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SPIRIT OF LIBERTY LOW FLOOR BUS



PHOTO SHOWN WITH OPTIONAL EQUIPMENT

CONSTRUCTION SPECIFICATIONS

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ARBOC SPECIALTY VEHICLES, LLC ® Low Floor Commercial Bus

1.0 SCOPE: MID-SIZE LOW FLOOR BUS

- 1.1 This specification describes a steel cage, low floor, commercial bus designed for use in Tour, Charter, Shuttle, and other Commercial or Transit applications that meets all the requirements of ADA and the FMVSS and CMVSS Safety Standards in effect at the time of manufacture.
- 1.2 The proposed bus must have been tested at the Federal Bus Testing center at Altoona, PA in the 7 year/200,000 mile category.
- 1.3 The bus provided must be built on a Freightliner XBA Chassis. Other chassis will not be accepted.
- 1.4 The bus must meet all the chassis specifications listed in Section 9.1.

2.0 PURPOSE:

- 2.1 The purpose of these specifications is to describe a mid-size bus suitable for transporting both ambulatory and non-ambulatory passengers in both rural and urban areas.
- 2.2 This vehicle is not a School Bus and is not intended to transport children to or from school.
- 2.3 The bus will be of a "Steel Cage" type construction with FRP (Fiber Reinforced Plastic) Composite skin laminated to a moisture resistant (less than 1%) substrate (not Luan) attached to the steel cage with urethane adhesive. The roof will consist of a single piece FRP skin laminated to the substrate and roof steel with urethane adhesive. The bus body is constructed of welded walls, sub floors, roof framing, and rear steel structure which are bonded and bolted together, forming an integrated steel cage around the passenger area.

3.0 CLASSIFICATION: MID SIZE LOW FLOOR BUS:

- 3.1 This specification is for a Mid Size Low Floor Commercial bus of the "Body-on-Chassis" type.
- 3.2 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.
- 3.3 The bus shall be of the Low Floor type with air suspension both front and rear.
- 3.4 The bus shall have a kneeling feature to lower the bus to meet 1:6 angle when ramp is deployed.

4.0 EXCEPTIONS TO SPECIFICATIONS:

- 4.1 Manufacturers of similar equipment of the type specified may submit requests for approved equals provided that the bus is built on the identical chassis specified and that they have produced this model in commercial quantities. Manufacturers of similar buses must be able to provide a list of current users of the proposed bus as references.

- 4.2 Manufacturers requesting any deviation from these specifications must provide actual test results supporting their claim.
- 4.3 Such requests must be accompanied by test reports and other evidence showing that the proposed product meets or exceeds the requirements of these specifications.
- 4.4 Any tests submitted to support a request for approved equal must have been performed by an Independent Professional Engineering Company and certified by a Licensed Professional Engineer.
- 4.5 This specification reflects the specific needs of this organization/agency. In order to standardize certain components, therefore, we have named specific brands of equipment. This has been done to establish a certain standard of quality and to standardize inventory of replacement parts.
- 4.6 Other brands will not be considered, as the brands specified are readily available and have been proven in Transit/Shuttle service.

5.0 ITEMS NOT ELIGIBLE FOR EXCEPTIONS:

- 5.1 There are several items in the specification that will not be considered for any deviation:
 - 5.1.1 1. The chassis must be a Freightliner XBA Chassis in accordance with the chassis specifications listed.
 - 5.1.2 2. The Passenger door must be dual panel, outward opening electrically operated with one full length window in each panel. The windows shall have a minimum of 14.5" wide and 74" high visible viewing area.
 - 5.1.3 4. The entry door must be forward of the front axle and in direct line of sight with driver to assist in seeing the passenger entry.
 - 5.1.4 5. The Exterior skin must be FRP (Fiber Reinforced Plastic) Composite skin laminated to a moisture resistant substrate (less than 1% absorption) attached to the steel cage with urethane adhesive. No Luan is permitted in the sidewalls or rear end wall of the bus. Laminated constructions with Luan or other wood materials are not allowed as they can lead to corrosion of the skin due to the wicking of moisture into the wood material.
 - 5.1.5 6. The steel cage must be Electro-coated (Cathodic 'Military Spec' E-coating to 1500 hour salt spray test) after fabrication, prior to final assembly.
 - 5.1.6 7. The steel structure of the walls must extend below the floor level and continue to the lowest part of the bus. Separate skirting that only serves a decorative purpose is not allowed; every part of the sidewall must have the steel cage structure behind the exterior skin.
 - 5.1.7 8. The overall exterior width, excluding mirrors, of the bus must be a nominal 100" wide as narrower buses do not allow sufficient space for wheelchair maneuverability.

