

The vision

behind the vehicle



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Thousands of buses are sold in the United States and Canada each year, whether to transit agencies, churches, assisted living communities or theme parks. There are many factors that are considered when deciding which type of bus will fit each specific need the best and, therefore, will best serve the needs of the customer. Often, these factors include cost, the type of service to be offered, passenger capacity and fuel source. When considering a low-floor versus a standard-floor bus with entry steps and a wheelchair lift, there are a few more contributing factors: safety, speed of operation and, most importantly, the dignity of those who will utilize the vehicle.

The original low-floor cutaway was designed with all of those things in mind, but with a special emphasis on passenger dignity. So how does that translate into the design of the vehicle? First, consider the boarding process. A standard floor bus requires the driver to exit the vehicle and walk to the lift doors, typically located at the back of the bus. Then, he or she opens the doors and lowers the lift to the ground. At this point, the passenger is positioned on the lift and the process of raising them



A ramp allows passengers with wheelchairs to board a bus without assistance.

into the vehicle commences. After reaching floor height, the driver must enter the vehicle through the entrance door in order to assist the passenger into the wheelchair placement. The tiedown process is completed and the lift doors are finally able to be closed. Altogether, up to five minutes has passed.

By utilizing a ramp, manufacturers are able to eliminate the wheelchair lift. This simplifies the boarding process for wheelchairs immensely. The ramp is deployed from the driver's seat in a mere 10 seconds and the driver simply assists the passenger into the vehicle. The ramp is stowed in another 10 seconds and the doors are closed as soon as the passenger is inside. Again, the tiedown process is completed and the driver is able to continue to their destination. Altogether, this process takes one to two minutes.

The ramp allows *everyone* to use the same entrance door, which creates a sense of equality among all passengers. Due to the front entrance door, wheelchairs are most commonly placed behind the driver and the entry door rather than being forced to the rear of the bus, which potentially results in a large space between them and other passengers or the driver. Sitting in the front, they no longer feel sequestered, but rather a part of the ambulatory passengers. It is an added luxury that they get to experience the best ride in the vehicle due to their position between the axles.

Consider passengers who use walkers or canes. As the population continues to age, there is an emphasis on providing ways for those around us to maintain their independence. Rather than having to stand on the wheelchair lift and be raised into the bus or risk taking the stairs, they are able to enter the vehicle on their own. The low-floor bus with 1:6 ramp angle enables them to use their mobility device without any assistance, which renews their sense of dignity and independence. Scheduling trips to the doctor or the store becomes much more accessible for many when low floor transportation is available. There is a greater effort put into making these trips for someone with



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device without any assistance, which renews their sense of dignity and independence. Scheduling trips to the doctor or the store becomes much more accessible for many when low floor transportation is available. There is a greater effort put into making these trips for someone with disabilities, which is often forgotten. Making accessibility as easy and safe as possible should be the main effort of all public transportation manufacturers. The Americans with Disabilities Act (ADA) has set the tone for breaking down societal barriers. The shift to make laws that benefit and protect those with disabilities started in the 1970s in an effort to bring the very best quality of life to those with disabilities or limited mobility. With every alternative today, it remains true that a low-floor bus still maintains the level of safety and integrity needed for those using public transportation. ➤



Complete with the tiedown process, loading a wheelchair-using passenger onto a low-floor bus takes approximately two minutes.

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Safety is another hot button for all bus operators, whether public or private. With a low-floor bus, many of the items that frequently cause accidents or possible injury when loading and unloading the vehicle are eliminated. The absence of stairs in the low floor removes the tripping hazard when entering or exiting the vehicle and the ramp negates the possibility of chairs rolling off the wheelchair lift. Lifts are often referred to as “scary” and are known to cause passengers to feel like they are on display when loading and unloading, particularly from the street or sidewalk in a public transit application.

Maxine, a resident of Thurston Woods Village in Sturgis, MI, appreciates the feeling of security that comes with the ramp.

“There’s no comparison [between a lift and a ramp], because the ramp is so much better,” she says. “I’m always afraid of the lift. Passengers with limited mobility are able to board the bus confidently without having to worry about stumbling.”

Passenger comfort and speed of operation both benefit when a low-floor bus is employed. When utilizing the ramp, passengers using mobility aids are able to load much more quickly (typically three times faster) than those using a wheelchair lift. Passengers can usually board

on their own, eliminating the need for the operator to go through the painstaking and time-consuming process of using the lift. Studies have shown that three passengers can be loaded into a low-floor bus in three minutes, while it takes approximately nine minutes to load the same three people into a standard-floor bus. Because of the time savings and the single entrance door for all passengers, the temperature of the low-floor bus cabin is maintained, while the standard floor bus temperature fluctuates considerably. This is an especially important factor in extremely hot or cold temperatures and contributes to the comfort and, therefore, overall satisfaction of the passengers on board. With both the lift and entrance doors open for an extended period of time, the extremely hot or cold air, snow, or rain enters the vehicle and creates an unpleasant experience for everyone. Fleet operators will also appreciate the time savings from a cost standpoint. Time equals money in many cases and the low floor offers transit agencies the ability to service more customers in a shorter amount of time with higher productivity due to the speed of loading and unloading their passengers. In a fixed-route situation, the need to budget as much time for potential ADA pickups is lessened. In some situations, fewer vehicles for route service are required because of the time savings. Less idle time for the vehicle also means a decrease in fuel costs, one of the biggest expenditures that fleets incur on a daily basis.

Whether transporting a mother with a stroller, a young child in a power chair who is accompanied by a service dog, or a group of teenagers with their surfboards headed to the beach, a low-floor bus provides not only convenience and safety, but especially the dignity and sense of normalcy that everyone desires. It’s not just another bus or simply a means of transportation – *there’s a vision behind the vehicle.* 