Pass-Through Access: Curb Side, Rear

An inside/outside dual access storage area will be provided into the curb side rear compartment. This area will be trimmed around the opening and is to be accessible through both an exterior compartment door and an interior cabinet door.

The compartment pass-through notated above is to include a vertically hinged door. The door is to be made of ½” acrylic material and is to be compliant with Change Notice 10.

The specified curb side rear inside/outside pass-through access door will include a full length piano style hinge.

Bidder fully complies without exception or deviation YES _____ NO _____

FRONT WALL CABINETRY

Cab to Module Pass-Through Opening

A pass-through opening will be provided between the cab and the patient area. The opening will include a fixed opening that measures approximately 12" x 12".

Bidder fully complies without exception or deviation YES _____ NO _____

Glove Holders

Three (3) glove box holders are to be installed on a wall in a location to be determined at final inspection.

Bidder fully complies without exception or deviation YES _____ NO _____

Radio Cabinet

A cross-over cabinet will be installed in the upper center of the front wall for the mobile radio equipment. The cabinet dimensions will be approximately 22W x 18H x 10D. A 50 A 12V DC, 6 circuit Fuse Block, Blue Sea 5025 Ignition Hot with ground will be installed in this compartment. A 50 A 12V DC, 6 circuit Fuse Block, Blue Sea 5032 with ground one bus ignition and the other bus battery hot will be installed in this compartment. One (brand to be determined) Tri-band radio antenna compatible with the Motorola APEX 8500 mobile radio will be installed and terminate in the compartment. One antenna NMO mount and cable will be installed and terminate in this cabinet. There will be a method to run radio control cables, such as a conduit, chase, or pull wire, from the radio cabinet to both the action area and the front console. The cabinet will have a swing-up style door with hold-open devices, and a recessed locking mechanism.

Bidder fully complies without exception or deviation YES _____ NO _____

Radio Equipment

Customer will supply the following equipment to be installed by the manufacturer. Dealer install with not be permitted.

- One (1) Motorola Tri-band APEX 8500 Mobile Radio with two control heads; one in Action area, one in front console.
- Two (2) Motorola APEX 7000 portable radio chargers installed in front console

Bidder fully complies without exception or deviation YES _____ NO _____

Cot Mount (Offset) and Cot

The bidder will supply and install and Stryker Power Load system in the completed vehicle.

A Stryker Power Pro XT Model 6506 will be provided with the unit. The Stryker Power Pro XT will include the SMRT Power System and the XPS patient surface options.

Bidder fully complies without exception or deviation YES _____ NO _____

VISUAL WARNING

Lightbar

There will be one (1) 72" Whelen Freedom IV LED lightbar mounted on the cab roof. There will be clear lenses included on the lightbar, with red and white LED modules. There will be a switch in the cab on the switch panel to control this lightbar. The white LEDs will be disabled when the parking brake is applied. The six (6) red flashing LED modules in the front positions and the two (2) red flashing LED modules in the end positions may be load managed when the parking brake is applied.

M6 Red / Red Lens; Side Warning Lights

Whelen M6 series LED lighting will be installed as noted. Lighting is to be red with red lens and is to include the chrome flange. The lighting will be mounted using threaded nylon inserts providing separation between the mounting hardware and the vehicle body. A switch will be provided in the front control panel to change flash patterns on the specified lighting.

There will be two lights on each side. One on the hood and one over the rear wheels.

Bidder fully complies without exception or deviation YES _____ NO _____

M6 Red / Red Lens; Grill Warning Lights

Whelen M6 series LED lights will be installed as noted. Lighting is to be red with red lens and is to include the chrome flange. The lighting will be mounted using threaded nylon inserts providing separation between the mounting hardware and the vehicle body. A switch will be provided in the front control panel to change flash patterns on the specified lighting.

There will be two lights on each side of the grill for a total of four (4) lights.

Bidder fully complies without exception or deviation YES _____ NO _____

M9 White Clear Lens; Front Center

One Whelen M9 series LED light will be installed centered on the front face of the body. The light is to be white with clear lenses and is to include a chrome flange. The light will be mounted using threaded nylon inserts providing separation between the mounting hardware and the vehicle body. A switch will be provided in the front control panel to change flash patterns on the specified lighting. This light will be tied to the parking circuit so that it is off when the brake is applied.

Bidder fully complies without exception or deviation YES _____ NO _____

M4 Amber / Amber Lens; Rear Center

One Whelen M4 series LED light will be installed centered on the upper rear face of the body above the rear doors. The light is to be amber with an amber lens and is to include the chrome flange. The light will be mounted using threaded nylon inserts providing separation between the mounting hardware and the vehicle body. A switch will be provided in the front control panel to change flash patterns on the specified lighting.

Bidder fully complies without exception or deviation YES _____ NO _____

M9 Red / Red Lens; Front Body Face

Six (6) Whelen M9 series LED lights will be installed as noted. Lighting is to be red with red lens and is to include the chrome flange. The lighting will be mounted using threaded nylon inserts providing separation between the mounting hardware and the vehicle body. A switch will be provided in the front control panel to change flash patterns on the specified lighting.

Bidder fully complies without exception or deviation YES _____ NO _____

M9 Red / Red Lens; Street Side Upper Corners

Whelen M9 series LED lighting will be installed as noted. Lighting is to be red with red lens and is to include the chrome flange. The lighting will be mounted using threaded nylon inserts providing separation between the mounting hardware and the vehicle body. A switch will be provided in the front control panel to change flash patterns on the specified lighting.

Bidder fully complies without exception or deviation YES _____ NO _____

M9 Red / Red Lens; Curb Side Upper Corners

Whelen M9 series LED lighting will be installed as noted. Lighting is to be red with red lens and is to include the chrome flange. The lighting will be mounted using threaded nylon inserts providing separation between the mounting hardware and the vehicle body. A switch will be provided in the front control panel to change flash patterns on the specified lighting.

Bidder fully complies without exception or deviation YES _____ NO _____

M9 Red / Red Lens; Rear Body Upper Corners

Whelen M9 series LED lighting will be installed as noted. Lighting is to be red with red lens and is to include the chrome flange. The lighting will be mounted using threaded nylon inserts providing separation between the mounting hardware and the vehicle body. A switch will be provided in the front control panel to change flash patterns on the specified lighting.

Bidder fully complies without exception or deviation YES _____ NO _____

Flash Pattern – 80FPM A/B

The emergency lighting flash pattern is to be programmed to an 80FPM A/B pattern.

Bidder fully complies without exception or deviation YES _____ NO _____

Chevron Style Lighting; Red/Amber

Bidder will install ten (10) 12" LED light strips on the rear of the body, five (5) on either side of the rear entry doors. Three (3) red and two (2) amber light strips are to be included per side and installed in an alternating pattern. The lights are to be installed with chrome bezels and at an angle to mimic a chevron type design. Each light strip will include an array of LED lights centered behind an integral lens for maximum light disbursement. When mounted, the lens will be near flush with the body skin. The slots in the body that house each strip will be computer cut. Hand-cut holes are not acceptable. The light strips will flash when the red flashing light circuit is activated. The lens will be designed to provide a bright and intense light from a distance. As distance is decreased the light will become less intense, preserving nighttime visibility for people working near the vehicle. The lights are to provide additional lighting to warn traffic and pedestrians of a stationary emergency vehicle and to provide additional safety for the attendants.

Bidder fully complies without exception or deviation YES _____ NO _____

AUDIBLE WARNING

Air Horns

There will be hood mounted Grover stutter tone air horns, one on each side of the hood.

Bidder fully complies without exception or deviation YES _____ NO _____

Chain Style Switch; Air Horn

A chain style switch will be installed for air horn activation and be centered to it can be easily reached by both the driver and passenger.

