

## **I. SPECIFICATIONS FOR ADA SIDE RAMP ACCESSIBLE MINIVAN**

### **I.1. DELIVERY**

- I.1.1.** The bidder agrees, if their proposal is awarded, they guarantee that the design materials and workmanship throughout the vehicle will conform to the highest standards of the vehicle bid according to the standard factory warranty.
- I.1.2.** Unless otherwise specified, all items listed below as OEM parts or equipment means that those items were made by the chassis manufacturer, not the conversion company.

### **I.2. ACCESSORIES**

- I.2.1.** All safety items and air pollution controls required by statute or regulation in effect at the time the vehicle is produced, dual sunshades, horn, prismatic type day/night mirror, power point, parking brake with warning light, factory standard electronic AM/FM/CD stereo with clock, undercoating, factory tinted glass in all windows, jack and tire tool, full size spare tire, and all other accessories or optional items which may be shown in the proposal shall be installed in each vehicle. In addition three sets of keys shall be provided with the vehicle.

### **I.3. AIR BAGS**

- I.3.1.** Driver side and passenger side shall be equipped with Generation II air bags.

### **I.4. AIR CONDITIONER**

- I.4.1.** The air conditioning system shall be factory installed and shall be designed to adequately cool the interior of the vehicle with a full load of passengers.
  - I.4.1.1.** The system shall consist of two evaporators, one installed in the front area with integral dash outlets and the second installed in the rear with outlets designed to direct the air throughout the vehicle.
  - I.4.1.2.** Both evaporators shall be equipped with multi-speed fans. On/Off switches and fan controls shall be within easy reach of the driver.
  - I.4.1.3.** Air conditioning efficiency is of paramount concern to the purchaser.
  - I.4.1.4.** The vehicle's electrical system shall be designed so that an ample electrical supply will be provided to maintain optimum air conditioning performance without battery discharge.
  - I.4.1.5.** All lines and hoses shall be sufficiently fastened, protected, and insulated to ensure against wear from friction the elements.
  - I.4.1.6.** The lines must be mechanically attached, with OEM clamps, to the vehicle structure at no greater than 18 inch intervals and must be routed so as not to be exposed to wheel spray and not pass within 2 inches of any part of the exhaust system.
  - I.4.1.7.** Conversion shall not impede access to front and rear air conditioning components.

### **I.5. ALTERNATOR**

- I.5.1.** 12 Volt, 90 Amps (minimum), or maximum allowed by manufacturer.

### **I.6. BACK-UP WARNING DEVICE**

- I.6.1.** The vehicle shall be equipped with an audible warning device that is activated when the vehicle transmission is engaged in reverse and continues as the vehicle is being backed.
  - I.6.1.1.** This should be located behind the rear axle of the vehicle and all wires should be enclosed and secured.

### **I.7. BATTERY**

- I.7.1.** A heavy duty, minimum 600 CCA, 12 Volt, maintenance free or OEM maximum.
  - I.7.1.1.** The location and installation of the battery shall ensure easy access for replacement and maintenance.
  - I.7.1.2.** In case, a battery is installed under the chassis or body, a roll out tray shall be provided to allow battery to be rolled out beyond the chassis so that it is accessible for maintenance.

### **I.8. BRAKES**

- I.8.1.** 4 wheel anti-lock brake system (ABS) with disc brakes
  - I.8.1.1.** The converted vehicle must have been tested to comply with FMVSS 105. You cannot shift the automatic trans-axle out of Park unless brake pedal is depressed
  - I.8.1.2.** Brake warning light and ABS malfunction warning light shall be supplied.

## **I.9. BUMPERS**

**I.9.1.** Front and rear bumper height shall provide proper ground clearance

## **I.10. CRUISE CONTROL**

**I.10.1.** Must have OEM cruise control.

## **I.11. DRIVER/FRONT PASSENGER DOOR**

**I.11.1.** Standard factory equipment.

## **I.12. SLIDING PASSENGER DOORS**

**I.12.1.** The vehicle shall be equipped with manually operated single, left and right-side mounted (behind left and right-side front passenger doors) doors.

**I.12.1.1.** Doors must maintain OEM fit, finish and seal to prevent the entrance of air, water and other elements.

**I.12.1.2.** Doors must have a minimum opening of 31.5" and a minimum door clearance height of 56".

**I.12.1.3.** There must be no modification to the OEM roofline to achieve the 56" entry height.

**I.12.1.4.** The door shall be equipped with an interlock system so that the door cannot be opened from the inside or outside when the fuel door is open.

**I.12.1.5.** Both doors shall also have a mechanism to securely hold doors in the open position when opened on an incline.

**I.12.1.6.** The door must be capable of being opened from the inside of the vehicle and the opening handle shall not be impeded by the ramp when it is folded to the inside of the vehicle.

**I.12.1.7.** Passenger doors must be aligned correctly and able to open and close smoothly.

## **I.13. SLIDING PASSENGER DOOR TRACKS**

**I.13.1.** Sliding doors must have reinforced glides with an added stop brace to prevent doors from sliding off track.

**I.13.1.1.** Door tracks shall be reinforced or strengthened beyond OEM standards as needed in all areas of contact with sliding arms.

**I.13.1.2.** Door tracks must have a stopping device to prevent falling off.

## **I.14. SLIDING PASSENGER DOOR ARM BRACKETS**

**I.14.1.** Reinforcement of the sliding door components shall at a minimum be adequate to support the excess weight created by the door extensions.

**I.14.1.1.** These arms if extensions are needed must be constructed of stainless steel.

**I.14.1.2.** Under normal closure conditions, there should be no evidence of door track flexing or wobbling.

## **I.15. DOORS AND WINDOWS**

**I.15.1.** Fit and finish standards must include that the doors and interior panels shall be painted or otherwise finished with a non-glare finish in order to match the other interior panels.

## **I.16. STEPS**

**I.16.1.** Vehicle must have a step for the driver and passenger front seats. Extra Heavy-duty running boards/Steps that are bolted to the frame for added strength.

**I.16.2.** Steps must be able to hold over 400 pounds. This will assist driver and front passenger to enter and exit the vehicle.

## **I.17. EMERGENCY EQUIPMENT:**

**I.17.1.** All miscellaneous equipment must be secured to the vehicle and easily accessible.

**I.17.1.1.** First aid kit: (24M – National Standard School Bus Metal

**I.17.1.1.1.** Must be Certified Safety Mfg. Model S203-045 or equivalent.

**I.17.1.2.** Fire extinguisher – Multi-purpose Stored Pressure Dry Chemical Extinguisher.

**I.17.1.2.1.** Must be a 5 lb. type 3A:40B: C Pro Line, Kiddie Model # FXBND9 or equivalent.

**I.17.1.2.2.** Must have a gauge to indicate state of charge and mounted to vehicle using a bracket and having a heavy duty vinyl cover.

