



**VEHICLE SPECIFICATIONS  
CalACT-MBTA  
Standard Floor  
PURPOSE BUILT HEAVY DUTY TRANSIT VEHICLES  
(35' REAR ENGINE BASE)**

**ATTACHMENT A-1  
CalACT/MBTA Class H-SF**

**Morongo Basin Transit Authority  
Lead Agency for the  
California Association for Coordinated Transportation  
Vehicle Purchasing Cooperative**

**May 2010**



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## **SPECIFICATIONS FOR PURPOSE BUILT HEAVY DUTY BUSES**

### **1.0 SCOPE**

The purpose of the specifications is to set forth minimum requirements for a vehicle with Federal Transit Administration (FTA) minimum service life category of 12 years/500,000 miles capable of seating ambulatory and wheelchair passengers. Vehicle proposed and logistical support provided must consider that the solicitation is intended primarily for CalACT small and rural members who may purchase as few as one (1) custom ordered vehicle at a time. The basic vehicle, both chassis and body, must be a current year factory production model that is catalogued by the manufacturer and for which manufacturer's published literature and printed specifications are currently available. The bus manufacturer shall be ISO 9001:2000 certified.

This specification is intended for use in the purchase of a complete vehicle unit and all equipment and accessories necessary for its operation. All parts shall be new. All parts, equipment, and accessories shall be completely installed, assembled and/or adjusted as required. Each unit is to be equipped with a right side (curb side) mobility aid Lift and door.

FTA Circular 4220.1F does not require a Local Government Purchasing Schedule such as this solicitation to specify a minimum or maximum quantity to be ordered.

### **2.0 APPLICABLE STANDARDS, LAW AND REGULATIONS**

The following standards, law and regulations of the issue in effect on the date of the Invitation for Bid form a part of this specification to the extent specified herein. The bus is required to meet all regulations, standards and laws including revisions, at time of bus acceptance and through the term of the contract.

- Federal Motor Vehicle Safety Standards (FMVSS)
- Code of Federal Regulations Title 49, Chapter V-National Safety Bureau, Part 38 Subpart B, Part 567, 568, 571 and 665
- California Vehicle Code and CCR Title 13 regulations as applicable to transit vehicles
- California Health and Safety Code
- California Air Resources Board and Environmental Protection Agency Standards and Guidelines
- OEM Body Builders Standards and Guidelines
- National Fire Protection Agency Regulations 52
- Society of Automotive Engineers (SAE) and International Standards Organization (ISO)

2.1 **ALTOONA BUS TESTING:** Bidders for Class H vehicles will provide documents to verify vehicles offered are delivered in compliance with 49 CFR 665. Altoona test must be completed and a satisfactory test report (Hardcopy and electronic version on CD) provided to the Cooperative's prior to final acceptance of the first vehicle by a federally funded recipient. No vehicles with Class 1 or 2 failures are acceptable. Correspondence detailing remedial action taken to mitigate any Class 3 structural failures must be provided to the satisfaction of the MBTA. Failure to comply with these requirements will result in nullification of conditional award. Proposers offering CNG, Hybrid or low floor modifications must provide separate Altoona test documentation.

### 3.0 VEHICLE TYPES AND SPECIFICATIONS

**Vehicles solicited for in this attachment are as follows:**

**CalACT Class H-Standard Floor:** This specification is for a full Size, rear engine, heavy duty commercial bus of on a standard floor chassis suitable for transporting both ambulatory and non-ambulatory passengers in both rural and urban areas. The bus shall have a standard wheelchair lift to facilitate entry by passengers including those in a wheelchair. The bus shall meet all requirements of the Americans with Disabilities Act even though the specific items may not be listed in detail in this specification.

The base vehicles solicited for are 35' (+/-1') foot, 33 passenger capacity vehicle in diesel and CNG.

Offeror may offer additional line items showing lengths, seating plans and configurations available that it proposes to offer via this contract and show applicable pricing or credits. Acceptance of additional configurations must otherwise comply with all other solicitation requirements, be fully described by the proposer and is at the discretion of the MBTA. Configurations not proposed, priced and accepted are to be considered a cardinal change and are not to be sold under this contract.

