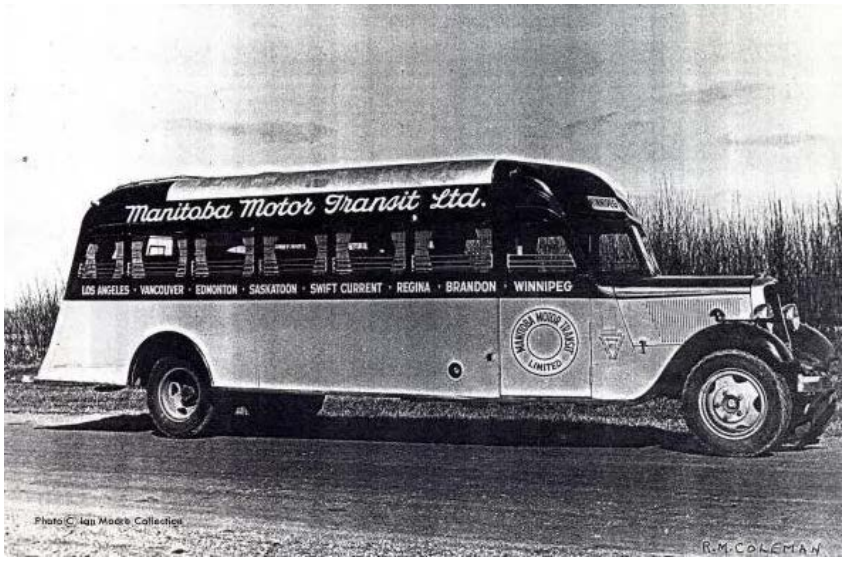
A New Day for Accessible Commuting

Launch of the MCI D45 CRT LE

MCI Reliability DRIVEN™

A History of Firsts

- 1932 Harry Zoltok founded Fort Garry Motor Body and Paint Works, Ltd.
- In 1933 he turned his Winnipeg repair shop into the laboratory for the future of coach travel, sketching his first vehicle design, an 11-passenger body on a Packard chassis, on the factory floor.
- At the cusp of a new mass transit industry, in 1941 Fort Garry Motor Body and Paint Works changed its name to Motor Coach Industries Limited (MCI)



Public Transit Takes Shape

- Opening a plant in Pembina, N.D, In 1962 allowed MCI to build coaches to “Buy America” requirements.
- In 1964, as the number of publicly operated transit systems grew, Congress created the Urban Mass Transportation Administration (UMTA), to provide federal assistance for the purchase of public transit equipment
- Late 1970s and early ’80s New York City MTA and New Jersey Transit began to acquire the company’s MC-9 model to serve a growing ridership base coming from suburbia to Manhattan.

ADA is Founded in 1990

- Fueled by passionate crusaders fighting for their civil rights
- The Bill finally enters Congress in ‘88
- Signed into law on July 26, 1990

ADAPT members block a bus with their wheelchairs to demonstrate RTD's inaccessible buses on February 15, 1985.

ADAPT Bumper sticker supporting the Disability Rights movement.

Meanwhile…. 6 years earlier

- In 1984, 6 years ahead of ADA, MCI is the first coach manufacturer to offer wheelchair lifts on its vehicles.
- MCI also produced a totally new coach, the “A” model, which at 102” wide was coach 102A3 3 axle. These were produced with the inboard based elevator lift, followed by the Stewart & Stevenson Swing lift as options.

And more Advances

- In 1990 MCI built its first 45-foot prototype, the 102DL3 (102/DL3), driven by the need and design of an accessible coach.
- **1992,** Production of the DL3 began. Lift equipped included
- **Early 2000's**
  - Incorporates the underfloor cassette lift, and the sliding door for NYCTA.
  - This allowed for improved passenger comfort by having the sliding door remain closed while boarding of closing while de-boarding.

- **<u>MCI is/was active participant in the various regulatory</u>**
  - 49 CFR Part 38, Subpart G - Over-the-Road Buses and Systems
  - The CSA D series accessibility standards, and key in the D436 Accessible over-the-road buses
  - NHTSA 403 and 404 Wheelchair lift standards
  - Held a chair position in the development of emergency egress instruction for OTRB's which included instruction for accessible coaches and persons with disabilities.