- 5.2 Any exceptions approved will be in writing and will be distributed to all prospective bidders and other interested parties. The approval, if granted, shall extend to all bidders and not just to the bidder who made the request.
- 5.3 Manufacturer must carry a minimum of \$50,000,000 in product liability insurance.

6.0 MATERIALS

- 6.1 All materials used in conversion of the bus shall be new and unused; returned or reconditioned components will not be accepted. Brand names and part/model numbers of the major components will be listed and must comply with the brands and models specified in these specifications.
- 6.2 Major components include but are not limited to Seats, Windows, W/C ramps, W/C Tie downs, Air Conditioning/ Heat, Flooring, Floor Covering, Entry Door, and Chassis.

7.0 WARRANTY

- 7.1 The manufacturer of this vehicle will provide a Warranty of 3 year or 50,000 miles parts and labor. The body structure shall be warranted for a period of five (5) years and 100,000 miles.
- 7.2 Chassis Warranty provided by Freightliner Custom Chassis for 3 years or 50,000 miles whichever comes first and 3 years or 50,000 on the drivetrain. Refer to Freightliner Owners Manual for complete coverage.
- 7.3 The major subcomponents, including but not limited to, the Wheelchair Ramp, the Wheelchair Tie Downs, and the optional rear Air Conditioning Systems are warranted by the manufacturer of that component. Detailed Warranty coverage shall be provided with each bus.
- 7.4 The Electrical System will be warranted for 3 Years or 50,000 miles parts and labor.

8.0 GENERAL INFORMATION:

8.1.0 DIMENSIONS

- 8.1.1 Exterior Width: 100" maximum excluding mirrors
- 8.1.2 Interior Width: 96" minimum
- 8.1.3 Interior Height: 77" minimum at the rear of bus and 85" minimum at the front of bus when measured at center aisle (Rear interior height varies with bus length)
- 8.1.4 Exterior Height: 120" maximum excluding roof hatch or roof mounted A/C units
- 8.1.5 Rear Overhang: Shall be kept to a minimum

8.2.0 BASE MODELS

- 8.2.1 SOL 2950 150" WB/31'-2" Overall Length Diesel 25,990 GVWR

8.2.2 SOL 3400 202.5" WB/35'-5" Overall Length Diesel 25,990 GVWR

8.3.0 PASSENGER SEATS AND CAPACITY

- 8.3.1 Seating Capacity: 1-37 passengers (Passenger weight based on Federal Guidelines)
- 8.3.2 Wheelchair Positions: 1-6 (dependent upon wheelbase and seat configuration) with minimum of 54 inches.
- 8.3.3 Seated Knee Room Forward: 27" minimum
- 8.3.4 Seated Width per Seat: 17" (wider seats optional)
- 8.3.5 Cushion Height above finished floor: 17-1/2" minimum/18-1/2" maximum
- 8.3.6 Minimum Aisle: 18" standard (options may affect aisle width)

9.0.0 CONSTRUCTION AND SPECIFICATIONS:

9.1.0 FREIGHTLINER XBA LOW FLOOR RAIL CHASSIS
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- 9.1.1 Engine: Cummins ISB 6.7L/240 HP Turbo Diesel Engine
- 9.1.2 Base Transmission: Allison B220 Heavy Duty 6-Speed Automatic with Park Pawl and Transmission Cooler
- 9.1.3 Horsepower: 240 at 560 FT/LBS.
- 9.1.4 Torque FT/LBS at RPM: 560 at 2,600 RPM
- 9.1.5 Standard Axle Ratio: 5:13:1 (Diesel)
- 9.1.6 Fuel System: Diesel
- 9.1.7 Battery: (2) Heavy Duty 1520 CCA
- 9.1.8 Alternator: 270-amp/12 V
- 9.1.9 GVWR Standard: 25,990
- 9.1.10 GVWR Front Axle: 10,000
- 9.1.11 GVWR Rear Axle: 17,500
- 9.1.12 Fuel Tank: 70 Gallon tank mid-ship between the frame rails. Dual fuel fills - curbside & roadside.
- 9.1.13 Tires: 245/70Rx19.5 G Rated on Accuride 19.5" x 7.5" Steel Powder Coated White Rims
- 9.1.14 Dual Rear Wheels
- 9.1.15 Brakes: Hydraulic Actuated Heavy Duty Disc Brakes with four-wheel anti-lock system
- 9.1.16 Park Brake: Transmission Mount/Drum Air Operated
- 9.1.17 Wheel Base Availability: 150 and 202.5 inches
- 9.1.18 Full-Flow Oil Filter (Disposable Type)