### 4.0 SPECIFICATION REQUIREMENTS

These specifications apply to all components of Class H vehicles unless otherwise stated within specifications.

- 4.1 **VEHICLE LOADING:** In no case shall the vehicle GVWR or the front or rear gross axle weight rating (GAWR) or any components therein, exceed the OEM Chassis rating, when the vehicle with all options installed is fully loaded with passengers 150 lbs. per ambulatory seated passenger and driver, 250 lbs per mobility aid passenger. A weight distribution schematic and loading calculation must be shown for each floor plan and submitted with bid for each floor plan offered. Loading calculations must be made with full tanks of fuel.
- 4.2 **UNLADEN WEIGHT:** A copy of a weight certificate from a state (state of final builders location will be accepted for these purposes) certified scale showing the unladen weight of the vehicle, with a full fuel tank, must be submitted at time of delivery.
- 4.3 **BASE CNG ENGINE:** Base vehicle to be equipped with Rear T-mounted Cummins ISL-G 8.9L Gas Plus (or approved equal) turbo-charged and charge air-cooled, in-line 6-cylinder electronic controlled natural gas (CNG or LNG) engine. Proposer may offer and show as priced options additional engines in a separate attachment to be approved by the Cooperative.
- 4.4 **BASE DIESEL ENGINE:** Rear T-mounted Cummins ISB-2010 (or approved equal) 6.7 liter turbo-charged and air-cooled, in-line 6-cylinder electronic controlled medium/heavy-duty diesel engine. Proposer may offer and show as priced options additional engines in a separate attachment to be approved by the Cooperative.
- 4.5 **FUEL SYSTEMS:** Diesel vehicles to be equipped with a DOT approved steel fabricated tank with a minimum 100 gallon capacity located behind the front axle. Fuel fill to be located on the curbside of the bus. The fuel fill to be located under a curbside access door.

CNG powered base vehicle to be equipped with DOT, NFPA 52 approved and State of California (CARB) certified compressed natural gas (CNG) fuel system with Three (3) chassis mounted 3,600 PSI all composite gas cylinders equaling a minimum 9,400 SCF fuel. Cylinders are equipped with a 212 degrees Fahrenheit thermal pressure relief valve (PRD) and electrical solenoid shutoff valves. High-pressure relief is vented to the atmosphere at roof line. A high-pressure regulator to be installed outside the engine compartment, which reduces the gas pressure from 3,600 PSI to 100 PSI. This regulator is equipped with a safety electrically controlled lockoff valve. The high-pressure regulator delivers 100 PSI gas to an engine mounted low-pressure converter regulator, which supplies the engine with 18-20 PSI natural gas. ) NGV-2 3600 psi rated fill receptacle sized at buyers choice, no extra cost. A CNG de-fueling port to be located in the fueling compartment.

- 4.6 **TRANSMISSION:** Allison B400R five-speed, push-button automatic transmission with an integral output hydraulic brake retarder. The transmission to have a duty cycle rating of 45,000 lbs. GVWR.
- 4.7 **HUB ODOMETER:** The bus shall be equipped with a hub odometer mounted at the curbside of the rear axle. The hub odometer shall have a capacity reading no less than 999,999 miles.

- 4.8 RADIATOR: A high capacity, cross-flow radiator with frontal area with stainless steel bolt-on inlet and outlet tanks. The radiator to be baffled top and bottom, and on both sides.
- 4.9 EXHAUSTS: High capacity stainless Cummins Particulate Filter and SCR system installed in an insulated compartment above engine. The exhaust pipes are installed with heat shields / exhaust wrap and vibration mounts. Tailpipe is so designed to direct exhaust vertically at the rearmost roadside corner of the bus body.

For CNG vehicles. High capacity stainless steel exhaust pipe and three-way catalyst installed with heat shields/exhaust wrap and vibration mounts. Tailpipe is so designed to direct exhaust vertically at the rearmost roadside corner of the bus body.