Evolution to Our Current MCI D4500 Commuter Coach

- #1 Coach on the market with over 12,000 built
- D –Series origins since 1992 and even before.

Customer Needs – MCI Commuter Coach Positives

1. High capacity, forward facing seats

2. Passenger comfort: Seats, ride quality, amenities

3. High passenger and driver floors

4. High MDBF/reliability

MCI Reliability DRIVEN™

Customer Needs – Desired Enhancements

1. Significantly reduce loading and unloading times for passengers using mobility devices

2. Significantly reduce loading and unloading times for all other passengers

Lift takes too long!

3. Create a more modern appearance

MCI
Improved Accessibility Project

Designworks
A BMW Group Company

PASSENGER JOURNEY FOCUS

Mapping the journey to identify priorities and problem areas with a **focus on rapid entry/exit**.

RESEARCH METHODOLOGY

COACH INTERVIEWS

Coach with lift **average:**
6mins +
(with perfect conditions)

LOW FLOOR INTERVIEWS

Low floor bus with ramp average:
2mins

DESIGNER IMMERSION

We Focused on the "Journey" of the Passenger – Start to Finish

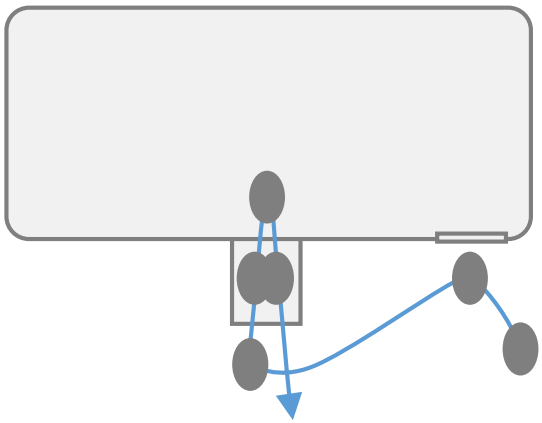
MCI RAPID ENTRY/EXIT

FLOW MAPPING

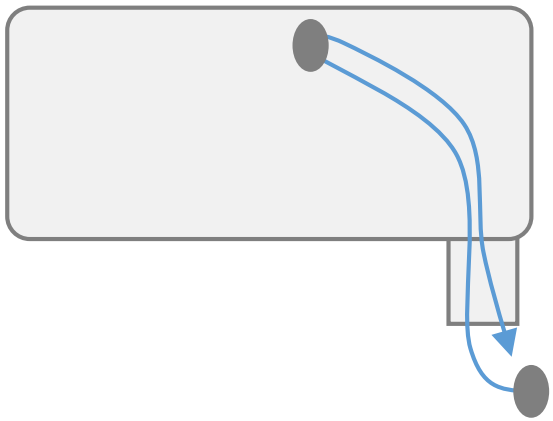
KEY TAKEAWAYS:

- **Riding and maneuvering** on-bus were the **most difficult** moments.
- **Securement** seemed tedious for the driver, but **relatively smooth for passenger.**
- **Exiting with the coach lift** was approximately **2 minutes longer than low-floor bus**
- **Even beyond speed, the journey with the High-Floor bus adds multiple points of complication and room for potential anxiety**

High-Floor



Low-Floor



Multiple Points Coach Complexity Add to Time and Anxiety to the User Experience

PASSENGERS WITH MOBILITY DEVICES PRIORITIES

COACH PASSENGER 1	COACH PASSENGER 2
1 Loading Experience	1 Securement Experience
2 Securement Experience	2 Privacy/Crowding
3 Privacy/Crowding	3 Loading Experience