**I.17.1.3.** Triangle warning devices (3), with storage container.

- I.17.1.3.1. must meet FMVSSP # 125
- I.17.1.4.** Bloodborne Pathogens infection control kit.
- I.17.1.4.1. Must be Certified Safety Mfg. Model #FK200-931, or equivalent.
- I.17.1.5.** Seat belt cutter

## **I.18. ENGINE**

- I.18.1.1.** Minimum 3.8 liter V6 gasoline engine with electronic fuel injection and shall include: oil filter, air cleaner and heavy duty radiator capable of providing sufficient cooling capacity for the operation of all air conditioning equipment.
- I.18.1.1.1. Engines that are E-85 flexible fuel capable are preferred if available at no additional cost.
- I.18.1.1.2. Engine cooling system shall be protected with permanent type antifreeze to minus 20 degrees Fahrenheit.
- I.18.1.1.3. The Coolant used shall meet or exceed the engine manufacture's specification.
- I.18.1.1.4. A permanent label listing protection level shall be supplied and riveted or screwed to the close proximity to the radiator.
- I.18.1.1.5. Engine warning system with light indicated oil pressure below 6 psi and with a light to indicate water temperature above 210 degrees Fahrenheit.
- I.18.1.1.6. Engine shall meet the latest applicable emission control standards.

## **I.19. ENTRANCE RAMP LIGHTING**

- I.19.1.** Must meet all ADA requirements as stated in the Federal Register, Part IV, Department of Transportation, 49 CFR Parts 27, 37 and 38, Transportation for Individuals with Disabilities; Final Rule, published Friday, September 6, 1991.
- I.19.1.1.** Ramp area lighting shall illuminate automatically when door is opened.
- I.19.1.2.** Overhead and step well lights shall be activated when the passenger doors are open.
- I.19.1.3.** Adequate interior lighting shall be installed throughout which provides a minimum of two foot-candles at a seated level.
- I.19.1.4.** Interior lighting fixtures shall be reasonably flush with the interior walls and ceiling to prevent a hazard to passengers.

## **I.20. FLOOR ASSEMBLY**

- I.20.1.** Floor assembly shall be at minimum the following.
- I.20.1.1.** Floor drop shall be from the front firewall back to just forward of the rear axle, run the full width of the vehicle, and measure thirteen (13) inches maximum and allow ground clearance of at least 5 inches including exhaust.
- I.20.1.2.** Floor should be constructed of stainless steel, and shall be 'ramped' or 'notched' where necessary to provide adequate clearance for underbody components, such as to allow for full suspension travel.
- I.20.1.3.** All modifications to the OEM floor plan shall be of the highest quality of construction.
- I.20.1.4.** These modifications to the vehicle floor and frame must provide reinforcement to ensure that the structural integrity of the OEM vehicle is not compromised.
- I.20.1.5.** All modifications must be properly sealed to prevent the entrance of exhaust fumes, moisture and dust into the vehicle.
- I.20.1.6.** The exhaust pipes should have the necessary heat shields.
- I.20.1.7.** Rust inhibitors other than undercoating shall be applied to all conversion materials.

## **I.21. SUB FLOOR**

- I.21.1.** The interior floor shall be insulated with 3/8" (minimum) marine grade plywood to provide a smooth surface for flooring attachment and to minimize interior noise.
- I.21.1.1.** The proper insulation should be used to prevent the exhaust from making the floor so hot that it would be uncomfortable for the passengers.

## **I.22. FLOOR COVERING MATERIAL**

- I.22.1.** Shall be at minimum 3/16" thick continuous piece of fire retardant, nonskid transit-type flooring.

I.22.1.1. The floor covering shall be butt jointed and cemented to the floor with a waterproof adhesive in order to prevent bubbles and blisters which could create a safety hazard.

I.22.1.2. Mobility air restraint tracks and seat locks shall be beveled, with no sharp edges and will protrude no more than ¼" above floor surface.

**I.23. FRONT AXLE**

I.23.1. Minimum 2400 lbs. capacity or OEM maximum.

**I.24. FUEL TANK**

I.24.1. Largest available, but no less than 20 U.S. gallons.

I.24.1.1. Tank, fuel lines, and hardware must meet all current FMVSS, including FMVSS 301, as well as all current CARB and EPA requirements.

I.24.1.2. Tank shall be calibrated with the OEM dash fuel gauge.

**I.25. GUAGES**

I.25.1. Fuel, water-temperature, oil pressure light, alternator light, speedometer, and odometer.

**I.26. HORN**

I.26.1. Dual, electric

**I.27. HEATER**

I.27.1. Both a deluxe front heater and a heavy-duty auxiliary rear heater are required.

I.27.1.1. Front and rear coils shall be factory installed hot water type, of sufficient capacity to warm cabin area and clear windows of snow, ice and fog.

I.27.1.2. The water lines for the rear heater coil may be housed within the conduit used for the air conditioning refrigerant lines.

I.27.1.3. All lines and hoses shall be sufficiently fastened, protected, and insulated to ensure against wear from friction and the elements.

I.27.1.4. The lines must be mechanically attached, with OEM clamps, to the vehicle structure at no greater than 18 inch intervals and must be routed so as not to be exposed to wheel spray and not pass within 2 inches of any part of the exhaust system.

I.27.1.5. Conversion shall not impede access to front and rear heater components.

**I.28. INTERIOR INSULATION**

I.28.1. All side walls and areas around the windows shall be insulated and finished with matching trim and color.

I.28.1.1. Entire ceiling shall be insulated.(Batt is not acceptable)

I.28.1.2. Insulation shall consist of a polystyrene composite and shall be nontoxic.

I.28.1.3. A polyurethane foam or honeycomb resin in also acceptable.

**I.29. INTERIOR HEIGHT (AT CENTER)**

I.29.1. Minimum 57 ½"

**I.30. INTERIOR LENGTH**

I.30.1. Length measured from back of driver's seat to back window of vehicle at seated shoulder height.

I.30.2. Shall be a minimum of 90".

**I.31. INTERIOR TRIM**

I.31.1. Shall match factory original material.

I.31.1.1. All interior panels shall be OEM material or equal. Material and treatments shall be flame retardant to meet FMVSS 571.302 and be surface treated for efficient cleaning.

I.31.1.2. Panel fastening devices shall match the color of the panels with smooth finishes without any unprotected sharp edges.

**I.32. LAMPS**

I.32.1. Automatic daytime running lamps, if available.

**I.33. EXTERIOR MIRRORS**

I.33.1. Dual folding power

I.33.1.1. Heated factory installed

I.33.1.2. Low mount

**I.34. INTERIOR MIRROR**

I.34.1. 10" automatic day/night rear view mirror.

**I.35. MUD FLAPS**

I.35.1. Front and rear, securely mounted, standard.

**I.36. FLOOR MATS**

I.36.1. Must have front OEM floor mats.

**I.37. KEYS**

I.37.1. Must have 3 sets of keys

**I.38. OVERALL HEIGHT**

I.38.1. Measured from front to highest point of vehicle.

I.38.1.1. Minimum 66", Maximum 83".

**I.39. OVERALL LENGTH**

I.39.1. Minimum of 195 inches.

**I.40. OVERALL WIDTH-EXTERIOR**

I.40.1. Maximum 72".