- 5.0 FRONT SUSPENSION: The front suspension to be Ridewell Model ARS-227 (or equal) with 12,000 lbs. capacity, controlled constant height air spring suspension.
- 5.1 PASSENGER DOOR/S: Passenger door shall be a two (2) panel slide and glide design controlled by the driver, equipped with rear door brake and accelerator interlock. Door may not be opened unless bus is travelling below 2 mph. Interlocks must engage when door is opened. Doors able to be activated by driver operated release control valve. Offeror may describe and propose optional bus configuration with additional rear exit door.
- 6.0 FRONT SPRINGS - Four (4) rolling lobe air springs per axle. The springs' air pressure maintained by a single, time-delayed height control valve. Air springs internally equipped with jounce rubber stops.
- 6.1 DAMPENING :The front springs are dampened by two (2) hydraulic suspension valve Koni shock absorbers.
- 6.2 STABILITY: Lateral and longitudinal stability is provided by rubber bushed radius rods.
- 6.3 REAR SUSPENSION: Ridewell Model ARD-227 (or equal) with 23,000 lbs. capacity, controlled constant height air spring suspension.
- 6.4 REAR SPRINGS : Ridewell four (4) rolling lobe air springs (or equal) per axle. Springs air pressure is maintained by two (2) each zero delay height control valves. Air springs are internally equipped with jounce rubber stops.
- 6.5 REAR DAMPENING: The front springs are dampened by two (2) hydraulic suspension valve Koni shock absorbers.
- 6.6 REAR STABILITY: Lateral and longitudinal stability is provided by rubber bushed radius rods
- 6.7 KNEELING: Driver actuated control to lower coach three inches (3") during loading or unloading. Audible signal, amber kneeling warning light and warning decal to be provided at entry door.

- 6.8 FRONT AXLE ASSEMBLY: Arvin Meritor Model FF943 or equal with wide track, hub-piloted, drop center, I-beam type provides a design load rating of 12,000 lbs. capacity.
- 6.9 REAR AXLE ASSEMBLY: Arvin Meritor Model RC-23 or equal hub-piloted, full floating type drive axle providing a design load rating of 23,000 lbs. capacity.
- 7.0 BRAKES: Bendix Air and Meritor-Wabco ABS systems (or approved equal) meeting all FMVSS 121 requirements. Air supplied by engine driven air compressor and regulated by an air governor.
- 7.1 ANTI-LOCK BRAKING: The Meritor-Wabco ABS (or approved equal) all wheel anti-lock braking system electronic system that monitors and controls wheel speed during braking.
- 7.2 PARKING/EMERGENCY BRAKE: Spring brake chamber controlled by a push-pull dash mounted control valve.
- 7.3 HIGH IDLE SYSTEM: Vehicle to have electronically controlled high idle system. System to be activated when transmission is in neutral, air conditioning is operating and/or driver's switch is "On". Idle RPM programmable.
- 7.4 AUTOMATIC SHUTDOWN: Electronically controlled engine shutdown system. The system senses engine low oil pressure and high water temperature. Driver's console is equipped with an override switch to restart the engine.
- 7.5 SPARE WHEEL/TIRE: Assembled spare wheel and tire as specified for bus model selected. Spare is shipped loose in bus.
- 7.6 BODY AND FRAME: Meets or exceeds FMVSS 220. Side and end frames designed and constructed to absorb excessive road shocks. Side doors and windows reinforced to transfer stresses around openings. Roof designed to withstand rollover stress.
- 7.7 UNDERCOATING: The entire underside of the body including floor members, side panels below floor level (if metal), and fender wells shall be undercoated, at the time of manufacture, with a nonflammable resin type polyoleim coating for bus applications. All openings in the floorboards and firewall shall be sealed.
- 7.8 FIREWALL: Rear engine firewall to be fabricated carbon steel panel to provide a fire resistant barrier. The panel covered on the engine side with 1" thick Barymat sound and thermo blanket. The engine side of the blanket covered with abrasion resistant clear film, which provides a heat and sound reflective surface and a moisture barrier.
- 7.9 MUD FLAPS: Mud flaps are installed behind the front and rear tires to within three inches (3") of the road surface. The rear mud flaps will be full width as specified.
- 8.0 RUB RAILS: Three inch wide aluminum extrusion with one inch thick rubber insert installed at the floor line to protect the bus sides.
- 8.1 BATTERY COMPARTMENT: A stainless steel compartment is provided in the roadside to accommodate the size and weight of the batteries. The battery tray is vented and will pull out easily.