Bidder fully complies without exception or deviation YES _____ NO _____

Siren; Whelen Model 295SLSA1 Siren

The vehicle is to be equipped with a WLN 295SLSA1 siren installed in the front console.

Bidder fully complies without exception or deviation YES _____ NO _____

Siren; Whelen Howler, Freightliner

The vehicle is to be equipped with a Whelen Howler low frequency siren. The howler will be activated by a switch on the console.

Bidder fully complies without exception or deviation YES _____ NO _____

Speakers

Two (2) Cast Products 100W siren speakers will be installed, one (1) in each end of the chassis front bumper and wired to the specified siren.

Bidder fully complies without exception or deviation YES _____ NO _____

NON-EMERGENCY LIGHTING

Side Body Marker Lights; M6 Series LED (Pair)

One (1) Whelen red M6 series LED light with a red lens and chrome flange will be installed on each side of the vehicle towards the rear of the body. These lights will function as both running lights and turn signals.

Bidder fully complies without exception or deviation YES _____ NO _____

LED Exterior Compartment Lighting

Bidder will install full height white LED strip lighting in all exterior compartments. Install vertical strips inside both sides of each compartment. The lights are to be directed toward the back of each compartment.

Bidder fully complies without exception or deviation YES _____ NO _____

Running Board Lights; LED Strip

The bidder will install custom made white LED light strips, one per side, flush mounted into the running board/step area. The light strips will have a scalloped integral lens strip for maximum light disbursement. The lights will operate off of the cab door as a cab step light.

Bidder fully complies without exception or deviation YES _____ NO _____

Hi-Viz Guardian LED Scene Light; Street Side Front

A Hi-Viz Guardian LED scene light with chrome flange will be installed on the street side of the module body in the forward position. This light will be activated by right and left side switches located within the front electrical control panel. Additional means of activation, if any, are listed in the electrical section of these specifications.

Bidder fully complies without exception or deviation YES _____ NO _____

Hi-Viz Guardian LED Scene Light; Street Side Rear

A Hi-Viz Guardian LED scene light with chrome flange will be installed on the street side of the module body in the rear position. This light will be activated by right and left side switches located within the front electrical control panel. Additional means of activation, if any, are listed in the electrical section of these specifications.

Bidder fully complies without exception or deviation YES _____ NO _____

Hi-Viz Guardian LED Scene Light; Curb Side Front

A Hi-Viz Guardian LED scene light with chrome flange will be installed on the curb side of the module body in the forward position. This light will be activated by right and left side switches located within the front electrical control panel. Additional means of activation, if any, are listed in the electrical section of these specifications.

Bidder fully complies without exception or deviation YES _____ NO _____

Hi-Viz Guardian LED Scene Light; Curb Side Rear

A Hi-Viz Guardian LED scene light with chrome flange will be installed on the curb side of the module body in the rear position. This light will be activated by right and left side switches located within the front electrical control panel. Additional means of activation, if any, are listed in the electrical section of these specifications.

Bidder fully complies without exception or deviation YES _____ NO _____

Load Lights; Hi-Viz Guardian LED

Two (2) Hi-Viz Guardian LED load lights with chrome flanges will be installed on the rear of the module body above the entry doors. These lights will be activated by a switch located within the front electro8ical control panel or by opening of the right rear entry door. Additional means of activation, if any, are listed in the electrical section of these specifications.

Bidder fully complies without exception or deviation YES _____ NO _____

Red/White Warning; Bottom, Side Access Door

A 12" LED light strip will be installed on the lower portion of the curb side access door inner door panel. The light strip will be red/white split in color. The light will have optics integral to the lens for maximum light disbursement. When mounted, the lens will be near flush with the door panel. The light strip will

alternate flash when the access door is open, and the emergency lighting is activated. The lens will be designed to provide a bright and intense light from a distance. As distance is decreased the light will become less intense, preserving nighttime visibility for people working near the vehicle. The lighting is intended to provide additional warning to traffic and pedestrians of open access doors, and to provide additional safety for the crew.

Bidder fully complies without exception or deviation YES ____ NO ____

Red/White Warning; Bottom, Rear Access Doors

12" LED light strips will be installed on the lower portion of the rear module access door inner door panels, one (1) per door. The light strips will be red/white split in color. The lights will have optics integral to the lenses for maximum light disbursement. When mounted, the lenses will be near flush with the door panels. The light strips will alternate flash when the access doors are open, and the emergency lighting is activated. The lenses will be designed to provide a bright and intense light from a distance. As distance is decreased the light will become less intense, preserving nighttime visibility for people working near the vehicle. The lighting is intended to provide additional warning to traffic and pedestrians of open access doors, and to provide additional safety for the crew.

Bidder fully complies without exception or deviation YES ____ NO ____

LED Ground Lighting

The manufacturer will install Amdor AY-LB-12HW020 LED lighting beneath the module body for use as ground lighting. The lighting is to include stainless steel mounting brackets.

Lights are to function as follows:

1. Includes a front control panel switch
2. Compartment doors activate the lights in the respective quadrant of the body. Rear entry doors activate the rear corner lights
3. Rear lights are wired reverse activated. All lights to activate for 15 seconds when the vehicle is placed in drive
4. Items 2 and 3 are to only occur when the parking or headlights are activated

Bidder fully complies without exception or deviation YES ____ NO ____

Tail Lights; M6 Series, Horizontal Mounted

Whelen M6 series LED stop/tail, turn, and reverse lights are to be installed on the rear of the vehicle. The stop/tail and reverse lights are to be located in the rear riser/kick plate with brake/tail outboard. The turn signals are to be located above in the rear body panels, one to either side. All lights are to include chrome flanges.

Bidder fully complies without exception or deviation YES ____ NO ____

ELECTRICAL

Electric Door Locks; Compartment Exterior

Power activated door locks will be installed on compartment doors. Locks will be activated by switches located at each patient area access door, or via other means as may be specified within this document. Locks may be overridden by the door key.

Bidder fully complies without exception or deviation YES ____ NO ____

Electric Door Locks; Access Doors Interior

Power activated door locks will be installed on patient area access doors. Locks will be activated by switches located at each patient area access door. Locks may be overridden by a manual slide lever or by the door key.

Bidder fully complies without exception or deviation YES _____ NO _____

Electric Door Locks Wired to OEM Switches

The converter-added power door locks are to be wired through the OEM chassis door lock switches.

Bidder fully complies without exception or deviation YES _____ NO _____

Electric Door Locks Concealed in Grille

A concealed weatherproof switch will be installed in the chassis grille to operate the specified power door locks. The switch will be wired to unlock only.

Bidder fully complies without exception or deviation YES _____ NO _____

360 Degree Marker Lights; Emergency Flash

The bidder will install additional LED marker lights at each upper corner of the body. The lights are to be a rolled design to conform to the contour of the upper body corners and sides, front and rear. This design will allow for 360 degrees of light coverage including the sky. These lights are to be a surface mount design. Lights that must be recessed into the corners are not acceptable as they weaken the body structure at those locations. The specified lights are to flash along with the rest of the specified emergency lighting in addition to normal operation.

Bidder fully complies without exception or deviation YES _____ NO _____

Electrical System

The electrical control system must meet all current ambulance design standards to include KKK 1822, NFPA 1917, CASS and AMD. A system is desired that is easy to use, simple in design, and allows electrical problem diagnosis and repair time to 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. In some cases 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:

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 downtime associated with charging system repairs, and the fulfillment of each and every emergency response.

Bidder fully complies without exception or deviation YES _____ NO _____

Battery Activation

Switching for battery power to the ambulance systems, either On or Off, will be furnished as outlined elsewhere within this document. The battery switch will not disconnect power to the OEM chassis system.