**I.41. OVERALL WIDTH-INTERIO**

I.41.1. Minimum 55"

**I.42. PRIORITY SEATING SIGNS**

I.42.1. Each vehicle shall contain sign(s) which indicate that the seats in the front of the vehicle are priority seats for persons with disabilities, and that other passengers should make such seats available to those who wish to use them.

**I.43. RADIATOR**

**I.44. Heavy-duty, with factory installed coolant recovery system.**

I.44.1.1. Vehicle's cooling system must be winterized with ethylene glycol for temperature to 20 degrees F below zero.

**I.45. REAR WINDOW**

I.45.1. Defogger/defroster.

**I.46. ROOF GUTTERS**

I.46.1. Shall be installed over all windows and doors. OEM rain channel is fine if not obstructed during conversion.

**I.47. DRIVER'S SEAT**

I.47.1. Must be a power seat with power lumbar and be high backed with multi-positional fore and aft adjustment, reclining seatback, etc.

**I.48. FLOOR MATS**

I.48.1. Must have front OEM floor mats

**I.49. KEYS**

I.49.1. Must have 3 sets of keys

**I.50. OVERALL HEIGHT**

I.50.1. Measured from front to highest point of vehicle.

I.50.1.1. Minimum 66", Maximum 83".

**I.51. OVERALL LENGTH**

I.51.1. Minimum of 195 inches.

**I.52. OVERALL WIDTH-EXTERIOR**

I.52.1. Maximum 72".

**I.53. OVERALL WIDTH-INTERIOR**

I.53.1. Minimum 55".

**I.54. PRIORITY SEATING SIGNS**

I.54.1. Each vehicle shall contain sign(s) which indicate that the seats in the front of the vehicle are priority seats for persons with disabilities, and that other passengers should make such seats available to those who wish to use them.

**I.55. RADIATOR**

I.55.1. Heavy-duty, with factory installed coolant recovery system.

I.55.1.1. Vehicle's cooling system must be winterized with ethylene glycol for temperature to 20 degrees F below zero.

**I.56. REAR WINDOW**

I.56.1. Defogger/defroster

**I.57. ROOF GUTTERS**

I.57.1. Shall be installed over all windows and doors. OEM rain channel is fine if not obstructed during conversion.

**I.58. DRIVER'S SEAT**

I.58.1. Must be a power seat with power lumbar and be high backed with multi-positional fore and aft adjustment, reclining seatback, etc.

**I.59. TRANSMISSION**

I.59.1. 6 speed minimum automatic including overdrive.

I.59.1.1. Transmission shall be capable of transmitting the torque and horsepower listed on the engine.

**I.60. UNDERCOATING**

I.60.1. All exposed floor seams shall be sealed with an industrial grade butyl sealant or equivalent that conforms to ASTM C920.

I.60.1.1. The entire surface of exterior lowered floor shall have a rust inhibiting coating, such as an epoxy primer base, applied to cover all welded areas, and then a fresh application of undercoating over the entire surface.

I.60.1.2. Undercoating shall comply with current Federal and State flammability standards.

I.60.1.3. The entire body-frame understructure of each vehicle is to be fully undercoated with high quality anti-rust protection material.

**I.61. VEHICLE COLORS**

I.61.1. Body: Vendor shall supply available colors and prices.

I.61.2. Interior/Seats: Bidder shall include interior color options for review.

I.61.2.1. Successful vendor shall coordinate with the agency issuing the purchase order in the selection of interior and seat color.

**I.62. WARNING LIGHT**

I.62.1. A warning light shall be in the driver's area, for the rear door, indicating "door ajar".

**I.63. WARRANTY**

I.63.1. Warranty must be as follows

I.63.1.1. A Bumper-to-Bumper Warranty 36,000 miles or three (3) years on body construction, modification, and add-on components. (This includes any and all conversion made to OEM vehicle).

I.63.1.2. Vehicle shall have a 60 months or 100,000 mile manufacture power train warranty.

- I.63.1.3. These warranties shall begin on the date that vehicle delivery is accepted by the agency issuing the purchase order.

#### **I.64. WHEEL BASE**

- I.64.1. Minimum of 119 inches.

#### **I.65. WHEELS AND TIRES**

- I.65.1. Tire size must be compatible with each vehicle and must meet 5,357 lb. GVWR minimum.
- I.65.2. Tires shall be steel-belted radial all season type tires.
  - I.65.2.1. The rims need to be OEM aluminum or comparable.
  - I.65.2.2. Wheel covers will not be acceptable.
  - I.65.2.3. Spare wheel and tire shall be of the same size as all the other wheels and mounted at an accessible location.

#### **I.66. WHEELCHAIR ACCESSIBILITY SYMBOL**

- I.66.1. The international wheelchair accessibility symbol depicted on sign D9-6 in the "Manual of Uniform Traffic Control Devices" published by the federal Highway Administration shall be affixed to the outside of each vehicle on all four sides.
  - I.66.1.1. No vendor/dealer advertisements shall be on the symbols.
  - I.66.1.2. Symbols shall be between 3" and 4" in overall height.

#### **I.67. WHEELCHAIR POSITIONS**

- I.67.1. 2 Wheelchair positions shall be provided as standard equipment: a center behind driver placement (straight in from the ramp entrance), and a right front passenger placement.
  - I.67.1.1. Tie-downs shall be located in these right front passenger positions and the center left and center right passenger positions.
  - I.67.1.2. The right front passenger placement should be located as far forward as possible.
  - I.67.1.3. This multiple tie-down configuration allows for up to two (2) wheelchair passengers and three (3) ambulatory passengers. Wheelchair positions must be forward facing.

#### **I.68. WHEELCHAIR RAMP**

- I.68.1. Vehicle will be equipped with a manually deployed ramp.
  - I.68.1.1. The fold and unfold motion of the ramp must be counter balanced so that the force exerted by the operator does not exceed 15 lbs.
  - I.68.1.2. The ramp shall have a minimum usable width of 30" and slope meeting the requirements of ADA, 49 CFR.
  - I.68.1.3. The ramp shall be designed to swing-away when in the upright position to allow access for non-wheelchair passengers.
  - I.68.1.4. When in the upright position, the ramp must not interfere with the front passenger seat. If this occurs, there must be something added to protect the back and side of the seat, and must be of quality material and look as OEM as possible.
  - I.68.1.5. The ramp must fold up completely below the window line for unobstructed visibility.
  - I.68.1.6. The ramp surface shall be continuous, with the surface being either expanded or solid metal. If solid metal, it shall be covered with (Armstrong Crosswalk, or equivalent) slip-retardant flooring.
  - I.68.1.7. The surfaces of the boarding edge of the ramp and door threshold shall have a bright yellow finish running the full surface, in order to contrast with the finish on the rest of the ramp.
  - I.68.1.8. Vinyl tape is not acceptable.
  - I.68.1.9. Ramp shall have a rated capacity of 600 lbs. with a safety factor of at least three (3) based on the ultimate strength of the material.
  - I.68.1.10. Each side of the ramp shall have protective barriers at least two (2) inches high to prevent mobility aids from rolling off of the ramp edge and must have yellow tape on them.
  - I.68.1.11. Ramp must meet all ADA requirements as set out in the Federal Register, Part IV Department of Transportation, 49 CFR Parts 27, 37 and 38, Transportation for Individuals with Disabilities; Final Rule, published Friday, September 6, 1991.