- 8.2 **BUMPERS:** Front and rear bumpers are reinforced Romeo Rim HELP "S" energy absorbing type or equal. Bumpers are attached to the chassis frame with 1/2" diameter Grade 8 bolts.
- 8.3 **PAINT:** Exterior surfaces shall be properly cleaned and primed as required by the paint manufacturer. Painted surfaces shall be impervious to diesel fuel, gasoline, and commercial cleaning agents. Paint shall be high quality acrylic white enamel that matches the OEM paint scheme (non fiberglass body). Entire vehicle to be OEM white, any other colors (including two-tone) will be at buyers cost.
- 8.4 **LIGHTING:** The brake/tail, backup, turn signal and marker lamps will be LED type to long life and superior visibility. All exterior lighting conforming to all State regulations and FMVSS 108.

Unless otherwise indicated, all lights, taillights, brake-lights, turn-signal lights, collision avoidance lights, clearance marker lights, and back-up lights, shall be voltage regulated light emitting diode (LED) lights. Vehicle to be equipped with:

- a) OEM daytime running lights.
  - b) Taillights will be grommet mounted and recessed. Taillights shall not protrude more than 2" from the body. A pair of amber hazard and conventional lights shall be provided. Rear lights shall include a pair of red taillights and red stoplights which may be combination lights (equal to a dual filament bulb).
  - c) LED side signal lights, with marker, shall be provided independently, or be incorporated into the center of the bus. Location shall be in front of the rear wheel opening and provide visibility from behind the rear wheel opening.
  - d) LED Clearance marker lights shall be installed either recessed or surface mounted and armored, facing the front, rear, and each side at rear.
  - e) Center mounted LED light will be provided and mounted above rear window.
  - f) Two (2) LED back-up lights, one mounted on each side of the body rear cap, shall be provided.
  - g) LED step lighting will be provided, mounted to provide light for the entire step-well and portion of the ground area outside the bus. The step lights shall be extinguished when the front door has closed. Raised floor step lighting shall be provided by one LED Strip light mounted in the step riser. (Must be recess mounted to protect from accidental damage by passengers contacting light while using step.) Exterior step light shall be mounted away from wheel splash and provide light a minimum of three (3) feet beyond the first step on the ground area outside the bus.
  - h) Vehicle shall be equipped with an LED rear center brake light.
- 8.5 **MODESTY PANELS:** Modesty panels and barriers when specified are 1/4" thick gray melamine fitted to the 1 1/4" O.D. stainless steel tubing passenger assists.

- 8.6 **PASSENGER SEATING:** All seating, including driver, shall meet the following requirements:  
Seat fabric shall be compliant with Docket 90-A, FTA Recommended Fire Safety Practices for Transit Bus and Van Materials Selection. Foam cushions, seat and back, shall be polyurethane with a minimum density of 2 lbs. per cubic ft and need not comply with Docket 90-A. Cloth seat fabric shall be a minimum 100,000 double rub woven material, anti-bacterial and anti-microbial; the seat fabric shall have a moisture repellent treatment that prevents liquids from passing through fabric. Vinyl seat material shall be minimum level 3 vinyl (36 oz. per running yard).