Automatic Throttle Advance

In order to reduce the number of component parts and unnecessary throttle linkages, the factory electronic throttle control will be utilized to activate the throttle advance system. The controls will 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.

Automatic Load Management

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 will 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 will be programmed to constantly scan the electrical system. If a deficit charging condition continues for more than one minute, a pre-programmed circuit will shut down, correspondingly reducing the electrical draw. If the deficit continues, a second circuit will automatically shut down. This process will 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. A digital display warning must appear on the driver information panel indication Load Management Active.

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 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 mod for restocking, training, or maintenance convenience. The System Off setting will default to "on" with system power reset.

Bidder fully complies without exception or deviation YES _____ NO _____

Low Amperage Switching

Electrical devices that are not activated automatically will be controlled from either the cab or patient area control panels through the use of manual low amperage switches in conjunction with a programmed touch screen. Switches that are rocker style 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 integral to the panels.

Bidder fully complies without exception or deviation YES _____ NO _____

Switch Indicators

All manually activated switches on the panels described below will be programmed to change color when the circuit is active. The switch lighting must be LED.

Bidder fully complies without exception or deviation YES _____ NO _____

Switch Panel Design

Both the driver and the patient area switch panels must be designed so they can be easily decontaminated. The panels must be sealed so as to prevent contaminants from leaching into crevices,

underneath switches, etc. There will be no printing or labeling on the face of the overlay material. The panels must be cleanable using any commercially available spray type cleaner or disinfectant commonly used by EMS systems with no damage created by fluids leaking through openings onto the circuit boards or switch contacts.

Bidder fully complies without exception or deviation YES _____ NO _____

Switch Panel Backlighting

The switch panels must include an individual intensity control and backlighting color selection feature on each panel. 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. The panel lighting must have multiple color selections available with front and rear panels separately controlled.

Cab Control Switching and Display Switch Activation

The cab control center must include 8 critical buttons installed in a protective enclosure with proper ventilation to maintain temperature. The following minimum circuits must be provided on the switch panel:

1. Module Disconnect
2. Emergency Master
3. Emergency
4. Interior Lights
5. Exterior Lights
6. Home
7. Apps
8. Options

The following displays will appear on the Home screen of the cab console:

- Voltage (to the nearest 0.10 volt)
- Amperage (to the nearest amp)
- Outside Temperature
- Inside Patient Area Temperature
- Access or Compartment Door Open Warning Message and Display
- Electrical System Diagnostics
- 24-Hour Clock
- HVAC
- Emergency Brake Warning
- Accent Lighting and Backlighting Controls
- Patient Warning

Bidder fully complies without exception or deviation YES _____ NO _____

Door Open Indicator

The front panel will include a door open warning indicator. This will consist of a graphical diagram of the vehicle on the touch screen. An open door will appear on the screen allowing the operator to pinpoint which door is open. An audible alarm must sound if a door is left open and the vehicle is placed into gear. Under no circumstances will flashing lights or stand-alone audible indicators suffice to meet this requirement.

Bidder fully complies without exception or deviation YES _____ NO _____

Patient Area Control Switching and Display

The patient area control center must match the front control panel specified above in all but function. The rear panel is to specifically control patient care functions and must include 8 mission critical buttons installed in a backlit aluminum control panel. The following circuits will be controlled through these switches:

1. Oxygen
2. Vacuum
3. Interior lighting
4. Climate control
5. Scene/Load lights
6. Ventilation
7. Home

Additional functionality must be available via the graphical touch screen. At a minimum, the following information must be available and controllable through the rear panel in addition to the functionality listed above:

- Patient Status
- Stop Clock
- Oxygen Line Pressure
- Oxygen Cylinder Pressure
- Patient Area Temperature
- Thermostat Setting
- Oxygen Warning

Bidder fully complies without exception or deviation YES _____ NO _____

Compartment and Entry Door Switches

Exterior circuits such as loading lights, side scene lights, and compartment lights must 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.

Bidder fully complies without exception or deviation YES _____ NO _____

“Door Open” Indicator

A vehicle graphic door open warning indicator, with accompanying audible chime, will be installed in both the cab and patient area. A digital display will appear on both consoles indicating which specific door has been left ajar. Under no circumstances will red flashing lights or systems that do not specifically pinpoint which door is ajar be acceptable.

Bidder fully complies without exception or deviation YES _____ NO _____

Central Electrical Distribution

The electrical system smart modules must be independent and include their own logic. They must include RAM memory to execute commands without having to rely on a central CPU. The system must not 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.

Bidder fully complies without exception or deviation YES _____ NO _____

Multiplexed Electrical Communications System

Because most chassis manufacturers have chosen multiplex electrical communication technology to operate the chassis system, the City requires the same technology for the converter-added systems. A standardized electrical control and wiring system is required. "Off the shelf" third-party systems are not desired. 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 modules that are not standard in design and are not interchangeable from one unit to another will not be considered. 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.

In addition, the system will consist of a series of input/output control modules to manage and feed information and to control the various circuits required by this specification. Each smart module must have 32 power and 2 ground outputs and 12 inputs. The smart modules will have a chassis gateway interface with a 120 amp max output. Universal Mate-N-Lock connectors will be used for all load connections. Mini-Universal Mate-N-Lock connectors will be used for data transmission lines. Under no circumstances will systems that utilize screw type terminals or card connectors be acceptable due to their susceptibility to working loose due to vibration normally encountered on a vehicle.

Under no circumstances may the operation of the central processing unit of 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.

Unit Function

The electrical control system will be fully programmable and will control a number of functions. The minimum functions to be controlled are as follows:

- Load Management
- Sequenced Start Circuit Activation
- Electrical Systems 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

The electrical control system will be capable of adding the following options:

- Up to four cameras
- Emergency GPS
- Pulse Width Modulation
- USB Port for Field Upgradability
- Seat Belt Monitor Display
- Remote System Activation from a Mobile Device
- Record ambulance PM schedule

The electrical control system must include the ability to manage user defined maintenance issues. It must also allow for the notification of critical issues such as oil changes and tire rotations.

Bidder fully complies without exception or deviation YES _____ NO _____

Circuit Protection

Each converter added electrical circuit must have circuit protection for both over current limit and over temperature condition. The circuit protection will be provided by solid-state circuit breakers/switching devices (MOSFETS) for both the input and output wire feeds for each circuit. The circuit protection will require no user intervention such as that required for circuit breakers or fuses. The system must be able to indicate an output fault warning.

Bidder fully complies without exception or deviation YES _____ NO _____

No Prototype Systems

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 they have a least ten years of 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.

Bidder fully complies without exception or deviation YES _____ NO _____

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: all wiring must be un in breakaway wire loom for protection against abrasion or chafing

Bidder fully complies without exception or deviation YES _____ NO _____

Diagnostics

The electrical system must have built-in capability to self-check each converter-added circuit and identify a short or open circuit automatically. The system must be designed to continuously monitor all outputs and to notify the operator of any faults via a message on the front control screen.

Bidder fully complies without exception or deviation YES _____ NO _____

Support Data

Being able to service the electrical system should the need arise is of the utmost importance. To reduce the downtime associated with servicing, the following information must 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

Bidder fully complies without exception or deviation YES _____ NO _____

Wiring, Recessed Auxiliary Condenser

The specified recessed auxiliary condenser is to include wiring as well as a control module covering all aspects of operation. As specified under the condenser requirements, the control module will cycle the fans as needed and will rotate the primary fan so as to not overburden any single fan.