## **I.69. WHEELCHAIR SECUREMENTS SYSTEM**

- I.69.1.** The securement system shall be, Q'Straint QRT MAX Automatic Retractor System Q-8309-L with L-Track anchorage system and J-Hooks, or equivalent.
  - I.69.1.1.** They must be fully assembled and ready to use.
  - I.69.1.2.** Shall include securement pouches store wheelchair securement tie-downs.
  - I.69.1.3.** Shall include four (4) Q5-7580 Webbing Loops for Securing Scooters. Belt system shall be of sufficient length to accommodate a motorized wheelchair.
  - I.69.1.4.** A minimum of two tracks, (pads), each of sufficient length for proper attachment and positioning of the belts, shall be placed parallel to each other and perpendicular to the direction in which the wheelchair faces.
  - I.69.1.5.** The anchors must be bolted to structural steel.
  - I.69.1.6.** Bolting to plywood floor without bolting into structural steel under floor is NOT ALLOWED.
  - I.69.1.7.** The tracks shall be securely mounted to the vehicle, flush from the floor and ramps, to insure that the track will not pull away from the van floor or shift position under anticipated loads.
  - I.69.1.8.** Any tracks overlapping the access path must be recessed into the floor to prevent passengers from tripping.
  - I.69.1.9.** All attachment hardware and anchorages shall meet or exceed the 30 mph/20 Impact Test criteria per SAE J2249, 36 CFR Part 1192 and CFR Part 38, and all applicable Federal Motor Vehicle Safety Standards, as amended.

## **I.70. WHEELCHAIR OCCUPANT RESTRAINT**

- I.70.1.** The wheelchair occupant restraint system shall be Q'Straint Q8-6325
  - I.70.1.1.** A shall have a standard manual lap/shoulder belt combo or equivalent to.
  - I.70.1.2.** That meets SAE J2249 and ADA requirements.
  - I.70.1.3.** The L tracks must be bolted to structural steel. Bolting to plywood floor without bolting into structural steel under floor is NOT ALLOWED.
  - I.70.1.4.** Each wheelchair securement location shall have a sign designating it as such. Lettering size and type on these signs shall comply with the Americans with Disabilities Act regulations.
  - I.70.1.5.** Price bid should be for 2 sets of wheelchair restraints (which would cover both wheelchair placements).
  - I.70.1.6.** Vendor will supply written or video instructions on the use of the restraint system.

## **I.71. WINDOWS**

- I.71.1.** Factory tinted safety glass all around, (1) window on each side capable of being opened.
  - I.71.1.1.** Shall be at least 30% smoked glass windows throughout passenger area that is be factory installed.
  - I.71.1.2.** After market add on films is not acceptable.
  - I.71.1.3.** All windows and emergency exits shall meet the performance and operational requirements as outlined in the Federal Motor Vehicle Safety Standards and Procedures.

## **I.72. WINDSHIELD**

- I.72.1.** Tinted safety glass

## **I.73. WINDSHIELD WASHER**

- I.73.1.** Windshield washer must be protected with winter-strength solution.

## **I.74. WIPERS**

- I.74.1.** Must have a dual intermittent wiper system

## **I.75. WIRING**

- I.75.1.** Schematic of non-OEM wiring shall be included with the vehicle at the time of delivery.
  - I.75.1.1.** Each vehicle shall have a 12-volt electrical charging system as supplied from the OEM.
  - I.75.1.2.** All electrical wiring shall be automotive stranded copper, of sufficient gauge to handle the load, color-coded to match the OEM.



- I.75.1.3.** All harnesses that are modified or added to the vehicle will be secured to the frame/body at a maximum of two feet intervals with insulated clamps.
- I.75.1.4.** All exposed terminals and wiring shall be protected from the elements using sealed terminals or heat shrink where necessary. Exposed wires will be wrapped or loomed in corrosion/moisture-resistant material.
- I.75.1.5.** Must be continuous wiring with OEM type pin connectors at harness connections, butt connectors are not allowed.

## **I.76. MISCELLANEOUS TECHNICAL SPECIFICATIONS**

- I.76.1.** There shall be no sharp corners on the unit. All corners shall be slightly rounded and filed smooth.
- I.76.2.** All weld joints shall have been cleaned, primed, be free of slag intrusions, undercut, roll, blow holes, craters and porosity.
  - I.76.2.1.** Welds shall be properly fused, of ample penetration and smoothly finished on exposed surfaces.
  - I.76.2.2.** Sheet metal fit-up must be properly executed and concealed by a finish-coat of paint.
  - I.76.2.3.** Finish and all glass must be free of any defects due to welding, welding slag, heat, war page, or assembly damage.
- I.76.3.** All materials installed shall be new and free of rust.
- I.76.4.** No wires shall be visible on the exterior or interior of the unit.

## **I.77. DELIVERY**

- I.77.1.** Vehicle must be delivered at a maximum of 120 calendar days from the date a Purchase order is issued. Pre-delivery servicing and adjustments: prior to acceptance by the purchaser, the vendor shall service and adjust each vehicle for operation. This process shall include but not be limited to the following:
  - I.77.1.1.** The vehicle must have a full tank of fuel when delivered.
  - I.77.1.2.** Each vehicle shall be designed to facilitate the disassembly, reassembly, servicing or maintenance thereof by use of tools and items that are normal and available as commercial standard items. The body and structure shall be designed for ease of maintenance and repair.
  - I.77.1.3.** All parts added, as part of the modification process shall be new.
  - I.77.1.4.** Headlights properly aligned
  - I.77.1.5.** Engine Tuned
  - I.77.1.6.** All accessories properly adjusted
  - I.77.1.7.** Electrical, braking and suspension systems inspected
  - I.77.1.8.** Both batteries Charged
  - I.77.1.9.** Front-end alignment must be done after body is put on chassis. Chamber, caster and toe must be adjusted to the center of OEM specs. Ford chassis buses must have adjustable caster, camber bushings installed. Standard OEM bushings will not be accepted. Each bus must come with documentation stating before and after actual alignment readings of bus.
  - I.77.1.10.** All wheels balanced, including spare
  - I.77.1.11.** All lubricants checked, and greased if needed
  - I.77.1.12.** Cooling system serviced with permanent type anti-freeze and summer coolant for minus 20 degrees F (-28.888C).
  - I.77.1.13.** Warranty papers and owner's guide
  - I.77.1.14.** Exterior and interior cleaned and washed.
  - I.77.1.15.** Odometer cannot exceed 3,000 miles at the time of delivery of completed buses to the purchasing agency. There will be a charge of one dollar (\$1.00) per mile for each vehicle with an odometer reading in excess of 3,000 miles payable to the purchasing agency at the time of delivery.
  - I.77.1.16.** Under no circumstances are tow vehicles to be attached to any buses.
  - I.77.1.17.** Each vehicle must be delivered to the agency submitting the P.O.
  - I.77.1.18.** Copies of the all Certificate of Origins and signed invoices must be sent to the organization named on the purchase order before delivery is made and must be delivered with the vehicle: receipt of these after delivery is not acceptable.