- 9.1.19 The frame shall be ladder construction w/rails constructed of high strength steel. Main rail configuration shall be c-channel w/3" flange and minimum section height of 8".
- 9.1.20 Power Steering: Hydraulic
- 9.1.21 Tilt Steering Wheel
- 9.1.22 Cruise Control- Electronic
- 9.1.23 Horn: Dual Note Tone
- 9.1.24 Air Cleaner: Heavy Duty ECOLITE canister type
- 9.1.25 Driver Side Sun Visor
- 9.1.26 50 State Emissions
- 9.1.27 Power Port: (1) 12 Volt
- 9.1.28 Daytime Running Lights
- 9.1.29 Exhaust system shall be equipped with a heavy duty, corrosion resistant exhaust system which meets or exceeds FMVSS and EPA noise level and exhaust emission (smoke and noxious gas) requirements. Exhaust hangers shall be standard equipment and shall be bolted to the frame. Exhaust U-bolts shall be used in connections with thread orientation must be directed upwards. Exhaust exits streetside Rooftop, (Streetside optional).
- 9.1.30 Dedicated Drivers A/C, Defroster, and Heat
- 9.1.31 Low Oil Pressure Light
- 9.1.32 High Engine Coolant Temperature
- 9.1.33 Power Steering
- 9.1.34 Service Center Box includes Dual Batteries, Emergency Schrader Air Valve, Rotary Electrical Disconnect Switch, and Fuel/Water Separator.

9.2.0 BUMPERS

- 9.2.1 Bumpers shall be steel and powder coated black. (Optional: Front and Rear Energy Absorbing Bumpers are available).

9.3.0 SUSPENSION

- 9.3.1 All chassis shall be equipped with Air Suspension System powered by Cummins internal engine driven single piston air compressor 318 cci.
- 9.3.3 System is equipped with a suspension status light incorporated with the kneel switch which will flash to indicate an error in the system.
- 9.3.4 When stopping for non-wheelchair passengers, operators may choose to maintain the vehicle at its normal ride height condition.
- 9.3.5 If Driver chooses to kneel the bus, the kneel sequence is as follows:
 - 9.3.5.1 • Driver pulls into position, places the vehicle transmission shifter in the park position.

- 9.3.5.2 • Driver opens door by pressing and holding open door switch until door is fully opened (interior passenger lights turn on when door is fully open). The vehicle must be below 2 mph for door to open. **Driver then presses the "One-Touch" Kneel Switch.**
- 9.3.5.2A • Door open limit switch sends signal to the suspension controller to kneel the front.
- 9.3.5.2B • The front of the vehicle kneels.
- 9.3.5.3 • Driver then deploys the ramp by pressing/holding ramp deploy switch until ramp is fully deployed to a 1:6 ramp slope
- 9.3.5.4 • Once the ramp is stowed and the door is closed the suspension controller will raise the vehicle to the normal ride height. If the driver neglects to close the door the controller will close the door automatically at 2 mph.