Bidder fully complies without exception or deviation YES _____ NO _____

Electronic Battery Switch, With Wake Button (5 Minutes)

Install an Inpower or equal electronic battery switch. Switch is to activate battery power through the vehicle ignition and is to include an automatic shutdown timer to deactivate battery power after the ignition is turned off.

Bidder fully complies without exception or deviation YES _____ NO _____

LifeSine Inverter/Charger, Auto Switched

The vehicle converter will furnish and install a Vanner #LSC12-1100 LifeSine Inverter/Charger in the street side intermediate compartment as noted. Inverter/battery status panels, if required, will be specified elsewhere within this document. The unit is to function through the vehicle ignition and is to power all 110V outlets. The charger portion will be wired to provide power to the vehicle batteries from the specified shoreline.

Bidder fully complies without exception or deviation YES _____ NO _____

110V Interior Outlet (4)

110V lighted interior outlets are to be installed as noted below.

- Two (2) in Inhalation Area
- One (1) above Crash Barrier
- One (1) Passenger side of cab console

Bidder fully complies without exception or deviation YES _____ NO _____

Interior 12VDC Outlets, USB 2 (3)

12V USB style outlets are to be installed as noted below. Outlets should be wired battery hot.

- One (1) in Inhalation Area
- One (1) above Crash Barrier
- One (1) in Cab Console

Bidder fully complies without exception or deviation YES _____ NO _____

Shoreline 1, 20A Auto Eject

A Blue Sea 20A 120V Sure Eject 7851 shoreline inlet, with dynamic disconnect, will be installed on the vehicle driver's side, on an angled bracket on the front face of the body. The inlet will be protected from the elements with a cover. The shoreline system will include a 20 amp inline GFI breaker. The shoreline cover should be yellow.

Bidder fully complies without exception or deviation YES _____ NO _____

Power Distribution Box

The onboard power distribution panel is to be located on the left wall of the street side intermediate compartment. The panel is to be covered with an aluminum closeout to match the finish in that compartment. Access to the panel will be provided by removing the closeout.

Bidder fully complies without exception or deviation YES _____ NO _____

Report Light, LED

Report lighting will be installed above the main counter/work area. The fixture will be 12” in length and LED. The fixture will be controlled via a switch on the attendant control panel. This design will allow for simple “one touch” operation while still providing for flexibility in terms of lighting needs.

Bidder fully complies without exception or deviation YES _____ NO _____

Clock, Digital

Bidder will install a large face digital 12/24 hour clock over the rear doors.

Bidder fully complies without exception or deviation YES _____ NO _____

Brake/Directional Indicator Lights

There will be LED lighting installed over the interior rear doors that indicate directional signal and vehicle brake application.

Bidder fully complies without exception or deviation YES _____ NO _____

Step Well Light Vista, LED

The side access door stepwell is to include a 10.5” LED light on the left hand side. The light is to illuminate with the opening of the side access door through the use of a magnetic door switch. Mechanical door switches will not be accepted.

Bidder fully complies without exception or deviation YES _____ NO _____

Patient Ceiling Dome Lights, Whelen LED

Whelen 80C0EHCR LED dome lights will be installed in the patient area ceiling. Patient area lighting is to meet applicable standards for patient area illumination. The lights will have a high/low feature with the switch in the rear control panel.

Bidder fully complies without exception or deviation YES _____ NO _____

3-Switch Panel, Rear Door Panel

The manufacturer will install a 3-switch electrical control panel as noted above. The panel is to match the style of switches used on the main control panels.

Bidder fully complies without exception or deviation YES _____ NO _____

Timer, Dome Lights: Rear Door Panel

An electronic momentary touch timer switch will be installed in the specified switch panel on the right rear door panel. The switch will enable time limited operation of the specified dome lights with the battery switch in the "off" position. Set timer to 15 minutes. Mechanical timers are strictly prohibited.

Bidder fully complies without exception or deviation YES _____ NO _____

Dump Override, i4G: Rear Door Panel

A switch will be programmed into the specified switch panel on the interior panel of the right rear entry door to override the automatch dump feature for the rear suspension. Activation of this switch will prevent the automatic raising and lowering of the rear suspension that occurs with the opening of the left rear entry door.

Bidder fully complies without exception or deviation YES _____ NO _____

3-Switch Panel, Side Access Door

The manufacturer will install a 3-switch electrical control as noted above. The panel is to match the style of switches used on the main control panels.

Bidder fully complies without exception or deviation YES _____ NO _____

Timer, Dome Lights: Side Access Door

An electronic momentary touch timer switch will be installed in the specified switch panel on the side access door panel. The switch will enable time limited operation of the specified dome lights with the battery switch in the "off" position. Set timer to 15 minutes. Mechanical timers are strictly prohibited.

Bidder fully complies without exception or deviation YES _____ NO _____

LED Lighting: Interior Main Wall Cabinets

All main wall interior cabinets will be equipped with LED cabinet lights. Lights will include a snap-in 45 degree clip for light dispersion and ease of replacement. LEDs will be spaced a minimum of 1" apart. The lights will be controlled through a switch in the rear control panel.

Bidder fully complies without exception or deviation YES _____ NO _____

LED Lighting: Interior Bench Wall Cabinets

All bench overhead cabinets will be equipped with LED cabinet lights. Lights will include a snap-in 45 degree clip for light dispersion and ease of replacement. LEDs will be spaced a minimum of 1" apart. The lights will be controlled through a switch in the rear control panel.

Bidder fully complies without exception or deviation YES _____ NO _____

LED Lighting: Floor

LED floor lighting will be recessed under the aisle risers to light the walkways. Lights will include a snap-in 45 degree clip for light dispersion and ease of replacement. LEDs will be spaced a minimum of 1" apart and will be controlled through a switch in the rear control panel.

Bidder fully complies without exception or deviation YES _____ NO _____

Spotlight, Hand Held: In Console

A hand held spotlight with momentary switch is to be provided at the front console location. Spotlight should be a Star-Lite LED or equal.

Bidder fully complies without exception or deviation YES _____ NO _____

Security Idle System, Freightliner

A solid-state security idling system will be provided on the vehicle. With the system in the “on” position, via a switch in the main control panel, the driver may remove the vehicle keys with the engine running. If the vehicle is placed in gear, without returning the keys to the ignition, the system will flash the marker lights and automatically shut down the engine to prevent vehicle theft. The desired system must be integrated into the vehicle’s programmed electrical system and must include a visual communication to the operator that the system is on. Aftermarket add-on units are not acceptable.

Bidder fully complies without exception or deviation YES _____ NO _____

Backup Alarm Resent, Momentary

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

Bidder fully complies without exception or deviation YES _____ NO _____

360 Camera System, White

Bidder will supply and install a 360 degree camera system. This system will consist of four (4) cameras feeding into the front control screen providing a 360 degree view around the vehicle. The system must stitch these views together to give an appearance on the screen of flying just above the unit where all four sides are visible at the same time. Each camera is to include a white housing for protection from the elements. Systems that do not include this protective housing will not be acceptable. Each housing is to incorporate four (4) red LED lights with clear lenses. Each light is to incorporate three (3) LEDs. These lights are to have the ability to function in emergency response mode, as additional turn signals, and when the vehicle is placed into reverse. The housings will be designed in such a way as to not allow the lights to wash out the view from the front screen.

Bidder fully complies without exception or deviation YES _____ NO _____

PROGRAMMING

Light Programming: Side Rear Scene

The rear scene lights on either side of the vehicle will 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 will be attained through the programming of the onboard electrical system. Systems that require additional wiring in order to provide this feature are not acceptable.

Bidder fully complies without exception or deviation YES _____ NO _____

Light Programming: Curb Side Scene

The curb side scene lighting will 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 will be attained through the programming of the onboard electrical system. Systems that require additional wiring in order to provide this feature are not acceptable.