**I.78. ALTOONA TESTING**

**I.78.1.** Bid must include a copy of Altoona Test Report for this vehicle.

**I.79. VEHICLE TESTING**

**I.79.1.** Certification shall be provided that in accordance with 49 CFR part 665, Bus Testing, the vehicle either does not need to be tested (with justification specified for exemption) or has been tested at the bus testing facility and a test report is included.

**I.79.2.** Information to be furnished with each vehicle

**I.80. MANUALS**

**I.80.1.** Must include OEM Repair service manuals and wiring diagram manual for the chassis. And as built wiring diagram and parts manual for body and for all auxiliary equipment.

**I.80.1.1.** Maintenance and inspection schedule incorporating the required maintenance and inspection of the basic vehicle and its sub-systems.

**I.80.1.2.** Operator's manual for vehicle and all add-on equipment.

**I.80.1.3.** Warranty papers for chassis, body, and additional equipment.

**I.80.1.4.**

**I.81. PRE-AWARD AUDIT**

**I.81.1.** A Pre-Award Audit shall be conducted to determine if the bid proposal specifications. The bidder shall submit documents, which include certification of the manufacturer's compliance with the Federal Transit Administration (FTA) Pre-Award Buy America Audit Requirements. The document submitted shall include the following information for each major component used on vehicle bid

**I.81.1.1.** Name and address of each supplier.

**I.81.1.2.** Cost of each major component and subcomponent. In order to protect proprietary information, the document may reflect the percentage of total cost each item represents instead of the actual cost.

**I.81.1.3.** Country of origin of each major component and subcomponent.

**I.81.1.4.** Name and address of company where final assembly occurs.

**I.81.1.5.** Cost of final assembly

**I.81.1.6.** Signature of authorized representative of vehicle manufacturer.

**I.81.1.7.** Once the preceding steps have been completed, the contract shall be awarded.

**I.82. POST- DELIVERY AUDIT**

**I.82.1.** A Post Delivery Audit of the vehicle(s) shall be conducted at the purchaser's facility, to determine that the completed vehicle(s) meets specifications. Once this process has been satisfactorily completed, the vehicle(s) shall be considered acceptable.

**I.83. ACCESSIBILITY REQUIREMENTS**

**I.83.1.** When submitting a bid for an accessible vehicle for the disabled, the vendor shall provide a list of the vehicle related equipment illustrating the component cost and related installation charges. The purpose of this list is to reflect an accurate cost for those vehicle related items, which are required to make the vehicle accessible to the disabled.

**I.84. OPTIONAL ITEMS**

**I.84.1.** Must be installed by vendor or factory before delivery

**I.84.2.** The following options shall receive separate pricing as part of the bid submission

**I.84.2.1.** CNG CONVERSION BI-FUEL

**I.84.2.2.** OEM engine shall be converted to operate on CNG and Gasoline. System shall be CARB and EPA certified, OBDII compliant, and fully integrated into the OEM powertrain control system. No additional module will be accepted. System shall be capable of switching between CNG and Gasoline. The Gasoline fuel tank will be installed as per OEM specifications. The system must comply with the following

**I.84.2.2.1.** Closed-loop fuel control

**I.84.2.2.2.** Sequential fuel injection (SFI)

**I.84.2.2.3.** Optimized ignition timing

- I.84.2.2.4. Must maintain original fault codes (DTCs)
- I.84.2.2.5. Diagnostics accessed through DLC using original scan tool or any generic OBD-II scanner
- I.84.2.2.6. CNG system shall be covered by 3 year/50,000 mile warranty and cannot void the OEM powertrain warranty.
- I.84.2.2.7. Must provide a detailed floor plan of the placement of the CNG tanks.
- I.84.2.2.8. System must be installed by a Qualified Vehicle Modifier (QVM), and installation must meet or exceed OEM requirements. This system shall also be installed by the system manufacture.
- I.84.2.2.9. The Minimum CNG Type IV tank with a capacity of 15 Gasoline Gallon Equivalent.
- I.84.2.3. POWER RAMP AND DOOR**
  - I.84.2.3.1. Operated from switch mounted on right-side "B" pillar. All other specifications listed in this document for Wheelchair Ramp and Doors shall apply to this optional electrically operated ramp and right-side sliding door.
- I.84.2.4. FOLD-AWAY CENTER SEAT**
  - I.84.2.4.1. Fold-away center seat, which folds up behind the driver.
    - I.84.2.4.1.1. This seat shall be forward facing, standard heavy-duty vinyl (if available), of durable type and material that can be cleaned easily, fully padded for occupant comfort and retention.
    - I.84.2.4.1.2. This seat shall comply with FMVSS burn resistance requirements, and seat color shall match the vehicle color and be aesthetically pleasing.
    - I.84.2.4.1.3. Seat will comply with FMVSS seat anchorage requirements.
- I.84.2.5. BACK-UP MONITOR SYSTEM**
  - I.84.2.5.1. ASA Voyager AOM562A or approved equal with a 5.6" color LCD screen mounted on rear view mirror OEM Bracket. With a rear mounted outside backup camera and a second inside front mounted camera to view passengers.
- I.84.2.6. TWO-WAY RADIO SYSTEM: UHF**
  - I.84.2.6.1. ICOM F6021 UHF two-way Radio System with a PCTELMUF4505 UHF antenna and coax or approved equal.**
    - I.84.2.6.1.1. Antenna shall be mounted on Roof.
    - I.84.2.6.1.2. Radio must be mounted in an easy accessible location for the driver.
    - I.84.2.6.1.3. Radio must be programmed with the correct Frequencies and the antenna tuned for the agency issuing this purchase.
- I.84.2.7. TWO-WAY RADIO SYSTEM: VHF**
  - I.84.2.7.1. ICOM F5021 VHF two-way Radio System with a PCTEL MHB5800 VHF antenna and coax or approved equal.**
    - I.84.2.7.1.1. Antenna shall be mounted on Roof.
    - I.84.2.7.1.2. Radio must be mounted in an easy accessible location for the driver.
    - I.84.2.7.1.3. Radio must be programmed with the correct Frequencies and the antenna tuned for the agency issuing this purchase.
- I.84.2.8. TWO-WAY RADIO SYSTEM: 800 MHz**
  - I.84.2.8.1. Kenwood NX-900K 800 MHz two-way Radio System with a PCTEL MUF8003 antenna and coax or approved equal.**
    - I.84.2.8.1.1. Antenna shall be mounted on Roof.
    - I.84.2.8.1.2. Radio must be mounted in an easy accessible location for the driver.
    - I.84.2.8.1.3. Radio must be programmed with the correct Frequencies and the antenna tuned for agency issuing this purchase.
- I.84.2.9. INTEGRATED CHILD SEAT**
  - I.84.2.9.1. Integrated Child Restraint Seat must be a Freedman Seating ICS-10 or equivalent.
    - I.84.2.9.1.1. Must have an integrated 4-point safety harness for children 22-78lbs with under seat retractor seat belts for adults.