9.4.0 FLOOR CONSTRUCTION

- 9.4.1 The front floor construction shall be made of a high strength composite material. This part shall be specifically designed to accommodate the wheel housings, drivers station, and entry door ramp areas. This floor sections shall be supported with rubber ride isolator supports with a ladder underlayment framing in the aisle space as additional support for wheelchair traffic.
- 9.4.2 The center floor sections shall be a steel floor section. This floor shall have longitudinal formed steel sections made of 11 ga. hot rolled steel. These longitudinal sections support the floor when mounted to the isolator mounts. The perimeter "C" channels which marry the floor assembly to the sidewall are made of 11 ga. hot rolled steel.
- 9.4.3 Steel sub floor cross members shall be made of 2 x 2 structural steel tubes of 1/4" wall material.
- 9.4.4 Sides of the sub floor shall be 14 gauge c-channel that will overlap the 1.5 x 2.5 x 16 gauge floor line tubing in the side walls.
- 9.4.5 The front floor section shall attach to the frame rails and firewall using rubber isolator supports, of adhesive and bolts.
- 9.4.6 The center floor decking shall be a 5/8" thick single piece of engineered wood with moisture barrier laminated to upper surface and moisture sealed edges.
- 9.4.8 A sealant shall be used in body to floor corners to provide a water resistant seal as an aid in floor cleaning.
- 9.4.9 The cab front floor will have a reinforcement plate in place for future fare box installation.
- 9.4.10 The rear floor will be constructed of tube steel and wood decking.

9.5.0 WHEEL HOUSINGS

- 9.5.1 Ample clearance shall be provided for tires under load and operating on both smooth and rough terrain.
- 9.5.2 Black rubber wheel flares will be installed.
- 9.5.3 Front and rear mud flaps are standard.
- 9.5.4 Underside of front wheel housings shall be coated with Poly Urea for corrosion and sound resistance.
- 9.5.5 Galvaneal Clad- Underside Rear Wheelwells

9.6.0	CURB SIDE WALL AND DRIVER SIDE WALL
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- 9.6.1 Wall structure which ends at the floor line is not acceptable and lower skirts that are not an integral part of the side wall are not permitted. Steel structure must extend below the floor level to the lowest point in side wall.
- 9.6.2 There is (1) 1-1/2" x 2-1/2" horizontal 16 gauge steel tube at the top forming the edge of wall.
- 9.6.3 There is one row of 1-1/2" x 1-1/2" horizontal 16 gauge steel tube below the window line.
- 9.6.4 There is one row of 1-1/2" x 2-1/2" horizontal 16 gauge steel tube at the floor level.
- 9.6.5 There is one row of 14 gauge C-Channel at the top of the side wall
- 9.6.6 There is one row of 1-1/2" x 1-1/2" horizontal 16 gauge steel tube at the bottom forming the edge of the wall.
- 9.6.7 Vertical steel ribs consist of 1-1/2" x 2" 16 gauge steel tubes located at sides of each window.
- 9.6.8 (1) 1-1/2" x 1-1/2" 16 gauge steel tube is welded vertically at the midpoint of each window with a width greater than 24" connecting the horizontal tubes below window and the horizontal tube that is welded at the floor line
- 9.6.9 (2) 1-1/2" x 1-1/2" 16 gauge steel tubes are required at the front of the side wall to form the front and rear of the door opening.
- 9.6.10 The entire steel structure must be bonded (structural bonding adhesive) and bolted together. Any other method of assembly will not be accepted.
- 9.6.11 Exterior wall surface is White FRP Composite laminated to a moisture resistant (less than 1% absorption) substrate (not Luan) attached to the steel cage with urethane adhesive.
- 9.6.12 Interior wall surface is Grey FRP Composite laminated to a moisture resistant (less than 1% absorption) substrate (not Luan) attached to the steel cage with urethane adhesive. Options to replace include Nanocide (Grey), Auto Cloth (Grey) or Vinyl Soft Touch (Grey).
- 9.6.13 Luan used as a substrate is not permitted in the exterior or interior of the of the wall construction. Experience has shown that construction using Luan can lead to moisture wicking into the walls causing corrosion and delamination.