Bidder fully complies without exception or deviation YES _____ NO _____

Light Programming: Load Light

The load lighting on the rear of the vehicle will 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 will be attained through the programming of the onboard electrical system. Systems that require additional wiring in order to provide this feature are not acceptable.

Bidder fully complies without exception or deviation YES _____ NO _____

Programming: Audible Low Voltage Alarm

An audible alarm will be programmed to warn the operator should the vehicle's voltage drop below 11.8 volts for 120 seconds. This function is to operate through the onboard converter-install electrical system. Add-on components will not be accepted.

Bidder fully complies without exception or deviation YES _____ NO _____

Light Programming: Parking Brake

When the vehicle is placed into "Park" or "Neutral" with the "Module Disconnect" switch on, then an audible alarm, accompanied by a visual readout on the cab console digital display, will 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.

Bidder fully complies without exception or deviation YES _____ NO _____

Brake Activated Chevron Lighting

The rear red conspicuity/chevron lighting noted above will be wired so that they illuminate when the brake pedal is depressed. This lighting is in addition to the specified brake/tail lights. Emergency lighting mode will override this feature.

Bidder fully complies without exception or deviation YES _____ NO _____

Turn Signal Activated Chevron Lighting

The rear amber conspicuity/chevron lighting noted above will be wired so that they illuminate with the turn signals. This lighting is in addition to the specified turn signals. Emergency lighting mode will override this feature.

Bidder fully complies without exception or deviation YES _____ NO _____

HVAC

12V HVAC, Attendant's Seat

A 12V heat/AC system with a brushless motor will be installed beneath the attendant's seat. The unit will be housed in a crash tested vented seat base. Air intake will be through the seat base with output located over the head of the attendant's seat to create a circular uniform airflow throughout the patient compartment. The mounting plate for the attendant's seat will be hinged with two bolts securing it in place. Access to the unit for maintenance will be attained by flipping the attendant's seat up. The minimum BTU and CFM ratings on the evaporator will be as follows:

- Heat: 65,000 BTU

- A/C: 32,000 BTU
- CFM: 650 CFM

Units providing for lower ratings will not be accepted.

Bidder fully complies without exception or deviation YES _____ NO _____

Recessed Compressor

A condenser will be recessed into the roof and plumbed to the specified A/C system. The unit must be installed in a position to not interfere with the front wall lighting or the height of the vehicle. Underbody condenser designs and condensers mounted to the face of the body in any way are not acceptable. The external condenser will be capable of producing a minimum of 100,000 BTUs of cooling capacity. The condenser will have a minimum of four flat mounted smart fans with a minimum flat surface area of 825 square inches. The smart condenser system will activate fans one at a time based on system demand. The system will reduce and optimize condenser AMP draw while reducing wear and tear on alternators and batteries. The 100,000 BTUs of added capacity will also reduce high head load on compressors while ensuring best performance in high temperature and high humidity climates. This will ultimately increase the life of the unit.

The condenser design will offer protection in harsh climates from salt and other chemicals used to melt snow and ice. The unit must have consistent performance due to reduced impact from mud, dirt, rocks, tar, and other road debris. The unit must have easy access for maintenance and service. The condenser mount must be easily accessible and allow for easy cleaning. The recessed roof mounted system will also incorporate a solar panel capable of charging vehicle batteries. The solar panel will have a minimum of f1.2 amps of charging capacity.

Bidder fully complies without exception or deviation YES _____ NO _____

NFPA Compliant Venting, Cast

An NFPA compliant venting system, to include a 400cfm exhaust fan along with a static vent, is to be installed. Bidder will install 9.5" square cast covers on both vents. Activation of the venting system is to be through the rear control panel.

Bidder fully complies without exception or deviation YES _____ NO _____

Console, Scorpion, W/Map Storage

Bidder will fabricate and install an aluminum cab console and spray with Line-X material. A custom console with map storage and three (3) adjustable dividers will be installed. A notch must be included at the forward end for a Toughbook mount. A 6" deep storage pocket must be installed between the cup holders. The forward top plate is to be .250" aluminum installed with nutserts and 1/4"-20 hardware. Rear most portion of the console is to have a flat portion for installation of two (2) portable radio chargers, model Motorola APEX 7000. Wired battery hot.

Bidder will install a customer supplied Knox Box Key Secure 6 in the passenger's side vertical panel of the console. Note, this area of the console is to be .1875" ILOS. Install as near flush as possible, the wire for the Knox Box is to be wired from the lock board battery hot at all times. This should have a fuse in the lock board. Through bolt console to chassis floor.

Bidder will install a Havis Docking station to the console with the following parts:

- MD-112 Motion Device
- C-UMM-101 Dock station plate
- HDM-205 10" Pole

Bidder fully complies without exception or deviation YES _____ NO _____

Cup Holders

Two (2) "jumbo" 4" cup holders will be installed in the front console with easy access from both the driver's and passenger's seats.

Bidder fully complies without exception or deviation YES _____ NO _____

Power Terminal

The vehicle manufacturer will install a 50 A 12V DC, 6 circuit fuse block, Blue Sea 5025 Battery Hot with ground inside console.

OXYGEN

O2 Bottle Bracket

A manually operated oxygen cylinder bracket will be installed in the street side forward compartment and set up for an "M" bottle.

Bidder fully complies without exception or deviation YES _____ NO _____

Oxygen Access

Access to the oxygen cylinder valve will be provided through the wall of the action area. The door will be hinged so that it swings into the oxygen cylinder storage compartment. Door material is to match other selected cabinet doors. Make as large as possible.

The Oxygen System will also include a 50 PSI, pre-set Oxygen Regulator and an electronically controlled on/off solenoid with manual override located on the action area wall.

Bidder fully complies without exception or deviation YES _____ NO _____

O2 Outlet, Ohio Medical (3)

Bidder will install O2 outlets per instructions below. Outlets will be Ohio Medical style.

- Two (2) in the Inhalation Panel
- One (1) in the curb side wall at side door

Bidder fully complies without exception or deviation YES _____ NO _____

Flowmeter: Dial Type (3)

Three (3) dial type flowmeters will be supplied with the completed vehicle. Each flowmeter will be supplied with a mating quick-connect adapter. The flowmeter will provide a maximum flow of 25 LPM.

Bidder fully complies without exception or deviation YES _____ NO _____

Oxygen Wrench

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

Bidder fully complies without exception or deviation YES _____ NO _____

Vacuum Outlet, Ohio Medical

A single vacuum panel will be installed in the inhalation area. The outlet will be Ohio Medical style and will be connected to the onboard vacuum pump.

Bidder fully complies without exception or deviation YES _____ NO _____

Aspirator, SSCOR, Inhalation Area

The manufacturer will furnish and install an SSCOR suction system. The system will include a wall-mounted regulator and a canister holder. The aspirator will be accessible for use from the inhalation area and plumbed to the specified pump.

Bidder fully complies without exception or deviation YES _____ NO _____

Vacuum Pump CAPL #D34 SE (P282)

The aspirator system will be operated through a CAPL #D34 SE (P282) 12V vacuum pump that is located inside an exterior compartment. The pump will be activated by a switch on the inhalation area electrical control panel.

Bidder fully complies without exception or deviation YES _____ NO _____

DBL, O2 Holder

Bidder will install a F.W. #516 double cylinder oxygen bracket in the street side front compartment. This bracket should be installed so that it does not interfere with exchange of the "M" cylinder.

Bidder fully complies without exception or deviation YES _____ NO _____

CERTIFICATIONS

KKK-A-1822F Certification Label

The vehicle must 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. Documentation showing that all required testing has been completed must be provided at the time of final inspection.