**JOHN VANCE MOTORS**

**SECTION "I"**  
**ADA MINIVAN**  
**RESPONSE SHEET**

**BASE VEHICLE COST PER UNIT**

<b>BASE VEHICLE</b>	<b>COST PER UNIT</b>
MINIVAN ADA VEHICLE	\$ <b>\$43,199.00</b>

**CHASSIS SPECIFICATIONS**

Specify Overall Vehicle Length (outside of front bumper to outside of Rear bumper): 202.8"

**OPTIONAL ITEMS**

<b>OPTIONAL ITEMS</b>	<b>COST PER ITEMS</b>
CNG CONVERSION BI-FUEL	\$ N/A
POWER RAMP AND DOOR	\$ 3525.00
FOLD-AWAY CENTER SEAT	\$ 1172.00
BACK-UP MONITOR SYSTEM	\$ 990.00
TWO-WAY RADIO SYSTEM: UHF	\$ 685.00
TWO WAY RADIO SYSTEM	\$ 685.00
TWO WAY RADIO SYSTEM	\$ 975.00
INTEGRATED CHILD SEAT	\$ N/A

**A LIST OF OPTIONAL EQUIPMENT AND/OR ACCESSORIES SHALL BE PROVIDED. THE LIST MUST CONTAIN:**

- Item
- Description and functionality detail
- Cost of item installed in final delivery of vehicle
- Any changes to listed specifications as outlined above to accommodate options

**PROPOSAL EXCEPTIONS**

Supplier must list any exceptions here to be used as a part of the Proposal evaluation and analysis. Please list the roman numerical on the standard specs or the number for the options when listing any Proposal exceptions.

page 12: I.18. ENGINE

bid calls for 3.8 liter engine.

The standard and only available engine is a Penastar 3.6 liter V6 Flex Fuel Engine

# OPTIONAL EQUIPMENT

## 1) BRAUN REAR ENTRY ADA COMPLIANT MII VAN PACKAGE.....NO EXTRA CHARGE

This van provides an alternative to the traditional side entry. This van can offers a wide ramp above the minimum ADA requirements to allow larger wheelchairs:

See attached brochure for optional seating packages

A: Floor Plan Package

B: Floor Plan Package

C: Floor Plan Package

## 2) VINYL SEAT COVERS.....\$965.00

The vinyl seat covers provides additional protection and makes clean-up much easier

## 3) POWER DRIVER SEAT - DELETION CREDIT.....\$<135.00>

This option provides a credit to the base price of the vehicle for agencies that do not need the power seat.

## 4) ALUMINUM WHEEL - DELETION CREDIT.....\$<400.00>

This option provides a credit to the base price of the vehicle for agencies that prefer HD factory steel wheel.

## 5) N-FLOOR SIMPLE STOW RAMP \$1995

allows operators to easily and safely accommodate both wheelchair and ambulatory passengers. 30" ramp width (31.625" wide with stow/deploy aid removed) - 1,000-pound ramp capacity - Automatic fold up/down side plates

## 6) 3 CHANNEL VIDEO SYSTEM \$2975

Monitors and records with front camera pointing at road, One camera on rear passengers and one camera on Ramp/Lift

# Commercial Side-Entry

Dodge



BraunAbility® applies our extensive personal mobility product experience to the Commercial market with the Commercial Side-Entry conversion. If you want a wheelchair accessible vehicle that's functional, practical, safe, and reliable, while retaining its style, comfort, and convenience, this is the right vehicle for your fleet.

Safety has always been a top priority at BraunAbility. The Dodge Commercial Side-Entry conversion has been crash tested and certified to meet or exceed all applicable requirements of the Federal Motor Vehicle Safety Standards (FMVSS).

#### MANUAL DOOR

The conversion features an ADA compliant manual driver and passenger sliding door with 56-1/4" vertical opening.



#### MANUAL RAMP

The 30" wide foldout ramp makes it easy to load and unload wheelchair users. The swing-out feature allows for easy ambulatory access to the vehicle.



Commercial Vehicles



**BraunAbility®**

*Life is a Moving Experience®*



# Commercial Side-Entry

## Dodge

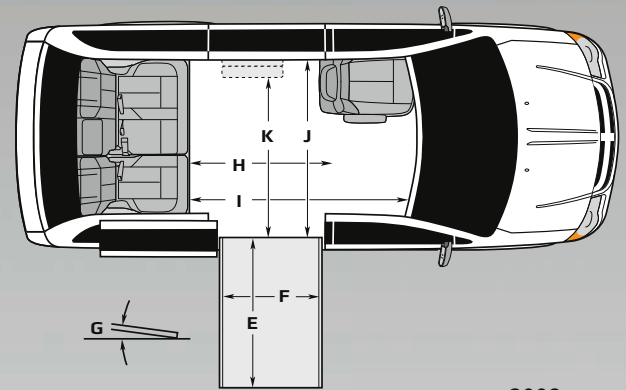
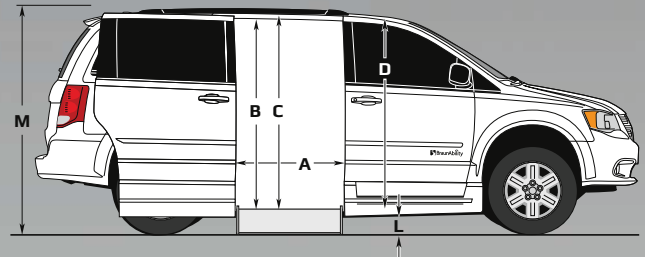
### Standard Features

- FTA Buy America Compliant
- ADA, FMVSS and CMVSS Compliant
- Meets/exceeds Altoona test requirements
- CARB approved
- 6-passenger vehicle (with optional aftermarket 2nd row 2-passenger folding bench seat)
- Lowered floor from firewall to rear axle
- 61" floor-to-ceiling at center of van\*
- 30" wide manual ramp with swing out feature for ambulatory access
- Multiple wheelchair securement locations
- One belt system for wheelchair securement
- Manual driver and passenger side sliding door providing 56-1/4" vertical opening (ADA compliant), passenger door provides 31-1/2" in width
- Step-and-Roll front seats
- 3-passenger bench seat at rear with folding footrest
- Front passenger floor tracks for wheelchair securement, with 60" floor-to-ceiling height
- Stylized lower body panels with integrated steps
- Vinyl flooring with 3/8" marine grade plywood underlayment
- ADA-compliant interlock
- ADA-compliant ramp and door entrance lighting
- Priority seat decal
- Wheelchair securement location decals
- Auxiliary wiring harnesses include fused circuits
- Emergency rear hatch release
- Easy maintenance interior trim package
- 20 gallon OEM fuel tank

### Options

- Power door, power folding ramp and kneeling system
- Aftermarket 2nd row 2-passenger folding bench seat
- DOT kit
- Additional set of tie-down straps

All illustrations, descriptions and specifications in this brochure are based on the latest product information at the time of publication. BraunAbility reserves the right to make changes at any time without notice. © 2017 BraunAbility 35293