9.7.0	ROOF CONSTRUCTION
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- 9.7.1 Roof Bows must be 1-1/2" x 1-1/2" 16 gauge tubes bent to the radius of the roof. Traditional roof bows with or without capped top covers are not allowed.
- 9.7.2 One row of 1-1/2" x 1-1/2" 16 gauge steel tubing will be installed to form the center longitudinal members front to rear of roof structure.
- 9.7.3 (1) 1-1/2" x 1-1/2" 16 gauge tube will be installed at bottom of roof bow on each side of roof structure.
- 9.7.4 The entire steel structure must be bonded (structural bonding adhesive) and bolted together. Any other method of assembly will not be accepted. The bottom tube of the roof assembly will be bonded and bolted into the rivnuts of the side wall upper C-Channel.
- 9.7.5 Exterior roof surface is Single Piece White FRP (Fiber Reinforced Plastic) Composite laminated to a moisture resistant (less than 1% absorption) substrate (not Luan) attached to the steel cage with urethane adhesive.
- 9.7.6 Exterior FRP (Fiber Reinforced Plastic) Composite will be secured to the side walls with the seam being covered by a rain gutter.
- 9.7.7 Exterior seams are only allowed at the junction of the front cap and rear cap. Any other seams on the exterior of the roof are not permitted.
- 9.7.8 Interior ceiling surface is Grey FRP Composite laminated to a moisture resistant (less than 1% absorption) substrate (not Luan) attached to the steel cage with urethane adhesive. Options to replace include Nanocide (Grey), Auto Cloth (Grey) or Vinyl Soft Touch (Grey).

9.8.0	PASSENGER ENTRY DOOR
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- 9.8.1 Entry Door shall be a dual panel, swing out type door with two single piece, full-length glass windows.
- 9.8.2 Door Opening: 39" wide minimum clear opening (35" w/standard entry assist handles) and 79" high clear opening.
- 9.8.3 Door Windows Dimensions: 14.5" x 74" minimum (clear visible viewing space).
- 9.8.4 Entry doors shall incorporate gaskets and/or seals to provide a barrier against intrusion by wind, water, and dust around the perimeter. The seal at the center of the door shall be by means of full height overlapping rubber seals, and shall include a barrier or sweep at the bottom of both doors.
- 9.8.5 Passenger entry door shall function through the use of an electric door mechanism which includes an interior rocker style switch.
- 9.8.6 For emergency situations, a manual door release control shall be provided over the top of the door, and shall be designed to permit simple operations to override the electric door operator.
- 9.8.7 Standard operating for the passenger entry door will not allow the door opened when vehicle is traveling faster than 2 mph for safety.

- 9.8.8 Steps are not allowed as all passengers shall enter by way of passenger entry door.
- 9.8.9 Optional rear exit door when included shall provide adequate clearance for passenger egress and include sensitive edges for obstruction avoidance. When obstructions occur the door shall re-open and the driver must re-close the door

9.9.0 MIRRORS

- 9.9.1 Interior 6" x 16" Flat Mirror shall be standard.
- 9.9.2 Exterior rear view heated/remote mirrors shall be provided and mounted to view down each side of the bus as standard.

9.10.0 WINDOWS

- 9.10.1 Solid framed windows are standard.
- 9.10.2 Interior window frames will be anodized black as standard.
- 9.10.3 Passenger windows shall be a minimum of 19" or 36" and 36" high.

9.11.0 EMERGENCY EXITS

- 9.11.1 Hinge-out windows shall be installed for emergency escape and shall comply with FMVSS-217.
- 9.11.2 Emergency Escape windows shall be clearly labeled and operation instructions shall be clearly visible at each escape window. The emergency release handle will meet FMVSS-217 requirements and shall not return to the locked position automatically; it shall require the driver or other authorized person to manually re-lock it. All emergency exits shall comply with F.A.C. 14-90.
- 9.11.3 Each emergency exit shall be identified with a 12 volt red LED lamp assembly, with a 10,000 hour life bulb, wired to the vehicle ignition circuit. Next to or immediately below each LED light fixture shall be a decal, one inch white letters on red background, stating "Emergency Exit".
- 9.11.4 There shall be a roof hatch in every vehicle.

9.12.0 ELECTRICAL

- 9.12.1 The vehicle shall be equipped with a heavy-duty (12 volt) Multiplex controlled electrical system. All components are to be selected and integrated to function in an environment characterized by low engine (alternator) speeds and high amperage draws due to lights, air compressor, wheelchair ramp, 4-way flashers, air conditioning/heater, and other accessories in constant operation.
- 9.12.2 The vehicle shall be equipped with a rotary disconnect switch that removes 12V battery power from all loads except for ECU (Engine Control Unit) & TCM (Transmission Control Module) Memory.