Bidder must fully comply without exception

Change Notice 10 Certification

The finished vehicle must be certified to comply with Change Notice 10 requirements.

Bidder fully complies without exception or deviation YES _____ NO _____

Electrical Drawings

Two (2) sets of "as built" electrical drawings must be provide specific to this vehicle.

The schematics will show all circuits in a continuous manner from the front of the apparatus to the rear, and show the entire apparatus on one sheet. All termination and junction points/connections will also be shown.

Bidder fully complies without exception or deviation YES _____ NO _____

Electronic Manuals

Two (2) copies of all operator, service, and parts manuals MUST be supplied at the time of delivery in digital format. The electronic manuals must include the following information:

- Operating instructions, descriptions, specifications, and ratings of the cab, chassis, body, installed components, and auxiliary systems
- Charts, tables, checklists, and illustrations relating to lubrication, cleaning, troubleshooting, diagnostics, and inspections
- Instructions regarding the frequency and procedure for recommended maintenance
- Maintenance instructions for the repair and replacement of installed components
- Parts listing with descriptions and illustrations for identification
- Warranty descriptions and coverage
- Apparatus specific Multiplex Report

The electronic document will incorporate a navigation page with electronic links to the operator's manual, service manual, parts manual, and warranty information as well as instructions on how to use the manual. Each copy will include a table of contents with links to the specified documents or illustrations.

The electronic document must be formatted in such a manner as to allow not only the printing of the entire manual, but to also allow for the cutting, pasting, or copying of individual documents to other electronic media such as electronic mail, memos, and the like.

A "find" feature must be included to allow for searched by text or by part number.

These electronic manuals will be accessible from any computer operating system capable of supporting portable document format (PDF). Permanent copies of all pertinent data must be kept on file at both the local dealership and at the manufacturer's location.

Bidder fully complies without exception or deviation YES _____ NO _____

Build Sheet

The winning bidder must provide one (1) build sheet per vehicle which lists all parts used in assembling each vehicle. Build sheet must be provided at delivery.

Bidder fully complies without exception or deviation YES _____ NO _____

Inspection Trips

There will be one (1) inspection trip for five (5) representatives of the Knoxville Fire Department at the facility where the apparatus is being constructed. The inspection trip will be completed prior to delivery of the apparatus. Factory and sales representatives must be available at the time of inspection. Cost of transportation, lodging, and meals will be the responsibility of the winning bidder.

IMPORTANT: No changes will be made until Fleet Services and Fire Department personnel have signed and returned the approval to the vendor/manufacturer. Any changes made without these signed approvals will be unauthorized.

Bidder fully complies without exception or deviation

YES _____ NO _____

Required Delivery Documents

The manufacturer's Statement of Origin (MSO) must be delivered with the apparatus. Payment will NOT be issued until actual MSO is received. NO EXCEPTION.

Bidder must fully comply without exception

Delivery Instructions:

Delivery will be to: Fleet Services Fire Shop, 1400 Loraine St, Knoxville, TN 37921

Price is to include all charges, FOB Destination to the Fleet Services Fire Shop. No after hour, holiday or weekend deliveries will be accepted.

Bid Submission Requirements:

Bidders must furnish the following information in writing with their submission:

1. [Bid Form](#) showing bidder's name, address, quoted price, business license number, date of expiration of business license. A copy of the bidder's current business license may be submitted in lieu of providing the license expiration date.
2. Warranty Information
3. [Non-Collusion Affidavit](#)
4. [Iran Divestment Act Certification of Non-Inclusion](#)
5. [Diversity Business Enterprise \(DBE\) Program form](#)

Instructions and Conditions:

1. Sealed bids will be received by the Purchasing Division of the City of Knoxville in Room 667-674, City/County Building; 400 Main Street; Knoxville, Tennessee 37902 until **Friday, July 1, 2022**, at **11:00:00 a.m.**, at which time they will be publicly opened and read aloud and the contract awarded as soon as practicable. **No bid will be received or accepted after the above-specified time for the opening of bids.** Bids that arrive late due to the fault of U. S. Postal Service, United Parcel Service, DHL, FEDEX, any delivery/courier service, or any other carrier of any sort are still considered late and shall not be accepted by the City. Such bids shall remain unopened and will be returned to the submitting entity upon request.
2. The City of Knoxville reserves the right to reject any or all bids, to accept or reject any items thereon, to waive technicalities or informalities, to split orders if in the best interest of the City, to evaluate bids by various criteria, and to accept any bid which, in its opinion, may be for the best interest of the City.
3. Included in the Invitation to Bid is an affidavit in proof that the undersigned has not entered into any collusion with any person in respect to this bid or any other bid. The Bidder will be required to execute and submit this affidavit with the sealed bid. Also included is the Diversity Business Program contracting packet. Submissions must indicate on the enclosed form whether or not the bidder intends to use subcontractors and/or suppliers from one of the defined groups. Bidders are advised that the City tracks use of such use, but it does not influence or affect evaluation or award.
4. **NO CONTACT POLICY:** After the posting of this solicitation to the Purchasing Division's website, any contact initiated by any proposer with any City of Knoxville representative concerning this

proposal is strictly prohibited, unless such contact is made with the Purchasing Division representative listed herein or with said representative's authorization. Any unauthorized contact may cause the disqualification of the proposer from this procurement transaction.

5. **INCLEMENT WEATHER:** During periods of inclement weather, the Purchasing Division will enact the following procedures with regard to solicitations and weather delays:
 - If City offices are closed due to inclement weather on the date that bids/proposals/qualifications/letters of interest are due into the Purchasing Office, all solicitations due that same day will be moved to the next operational business day.
 - The City of Knoxville shall not be liable for any commercial carrier's decision regarding deliveries during inclement weather.
6. Each bid delivered via hardcopy must be submitted in a sealed envelope, addressed to the Purchasing Division; City of Knoxville; City/County Building; 400 Main Street, Room 667-674; Knoxville, Tennessee, 37902. Each sealed envelope containing a bid must be plainly marked on the outside as: "Medium Duty Type I Ambulance."
7. Electronic submissions shall be submitted online through the City's Procurement website. DO NOT EMAIL YOUR SUBMISSION. If submitting electronically, a paper bid is not required.
8. All proposers/bidders must register as a vendor in order to submit an electronic file.

Step One: Register as a City of Knoxville vendor (Vendors are encouraged to complete this step now to ensure seamless submission process prior to deadline.) To register as a vendor: Visit the website at www.knoxvilletn.gov/purchasing Click the "Vendor Registration" tab; then "Click here to register as a City of Knoxville Vendor" Follow the prompts to complete online registration. Note: You will be asked for a PIN. This PIN will be emailed to you and may be sent to your spam or junk folder.

DO NOT WAIT UNTIL SUBMISSION DEADLINE TO REGISTER AS A VENDOR. The electronic submission link will be disabled at 11:00:00 a.m. Eastern time. Vendors will not have the ability to submit any electronic files once the deadline has passed and the City will accept no late submissions.

Step Two: Submit all materials electronically as one (1) file to City's Procurement website PRIOR to 11:00:00 a.m. (Eastern Time) on Friday, July 1, 2022. To submit electronic file: Visit the procurement website at www.knoxvilletn.gov/bids Click "ITB - Medium Duty Type I Ambulance", Click "Submit Bid" (red button located at top of screen) Follow the prompts to upload and submit electronic file. The City prefers only one (1) bid file per submission. Files MUST use the following naming convention, listing the firm's name followed by the title of the project. Example: "ABC Company-Medium Duty Type I Ambulance.pdf." Should you need to merge multiple documents into one PDF please utilize Google to download a free software intended for merging pdf documents.