2008+

<b>A</b>	Door Opening Usable Width (Slide Door)	<b>31-1/2</b>
<b>B</b>	Door Opening Usable Height (Slide Door)	<b>56-1/4</b>
<b>C</b>	Interior Height at Center of Van*	<b>61</b>
<b>D</b>	Interior Height at Driver and Passenger Position*	<b>60</b>
<b>E</b>	Ramp Length	<b>52</b>
<b>F</b>	Ramp Width (Usable Clear Opening)	<b>30</b>
<b>G</b>	Ramp Angle - Manual (Unloaded)	<b>12.5°</b>
<b>G</b>	Ramp Angle - Power (Kneeled - Unloaded)	<b>10.75°</b>
<b>H</b>	Interior Floor Length (Behind Front Seats)	<b>57</b>
<b>I</b>	Overall Interior Floor Length (Flat Area)	<b>87-1/2</b>
<b>J</b>	Interior Width at B-Pillars	<b>62</b>
<b>K</b>	Width - Ramp to Optional 2-Pass. Seat (Folded)	<b>49-3/4</b>
<b>L</b>	<sup>1</sup> Ground Clearance (Unloaded) - <sup>2</sup> Loaded @ 1200 lbs	<b><sup>1</sup> 6-1/4 <sup>2</sup> 5</b>
<b>M</b>	Overall Vehicle Height (Unloaded)	<b>74</b>

Due to manufacturing tolerances both with the OEM vehicle and the conversion components, all dimensions may vary slightly from those shown.

\* Deduct 3" off of Interior Height for Applications with Overhead DVD/Rear Heat & AC/Rail System



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[www.braunability.com/commercial](http://www.braunability.com/commercial)

# Commercial Rear-Entry

## Dodge



We get it: downtime is expensive. That's why BraunAbility specializes in designing accessible vehicles that are up to the challenge of tough, real-world use in your transit fleet. With a number of floorplan options and ambulatory seating configurations, you'll have the flexibility to meet all of your customers' needs.

BraunAbility has a proven track record of producing economical and dependable commercial vehicles designed to keep you up and running day after day, year after year. Contact your BraunAbility representative today to see how the wheelchair accessible Dodge Caravan can help you maintain ADA compliance... and your bottom line.

#### FLEXIBLE SEATING

Multiple options are available to accommodate ambulatory passengers and wheelchair users.



#### LOWERED FLOOR

Choose the configuration that best meets your needs.



# BraunAbility®

*Life is a Moving Experience™*

Commercial Vehicles



# Commercial Rear-Entry

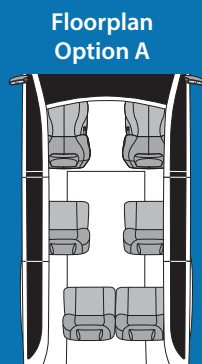
## Dodge

### Standard Features

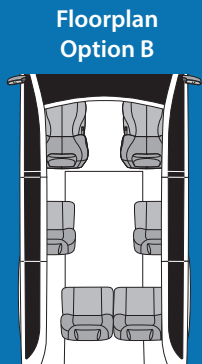
- FTA Buy America Compliant
- ADA, FMVSS and CMVSS Compliant
- Meets/exceeds Altoona test requirements
- CARB approved
- 56" door opening
- Long floor (lowered aft of 1st row seats)
- 34" wide manual ramp with 1,000 lb capacity
- Remount OEM quad seats - Flip & Fold
- ADA commercial flooring throughout
- Wheelchair securement tie-downs - Slide-n-Click QRT w/ Lap & Shoulder Restraints
- Transmission interlock
- ADA ramp lighting mounted on rear hatch
- Emergency exit release mechanism and sticker on rear hatch
- Back-up alarm

### Options

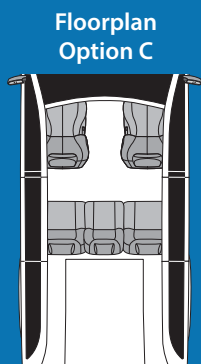
- Short floor (lowered aft of 2nd row seats)
- Aftermarket bucket seats - 2nd row
- Aftermarket 2nd row 3-passenger bench seat
- Aftermarket 3rd row 2-passenger folding bench seat
- Vinyl covers for OEM seats
- DOT kit
- Additional set of tie-down straps



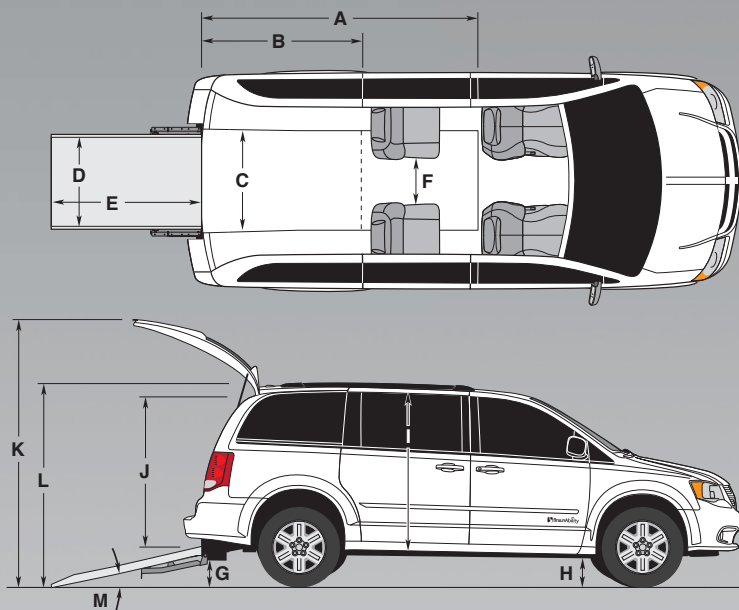
2nd Row OEM  
Flip & Fold  
Optional Folding  
2-Passenger Seat



2nd Row Aftermarket  
Bucket Seats  
Optional Folding  
2-Passenger Seat



2nd Row 3-Passenger  
Aftermarket Bench Seat  
Short Floor Option



2008+

A	Lowered floor length - Long	96-1/2
B	Lowered floor length - Short	62
C	Lowered floor width	33-1/4
D	Usable ramp width	34
E	Ramp length (manual)	58
F	Aftermarket buckets	21
F	OEM quads	12
G	Ground clearance at rear frame	8
H	Ground clearance at skid plate	6-1/2
I	Front wheelchair location interior	58
J	height (w/o overhead console)	
	Front wheelchair location interior	55
J	height (with overhead console)	
	Entrance height	56
K	Overall height (hatch open)	89
L	Overall height (hatch closed)	72
M	Ramp slope (manual)	10°