- 9.12.3 A fast idle system shall be installed which will automatically increase the engine speed (RPM) to approximately 1200 RPM on diesel engines. The fast speed idle shall engage only when the vehicle is in Park and the parking brake applied.
- 9.12.4 The vehicle shall be equipped with a backup alarm.
- 9.12.5 The vehicle shall be equipped with an Engine Driven Compressor System with an Air Pressure Gauge mounted on the OEM dash, air dryer control system, and diagnostic module.
- 9.12.6 The vehicle shall be equipped with an Exterior Toggle Switch for emergency use of the entrance door located curbside lower front corner behind and above the front bumper.
- 9.12.7 The vehicle shall be equipped with a Ramp Activation System that includes an optional Exterior Ramp Toggle Switch.
- 9.12.8 The vehicle shall be equipped with a driver console with switch panel that includes (6) available spaces for switches that includes but not limited to entry door, ramp, and interior lights.
- 9.12.9 The interior passenger area shall be equipped with LED Surface Lights. The SOL 2950 will have 8 lights (4 drivers side/4 passenger). The SOL 3400 will have 10 lights (5 driver/5 passenger).
- 9.12.10 The ramp area shall be equipped with (1) exterior overhead door light and (2) LED Stepwell Lights to illuminate the entry floor/ramp platform meeting ADA specs. These lights shall activate when the doors open and will turn off when doors close.
- 9.12.11 The driver's seat and instrument panel area shall have a flush-mounted ceiling light to provide general illumination. The light shall be controlled by the operator through a switch on the front console and shall illuminate without ignition activation.
- 9.12.12 The vehicle shall be equipped with center-top mounted third brake light, tail brake lights, rear turn signals, back-up lights, and state license tag lights shall be LED fixtures.
- 9.12.13 All wiring shall be SXL/GXL and be sized to minimize voltage drop at full load.
- 9.12.14 Entire harness system and mating electrical components are plug-connected with lock tab connectors; all terminals are machine crimped; all harnesses shall be covered in high temp conduit and all exterior under body/under hood connectors are IP67 rated sealed connectors.
- 9.12.15 All body wiring shall be run inside the body in a protected area. All wiring shall be in a loom and secured for maximum protection. Clamps shall be rubber or plastic coated to prevent them from cutting the wiring insulation.
- 9.12.16 When routing wiring under vehicle all wiring shall be encased in a loom and attached to the frame and sub-floor structure with proper fasteners and shall not be bundled with hoses. The harness shall run in straight lines as close to chassis frame rails as possible.

- 9.12.17 All electrical components (other than chassis OEM) shall be placed in an Electrical Panel. The panel shall be accessible through a non-locking access panel. Connection to OEM electrical system shall be accomplished through connectors supplied by chassis manufacturer using locking mating connectors. A legend shall be provided in an accessible location that displays circuit fusing and identification information.

9.13.0 GRAB RAILS AND STANCHIONS

- 9.13.1 Handrails and stanchions shall be provided in the entrance of the vehicle including:
- 9.13.1A • LH Entry Stanchion Stainless Steel with Modesty Panel. Fastening of the panel shall be by bolts - screws will not be acceptable. The front side of the stanchion shall include a handle for boarding and aligned with entry door grab handles.
- 9.13.1B • Entry Door Handles Stainless Steel mounted parallel to interior handles.
- 9.13.1C • RH Entry Stanchion Stainless Steel.
- 9.13.1D • Optional OH Ceiling Grab Rails - Stainless Steel

9.14.0 SEATING

- 9.14.1 Driver Seat: USSC Driver Seat w/Manual Base. OPTIONAL Air Ride Seat Base.
- 9.14.2 Seats shall be installed such that they provide "theater" seating in that rows of seats in the rear of the bus shall be higher than the seats in the front of the bus.
- 9.14.3 Seats shall be installed using tracking to allow for flexibility and easy movement.

9.15.0 PASSENGER ENTRY RAMP

- 9.15.1 The entry ramp shall be bi-fold power ramp that is designed to let wheelchair and ambulatory passengers enter the bus once the ramp is fully deployed.
- 9.15.2 Entry ramp shall be rated at 1000 lbs.
- 9.15.3 Entry ramp shall be 62 inches minimum and provide a 1:6 angle when deployed to the ground with bus in knelt position.
- 9.15.4 Steps are not allowed inside the entryway and all passengers shall enter by way of passenger door.

9.16.0 SAFETY EQUIPMENT

- 9.16.1 Every unit to include a standee line with a sign and warning lines on rear foot riser.