All seats shall meet the following minimum requirements:

- a) All applicable FMVSS requirements, including FMVSS 207, 209,210, and 302 for all seats and seat belts when seat belts are installed in the bus. Furthermore, when seat belts are installed documentation of current model testing with seats installed as specified within shall be provided prior to award. Testing by an American Association for Laboratory Accreditation or equal, accredited test facility of individual components independent of the vehicle will be accepted if done on a representative floor, and vendor can validate that test results meet all FMVSS requirements, and could be duplicated in the production vehicle. Any alterations to OEM seats or mounts that affect these tests must also be tested. Detailed seat installation instructions and test data must be made available to the Cooperative prior to award of the contract. This test is required for all seats, including optional seats installed over wheel wells that buyers may choose.
- b) Cushions (inserts) shall be easily removable and replaceable without removing the entire seat.
- c) When seat belts are required, under seat retractable seatbelts, equal to Freedman USR, shall be provided for all seats.
- d) All exposed metal surfaces shall be powder coated.
- e) All seats shall have not less than 27" hip to knee room spacing between seats. Seat bottom cushion height shall be 17.5", plus or minus ½ inch, as measured from floor to top of the cushion.
- f) All forward facing passenger seats are to have molded energy absorbing grab handles at the top of each forward facing seat.
- g) A minimum clear aisle of 16". This must be maintained with any optional seat chosen as well. There shall not be a mobility aid position blocking the aisle or directly in front of the mobility aid ramp except when there is a rear ramp. Random movement to any seat position for ambulatory passengers must be maintained.

- h) Optional foldaway seats (option a) must be equal to Freedman CitiSeat Foldaway. Foldaway seats must be installed so that rubbing/chaffing does not occur during fold operation. Seat cover must not touch sidewall or structure during folding and unfolding. All seats and restraints in the vehicle as specified must comply with current FMVSS standards, including 207, 209, 210, and 302 as applicable. Documentation of current model testing and seats as specified within shall be provided prior to award. Testing by an American Association for Laboratory Accreditation or equal, accredited test facility of individual components independent of the vehicle will be accepted if done on a representative floor, and vendor can validate that test results meet all FMVSS requirements, and could be duplicated in the production vehicle. Any alterations to OEM seats or mounts that affect these tests must also be tested. Detailed seat installation instructions and test data must be made available to the State prior to award of the contract. This test is required for all seats, including optional seats installed over wheel wells that buyers may choose.
  
- j) A one-piece filler/cover shall be provided in tracking between fixed seat placements on the floor and wall tracks where they exist. Any order that deletes fixed seats will also automatically delete the floor track for that seat. Floor track will not be installed in any area not covered by a fixed seat. Track can extend 6 inches to the rear of the fixed seat area to allow for seat adjustment by end user to better accommodate their needs.
  
- k) The Bidder shall provide floor plan and seating drawings, which are to scale and meet passenger-seating and loading requirements. Drawings, at a minimum, shall show the location and dimensions of all seating positions, drivers position, aisles, doors, modesty panels, and stanchion, grab rails, tie down locations, and other passenger assists. In addition, all major body interior dimensions must be shown. Proposed seating plans must be approved by each procuring agency prior to production, and must comply with standards established with the original seating proposals. This requirement does not preclude other optional seating requests as long as they meet all the requirements set forth in this specification, such as aisle width and hip to knee.
  
- l) **Passenger Seats**  
All passenger seats shall be individual modules similar to Freedman CitiSeat, or equal, one or two position bench type modules of not less than 17.25 inches in width. All fixed seats may be forward or aisle facing, mounted for easy removal and have an individual cushion. All back cushions shall be contoured to provide full lumbar support, color coordinated with the interior vehicle color. Prior to award, the Contractor shall submit a sample of the upholstery and cushion material to the Cooperative for approval. Seats shall be available in cloth or vinyl, at buyer's choice at no extra cost.

8.7 **INTERIOR LIGHTING:** Interior lighting (a minimum of eight LED type) to illuminate the driver, passenger, entry area and the interior aisle to a minimum of

eight candlepower measured at floor level. The switch for these lamps shall be mounted in the dash, back lighted, and labeled.