9. All bids must be made on the Bid Form supplied with the contract documents, and no interlineations, excisions, or special conditions shall be made or included in the Bid Evaluation Sheet by the Bidder. **Any bid on which there is an alteration of or departure from the Bid Form may be considered irregular and may be rejected.** All bids must be signed in full by the Bidder or Bidders in their business name or style when submitted and must show his or their complete address.
10. No bidder may withdraw his bid for a period of 60 days after the actual date of the opening thereof.

11. Prior to submitting their bids, bidders are to be registered with the Purchasing Division through the City of Knoxville's online Vendor Registration system. Instructions for registering on-line are available at www.knoxvilletn.gov/purchasing.
12. All bids must be made on the Bid Form supplied with the contract documents, and no interlineations, excisions, or special conditions shall be made or included in the Bid Evaluation Sheet by the Bidder. **Any bid on which there is an alteration of or departure from the Bid Form may be considered irregular and may be rejected.** All bids must be signed in full by the Bidder or Bidders in their business name or style when submitted and must show his or their complete address.
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14. Prior to submitting their bids, bidders are to be registered with the Purchasing Division through the City of Knoxville's online Vendor Registration system. Instructions for registering on-line are available at www.knoxvilletn.gov/purchasing.
15. **Bid submissions from un-registered bidders may be rejected.**
16. Payment for completed services delivered to and accepted by the City shall be at the contract price.
17. State make or brand on each item. If quoting on other than the make, model, or brand specified, the manufacturer's name and catalog number must be given, along with warranty information and detailed specifications. Because the City is committed to environmentally sound practices, brands are expected to be procured with environmental responsibility in mind.
18. Time of delivery is part of the consideration and must be stated in definite terms; time of delivery is guaranteed by the bidder and must be adhered to upon award. If time varies on different items, the bidder shall so state.
19. All quotations must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.
20. Bidders shall verify bids before submission, as bids cannot be withdrawn or corrected after being opened. Bids will be evaluated by unit price.
21. Prices are considered FOB Knoxville unless otherwise stated in the Invitation to Bid.
22. By execution and delivery of a bid submission, the bidder agrees that any additional terms and conditions, whether submitted to the City purposely or inadvertently, shall have no force or effect.
23. Bidders must comply with the President's Executive Orders No.11246 and 11375 which prohibit discrimination in employment regarding race, color, religion, sex or national origin. Bidders must not maintain or provide for their employees any facilities that are segregated on the basis of race, color, religion or national origin. Bidders must also comply with Title VI of the Civil Rights Act of 1964, Copeland Anti-Kick Back Act, the Contract Work Hours and Safety Standard Act, Section 402 of the Vietnam Veterans Adjustment Act of 1974 and Section 503 of the Rehabilitation Act of 1973, all of which are herein incorporated by reference.
24. ADA Compliance. With regard to the services performed under this Agreement, the Contractor will comply with all applicable requirements of the Americans with Disabilities Act, 42 U.S.C. § 12101, *et seq.* ("ADA"). The Contractor agrees that it will defend, indemnify and hold the City harmless against any and all claims, demands, suits or

causes of action which arise out of any negligent and/or intentional act or omission by the Contractor, its employees, agents or representatives that violates the ADA. The Contractor agrees that the City will not be responsible for any cost or expenses arising from the Contractor's failure to comply with the ADA.

25. All bidders must comply with Title VI of the Civil Rights Act of 1964, as codified in 42 U.S.C. 2000d. The successful bidder must follow Title VI guidelines in all areas including hiring practices, open facilities, insurance, and wages. The City of Knoxville reserves the right to review all compliance records by a contract compliance officer designated by the City.
26. No interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder orally. Each request for such interpretation should be in writing addressed to **Karisa Scott, Procurement Specialist** for the City of Knoxville, 400 Main Street, Room 667, Knoxville, TN 37902, or emailed to her at kscott@knoxvilletn.gov. To be given consideration, such requests/questions must be received at least five (5) business days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be posted to the City's website at www.knoxvilletn.gov/bids. Submitting organizations are strongly encouraged to view this website often to see if addenda are posted. Failure of any bidder to receive such addendum or interpretation shall not relieve such Bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract Documents.
27. Attention of all bidders is directed to the set off provision contained in Article II, Section 24-33, entitled, "Debts owed by persons receiving payments other than salary", and Section 2-1049 entitled "Receipt of benefits from City contracts by council members, employees, and officers of the City" of the Code of the City of Knoxville.
28. Before a Purchase Order is issued, the submitting entity, if selected, **must** provide the City Purchasing Division with a copy of its valid business license **or** with an affidavit explaining why it is exempt from the business licensure requirements of the city or county in which it is headquartered. If a contract is signed, the contractor's business license shall be kept current throughout the duration of the contract, and the contractor shall inform the City of changes in its business name or location. Any Agreement to purchase resulting from this Invitation to Bid shall be governed by and construed in accordance with the substantive laws of the State of Tennessee and its conflict of laws provisions. Venue for any action arising between the City and the Vendor from the Agreement shall lie in Knox County, Tennessee.
29. In compliance with Tennessee state law, bids must be accompanied by a certification attesting that, to the best of the bidder's knowledge, the bidder does not engage in investment activities in Iran. The Iran Divestment Act of 2014 Certification of Noninclusion form may be found in this solicitation document.
30. By acceptance and delivery of the Purchase Order resulting from the award of this Invitation to Bid, the Vendor agrees to the following:

Contractor shall defend, indemnify and hold harmless the City, its officers, employees and agents from any and all liabilities which may accrue against the City, its officers, employees and agents or any third party for any and all lawsuits, claims, demands, losses or damages alleged to have arisen from an act or omission of Contractor in performance of this Agreement or from Contractor's failure to perform this Agreement using ordinary care and skill, except where such injury, damage, or loss was caused by the sole negligence of the City, its agents or employees.

Contractor shall save, indemnify and hold the City harmless from the cost of the defense of any claim, demand, suit or cause of action made or brought against the City alleging liability referenced above, including, but not limited to, costs, fees, attorney fees, and other expenses of

any kind whatsoever arising in connection with the defense of the City; and Contractor shall assume and take over the defense of the City in any such claim, demand, suit, or cause of action upon written notice and demand for same by the City. Contractor will have the right to defend the City with counsel of its choice that is satisfactory to the City, and the City will provide reasonable cooperation in the defense as Contractor may request. Contractor will not consent to the entry of any judgment or enter into any settlement with respect to an indemnified claim without the prior written consent of the City, such consent not to be unreasonably withheld or delayed. The City shall have the right to participate in the defense against the indemnified claims with counsel of its choice at its own expense.

Contractor shall save, indemnify and hold City harmless and pay judgments that shall be rendered in any such actions, suits, claims or demands against City alleging liability referenced above.

The indemnification and hold harmless provisions of this Agreement shall survive termination of the Agreement.

Additional Federal Terms

Equal Employment Opportunity. During the performance of this contract, the contractor agrees as follows:

- 1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

- 2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- 3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- 4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to

employees and applicants for employment.

- 5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- 6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- 7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- 8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: *Provided*, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor

pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Clean Air Act and Federal Water Pollution Control Act. The Contractor shall comply with all applicable standards, orders, or requirements issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

Debarment and Suspension.