**BraunAbility**  
Life is a Moving Experience™

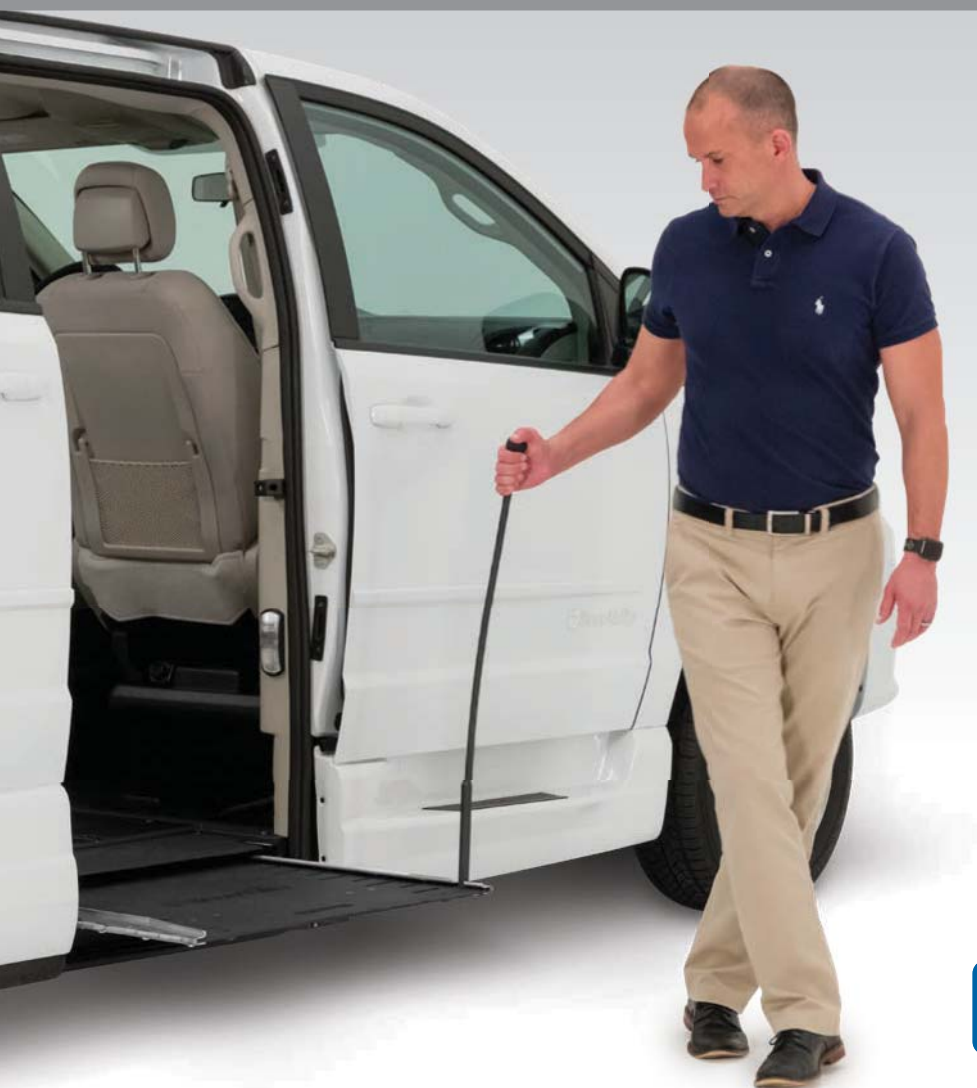
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## All-New BraunAbility® Dodge Simple Stow™ Infloor



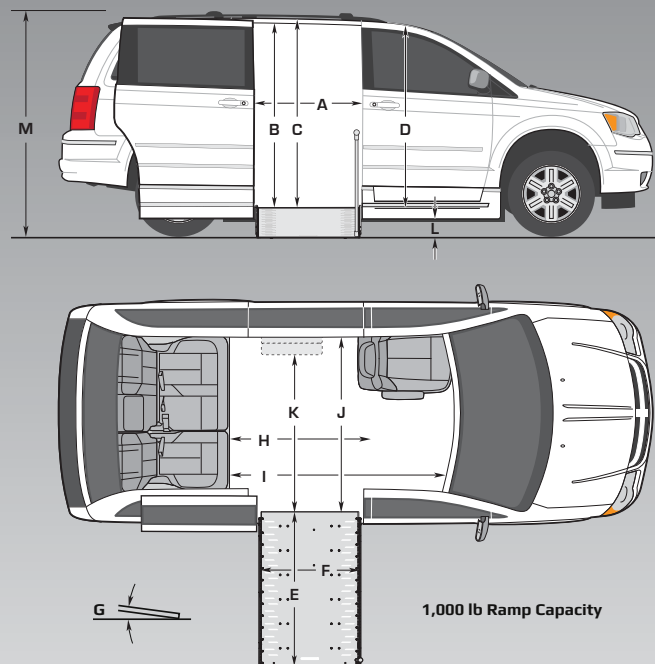
- ADA Compliant
- FMVSS Compliant
- CMVSS Compliant
- Buy America Compliant
- CARB Approved

The all-new Dodge Simple Stow™ Infloor is a cost-effective, ADA compliant conversion that allows operators to easily and safely accommodate both wheelchair and ambulatory passengers. This application features a manual infloor ramp with a stow/deploy handle for easy operation.



# Dodge Simple Stow™ Infloor

- ADA Compliant
- FMVSS Compliant
- CMVSS Compliant
- Buy America Compliant
- CARB Approved
- 56.25" door opening height
- All-new manual infloor ramp with stow/deploy aid
- 30" ramp width (31.625" wide with stow/deploy aid removed)
- 1,000 lb ramp capacity
- Automatic fold up/down sideplates
- Optional 2nd row 2-passenger foldaway seat
- 5" loaded ground clearance



<b>A</b>	Door Opening Usable Width (Slide Door)	<b>31.5"</b>
<b>B</b>	Door Opening Usable Height (Slide Door)	<b>56.25"</b>
<b>C</b>	Interior Height at Center of Van*	<b>61"</b>
<b>D</b>	Interior Height at Driver and Passenger Position*	<b>60"</b>
<b>E</b>	Ramp Length	<b>52"</b>
<b>F</b>	Ramp Width (Usable Clear Opening)	<b>30"</b>
<b>G</b>	Ramp Angle - Manual (Unloaded)	<b>12.5°</b>
<b>H</b>	Interior Floor Length (Behind Front Seats)	<b>57"</b>
<b>I</b>	Overall Interior Floor Length (Flat Area)	<b>87"</b>
<b>J</b>	Interior Width at B-Pillars	<b>62"</b>
<b>K</b>	Width - Ramp to Optional 2-Pass. Seat (Folded)	<b>49.75"</b>
<b>L</b>	<sup>1</sup> Ground Clearance (Unloaded) - <sup>2</sup> Loaded @ 1200 lbs	<sup>1</sup> <b>6.25"</b> <sup>2</sup> <b>5"</b>
<b>M</b>	Overall Vehicle Height (Unloaded)	<b>75"</b>

Due to manufacturing tolerances both with the OEM vehicle and the conversion components, all dimensions may vary slightly from those shown.

\* Deduct 3" off of Interior Height for Applications with Overhead DVD/Rear Heat & AC/Rail System



**4D ManeuverAbility**

- **FIT** - Plenty of wide-open interior space to maneuver the biggest chairs comfortably
- **WIDTH** - Widest doorway and ramp that allows you to enter and exit with confidence
- **RIGIDITY** - The strongest ramps with low flex so you can enter with ease
- **LENGTH** - A shorter ramp means greater flexibility - park your vehicle when and where you need it!



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