- 8.8 **DRIVERS SEAT:** Unless otherwise specified by purchasing agency, vehicle to be equipped with Recaro Ergo MC II with air ride suspension base.
- 8.9 **FLOORS:** Floor construction shall be of 3/4 inch marine grade plywood, subfloor understructure shall be completely undercoated and sealed.
- 9.0 **FLOOR COVERING:** The floor surface shall be covered with wall-to wall, slip-resistant, minimum 2.7 millimeter Altro Chroma or approved equal color to be specified by buyer. All step edges shall have Altro T36T Aluminum Step edge (or equal) with band of 2 ½ inch of bright yellow Altro inserted into the step edge using contact adhesive (described below) running the full width of each step. An aisle width standee line of at least two (2") in width of bright yellow contrasting color shall be in the aisle just behind stepwell. Flooring to be installed using manufacturers instructions using proper tools and adhesives. Alternative flooring selections may be proposed as priced options on a separate attachment to be approved by MBTA.
- 9.1 **STANCHIONS:** Vehicle to be equipped with stanchions, overhead grab rails and modesty panels are designed and produced using 1¼" diameter 304 stainless steel tubing. Stanchions are fitted floor to ceiling per floor plan.
- 9.2 **WHEELCHAIR LIFT:** Ricon Mirage or Braun UVL 855 (or approved equals) in-step lift system will be supplied, buyers choice no extra charge. Lift to be fully enclosed in a compartment and installed in the front or center stepwells. Lift to meet ADA and California Title 13 requirements. Proposer may offer additional lifts as priced options that meet the same requirements if identified on a separate attachment.
- 9.3 **WHEELCHAIR RESTRAINTS:** Q-Straint 8100-A1 Deluxe or SureLok Titan 4 point restraints to be supplied at buyers choice, no extra charge at each wheelchair position. Convenient storage compartment to be installed.
- 9.4 **HEATING AND AIRCONDITIONING:** Base vehicle to have Thermo King Model Athenia S960 rooftop system using R134a refrigerant, 91,000 maximum BTU heating capacity and a 92,000 maximum BTU air conditioning system. The supplied Thermo King Model X430 refrigerant compressor to be belt driven. Electronic climate control system will be the Thermo King IntelligAire III. Alternative heating or airconditioning options may be proposed as options, fully described and priced in a separate attachment to be approved by MBTA.
- 9.5 **ROOF HATCH:** Transpec Model #1122 five (5) position roof ventilator and emergency escape hatch to be installed in the roof over the rear axle
- 9.6 **ALTERNATOR:** V-belt driven Leece Neville® 270 amp, high output model to be supplied.
- 9.7 **BATTERIES:** Dual 8-D Series provides 2300 cold cranking amps, located on the roadside of the vehicle and accessible through the service access door. The batteries are supported on a slide out stainless steel tray.

9.8 WIRING: All general purpose wiring to be cross-linked polyethylene insulated color and number coded for positive identification, and meets the requirements of SAE recommended practice J878a, Type SXL. Precautions have been taken to avoid damage from heat, water, solvents or chafing by proper routing, clamping and the use of grommets or suitable elastomeric cushion materials. Harnesses are designed to resist abrasion by the use of machine mesh woven plastic loom. Harnesses are sectional, terminating at insulated multi-pin quick disconnects or junction blocks. Harnesses provide 10% spares.

9.9 FRONT AND SIDE CURTAIN DESTINATION SIGNS: Transign electric roller curtain sign mounted in the upper windshield area. Sign is back-lighted and is furnished with fifteen (15) destination readings with five-inch (5") high letters.

Transign side electric roller curtain sign mounted in the first window behind the wheelchair lift doors. Sign is back-lighted and is furnished with fifteen (15) destination readings with three inch (3") high letters.

10.0 WINDOWS: All windows to meet State and Federal Safety Regulations. Windshield is AS-1, driver's side windows are AS-2, and passenger windows are AS-3 in quality.

- ◆ WINDSHIELD - Front crown contoured two (2) piece 1/4" thick, 73% single density laminated safety float glass. Windshield has a dark tinted sunshade across top. Windshield is glazed with two (2) piece black ozone treated extruded lock and key rubber.
- ◆ DRIVER'S ROADSIDE WINDOW - Painted black "PPG's - Macroflex Coating Plus" extruded aluminum sash with 3/4 lower section of single slider design. Window is glazed 7/32" thick, 73% single density laminated safety sheet glass.
- ◆ PASSENGER SIDE WINDOWS - Painted black "PPG's - Macroflex Coating Plus" extruded aluminum sash with fix upper T-slider design. Windows are glazed with 7/32" thick, 37% gray density tempered safety sheet glass. An adequate number of passenger windows on each side are designed to meet FMVSS 217 for emergency egress, as required.
- ◆ DOOR WINDOWS - Windows are glazed with 1/4" thick, 73% density laminated safety sheet glass. Each window is installed in the upper and lower portions of the passenger door and in the upper portion of the lift door panels in-line with the passenger side windows.