COMMON TOP PRIORITIES for PASSENGER WITH MOBILITY AIDS

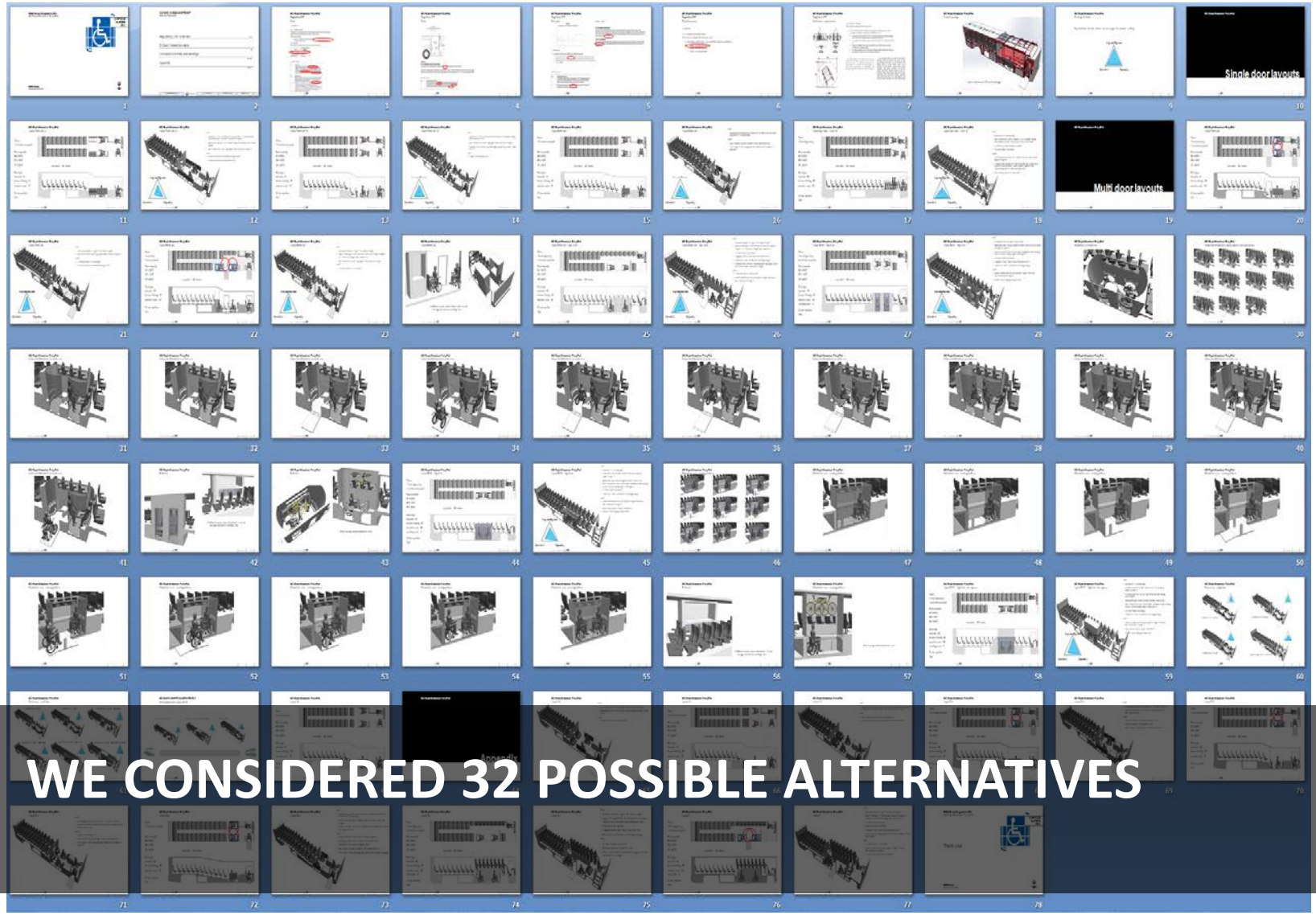
4 Ride Comfort	4 Ride Comfort
5 View	5 View