- 1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- 2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. As such, the Contractor shall verify that its principals, affiliates, and subcontractors are eligible to participate in this federally funded contract and are not presently declared by any Federal department or agency to be:
 - a) Debarred from participation in any federally assisted Award;
 - b) Suspended from participation in any federally assisted Award;
 - c) Proposed for debarment from participation in any federally assisted Award;
 - d) Declared ineligible to participate in any federally assisted Award;
 - e) Voluntarily excluded from participation in any federally assisted Award; or
 - f) Disqualified from participation in any federally assisted Award.
- 3) By signing and submitting its bid, proposal, or contract, the bidder, proposer, or contractor certifies as follows:

The certification in this clause is a material representation of fact relied upon by the City of Knoxville. If it is later determined by the City of Knoxville that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to the City of Knoxville, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder, proposer, or awardee agrees to comply with the requirements of 2 CFR pt. 180 and 2 CFR pt. 3000 while this offer is valid and throughout the contract period. The bidder, proposer, or contractor further agrees to include a provision requiring such compliance in its resulting subcontracts or subrecipient agreements.

Byrd Anti-Lobbying Amendment, 31 U.S.C § 1352 (as amended). Contractors who apply or bid for an award of \$100,000 or more shall file the required Certification Regarding Lobbying. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded

from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

Recovered Materials. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

- 1) Competitively within a timeframe providing for compliance with the contract performance schedule;
- 2) Meeting contract performance requirements; or
- 3) At a reasonable price.

Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.

The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

Prohibition on certain telecommunications and video surveillance services or equipment.

Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:

- 1) Procure or obtain;
- 2) Extend or renew a contract to procure or obtain; or
- 3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
 - a) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
 - b) Telecommunications or video surveillance services provided by such entities or using such equipment.
 - c) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

Domestic preferences for procurements. To the greatest extent practicable under a Federal award, contractor shall provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). For the purposes of this clause,

- a) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. "
- b) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-

based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

Submission Forms



Bid Form

TO: Purchasing Division
City of Knoxville
Suite 667-674
City/County Building
400 Main Street
Knoxville, TN 37902

Having carefully examined the specifications entitled "Medium Duty Type I Ambulance" to open on Friday, July 1, 2022, at 11:00:00 a.m. and the other Contract Documents and addenda, we hereby propose to furnish the equipment, and delivery as described herein for the following sum:

BID: Total cost for one unit (including shipping): _____

12-Month Price Lock: Yes: _____ No: _____

GUARANTEE of delivery no later than: _____ after awarded. ____ (Bidder must initial)

Firm Name: _____

Official Address: _____

DUNS #: _____

Business License Expiration Date: _____

(By)

(Name Typed)

Date _____ (Title) _____

Email _____

Phone _____

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of _____

County of _____

_____, being first duly sworn, deposes and says that:

1. He/She is the _____ of _____, the firm that has submitted the attached Bid;
2. He/She is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bid nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from proposing in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm, or person to fix the price or prices in the attached Bid or of any other Bidder, firm, or person to fix any overhead, profit, or cost element of the bid price or the bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Knoxville or any person interested in the proposed Contract; and
5. The price or prices quoted in that attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

(Signed): _____

Title: _____

Subscribed and sworn to before me this _____ day of _____, 20__.

NOTARY PUBLIC

My Commission expires _____

IRAN DIVESTMENT ACT

Certification of Noninclusion

NOTICE: Pursuant to the Iran Divestment Act, Tenn. Code Ann. § 12-12-106 requires the State of Tennessee Chief Procurement Officer to publish, using creditable information freely available to the public, a list of persons it determines engage in investment activities in Iran, as described in § 12-12-105. Inclusion on this list makes a person ineligible to contract with the state of Tennessee; if a person ceases its engagement in investment activities in Iran, it may be removed from the list. A list of entities ineligible to contract in the State of Tennessee Department of General Services or any political subdivision of the State may be found here:

https://www.tn.gov/content/dam/tn/generalservices/documents/cpo/cpo-library/public-information-library/List_of_persons_pursuant_to_Tenn._Code_Ann._12-12-106_Iran_Divestment_Act_updated_7.7.17.pdf

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to T.C.A. § 12-12-106.

Vendor Name (Printed)	Address
By (Authorized Signature)	Date Executed
Printed Name and Title of Person Signing	

NOTARY PUBLIC:

Subscribed and sworn to before me this _____ day of _____, 2_____.

My commission expires: _____

Diversity Business Enterprise Program (DBE) PROGRAM

The City of Knoxville strongly encourages prime contractors to employ diverse businesses in the fulfillment of contracts/projects for the City of Knoxville.

The City of Knoxville's Fiscal Year 2021 goal is to conduct 5.35% of its business with minority owned businesses, 9.5% of its business with women-owned businesses, and 38.4% with small businesses.

While the City cannot engage (pursuant to state law) in preferential bidding practices, the City does **strongly encourage** prime contractors to seek out and hire diverse businesses in order to help the City meet its goals as stated above. As such, the City encourages prime contractors to seek out and consider competitive sub-bids and quotations from diverse businesses.

For DBE tracking purposes, the City requests that prime contractors who are bidding, proposing, or submitting statements of qualifications record whether or not they plan to employ DBE's as sub-contractors or consultants. With that in mind, please fill out, sign and submit (with your bid/proposal) the following sub-contractor/ consultant statement.

CITY OF KNOXVILLE DIVERSITY BUSINESS DEFINITIONS

Diversity Business Enterprise (DBE's) are minority-owned (MOB), women-owned (WOB), service-disabled veteran-owned (SDVO), and small businesses (SB), who are impeded from normal entry into the economic mainstream because of past practices of discrimination based on race or ethnic background. These persons must own at least 51% of the entity and operate or control the business on a daily basis.

Minority: A person who is a citizen or lawful admitted permanent resident of the United States and who is a member of one (1) of the following groups:

- a. African American, persons having origins in any of the Black racial groups of Africa;
- b. Hispanic American, persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race;
- c. Native American, persons who have origin in any of the original peoples of North America
- d. Asian American, person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

Minority-owned business (MOB) is a continuing, independent, for profit business that performs a commercially useful function, and is at least fifty-one percent (51%) owned and controlled by one (1) or more minority individuals.

Woman-owned business (WOB) is a continuing, independent, for profit business that performs a commercially useful function, and is at least fifty-one percent (51%) owned and controlled by one (1) or more women.

Service Disabled Veteran-owned business (SDOV) is a continuing, independent, for profit business that performs a commercially useful function, owned by any person who served honorably on active duty in the armed forces of the United States with at least a twenty percent (20%) disability that is service connected. Meaning such disability was incurred or aggravated in the line of duty in the active military, naval or air service, and is at least fifty-one percent (51%) owned and controlled by one (1) or more service disabled veteran.

Small Business (SB) is a continuing, independent, for profit business which performs a commercially useful function and has total gross receipts of not more than ten million dollars (\$10,000,000) average over a three-year period or employs no more than ninety-nine (99) persons on a full-time basis.

Subcontractor/Consultant Statement
(TO BE SUBMITTED IN THE BID/PROPOSAL ENVELOPE)

We _____ do certify that on the
(Bidder/Proposer Company Name)

(Project Name)

\$ _____
(Amount of Bid)

Please select one:

Option A: Intent to subcontract using Diverse Businesses

A Diversity business will be employed as subcontractor(s), vendor(s), supplier(s), or professional service(s). The estimated **dollar value** of the amount that we plan to pay is:

\$ _____
Estimated Amount of Subcontracted Service

Diversity Business Enterprise Utilization			
Description of Work/Project	Amount	Diverse Classification (MOB, WOB, SB, SDOV)	Name of Diverse Business

Option B: Intent to perform work "without" using Diverse Businesses

We hereby certify that it is our intent to perform 100 % of the work required for the contract, work will be completed without subcontracting, or we plan to subcontract with non-Diverse companies.

DATE: _____ COMPANY NAME: _____

SUBMITTED BY: _____ TITLE: _____
(Authorized Representative)

ADDRESS: _____

CITY/STATE/ZIP CODE: _____

TELEPHONE NO: _____