10.1 MIRRORS: Exterior mirrors to be fully adjustable, heated and remote controlled. Mirror heads and rigid adjustable support arms supplied in black powder-coated finish. Interior mirror is large convex fully adjustable rearview mirror mounted within easy reach of the driver.

10.2 PAINTING, DECALS AND MONOGRAMS: All signs required by State and Federal law shall be affixed to each vehicle exterior and interior.

10.3 PARTS BOOKS, MANUALS AND DRAWINGS: The following shall be provided at time of delivery. The information shall be organized in a three ring binder format with each section clearly identified. A draft copy must be available for review and acceptance prior to preproduction meeting.

- a) A complete set of operating instructions, troubleshooting guide, inspection and service guide and detailed manufacturers parts list.
- b) A complete "as built" electrical wiring diagram covering all electrical equipment and electrical circuits installed, complete with wiring codes for **each** vehicle ordered.
- c) All manuals for the bus accessories, to include complete parts guide, and equipment to include mobility aid ramp, air-conditioning system, tie downs, seating, heater, etc.
- d) The Contractor shall have available complete bus maintenance manuals to include the engine, transmission and OEM chassis as well as a complete parts manual for each component. The contractor shall keep the manuals up-to-date and available to the Buyer for a period of three years after the date of acceptance of the buses under the contract.

**11.0 Base Price (Pre-tax as specified in this submission). Mark "No-Bid" if your firm is not proposing for a particular vehicle class.**

11.1 Class H BASE DIESEL STD FLOOR (35') \_\_\_\_\_

11.2 Class H BASE CNG STD FLOOR (35') \_\_\_\_\_

List additional configurations, options and pricing as a separate attachment.

**NOTE-PRICING IS NOT TO BE PROVIDED WITH INITIAL SUBMISSION, MBTA WILL REQUEST THIS INFORMATION AND PROVIDE FURTHER INSTRUCTIONS WHEN APPROPRIATE**

## 12.0 OPTIONS

**Provide pricing for each of the following options:**

- a) Luminator Horizon Front/side dest signs \_\_\_\_\_
- b) Twin Vision Front/side dest signs \_\_\_\_\_
- c) Front roof hatch \_\_\_\_\_
- d) System Signal Pullcord w/stop request \_\_\_\_\_
- e) Sportworks 2 position bike rack \_\_\_\_\_
- f) Apollo 250 GB dvr installed (4 camera) \_\_\_\_\_
- g) REI Buswatch installed (2 camera) \_\_\_\_\_
- h) Transfer cutter \_\_\_\_\_
- i) Main Treasury One farebox (1vault) \_\_\_\_\_
- j) Kidde AFSS \_\_\_\_\_
- k) Methane detection system \_\_\_\_\_
- l) Amerex AFSS \_\_\_\_\_
- m) USSC Fogmaker AFSS \_\_\_\_\_
- n) Rubber Solutions rubber floor (credit) \_\_\_\_\_
- o) Auxiliary 80,000 BTU rear heater \_\_\_\_\_
- p) Freedman Patriot reclining seats (per seat) \_\_\_\_\_
- q) Freedman Featherweight seats (per seat) \_\_\_\_\_
- r) Overhead luggage racks \_\_\_\_\_
- s) Diamond SV farebox (1 vault) \_\_\_\_\_
- t) Cummins Diagnostic software & connectors \_\_\_\_\_

**NOTE-OPTION PRICING IS NOT TO BE PROVIDED WITH INITIAL SUBMISSION,  
MBTA WILL REQUEST INFORMATION WHEN APPROPRIATE**

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