CRITICAL FINDINGS

Passengers with mobility devices

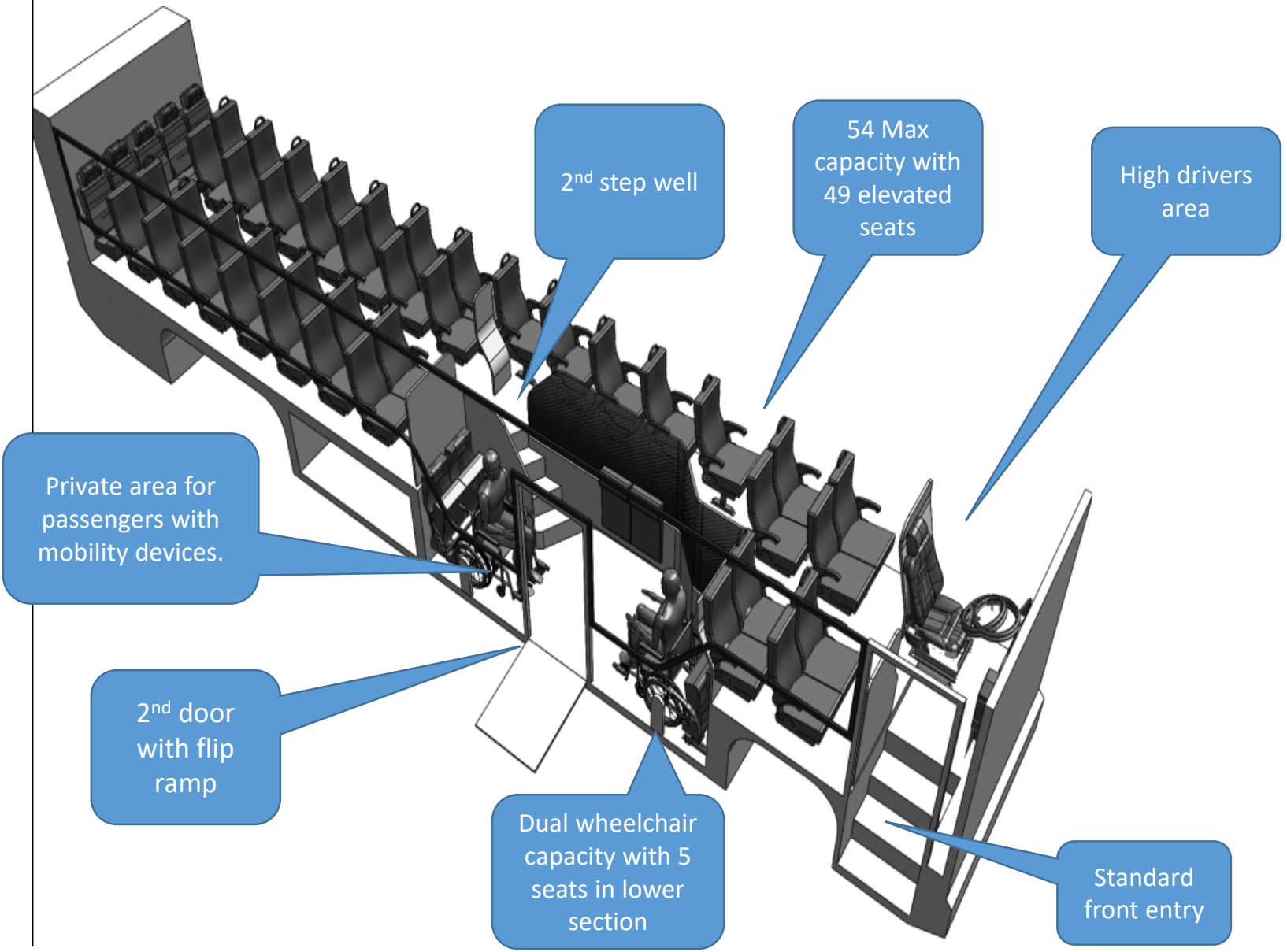
- Do not want to be the center of attention – blocking corridors, having blaring lights and buzzers or the cause of time delays.
- Maneuvering on/off the vehicle was a large contributor to overall stress.
- Other passengers are sometimes unwilling to give up their seats, causing stress and delay.
- Securement can be cumbersome, requiring significant driver interaction, and is often avoided.
- Passengers find themselves cramped in main traffic area with standees. They are often hit by bags, and in general , feel it is intrusive to their personal space.
- Their equipment (chair or scooter) is personal to them. They are sensitive to it being damaged during the securement process, less handling is preferred.

Dedicated space for passengers with mobility devices and automated securement would be ideal



WE CONSIDERED 32 POSSIBLE ALTERNATIVES

Selected the leading design for development



Worked on Detail Design of the Low-Entry Vestibule

MCI
VESTIBULE USER VALIDATION STUDY

Designworks
A BMW Group Company

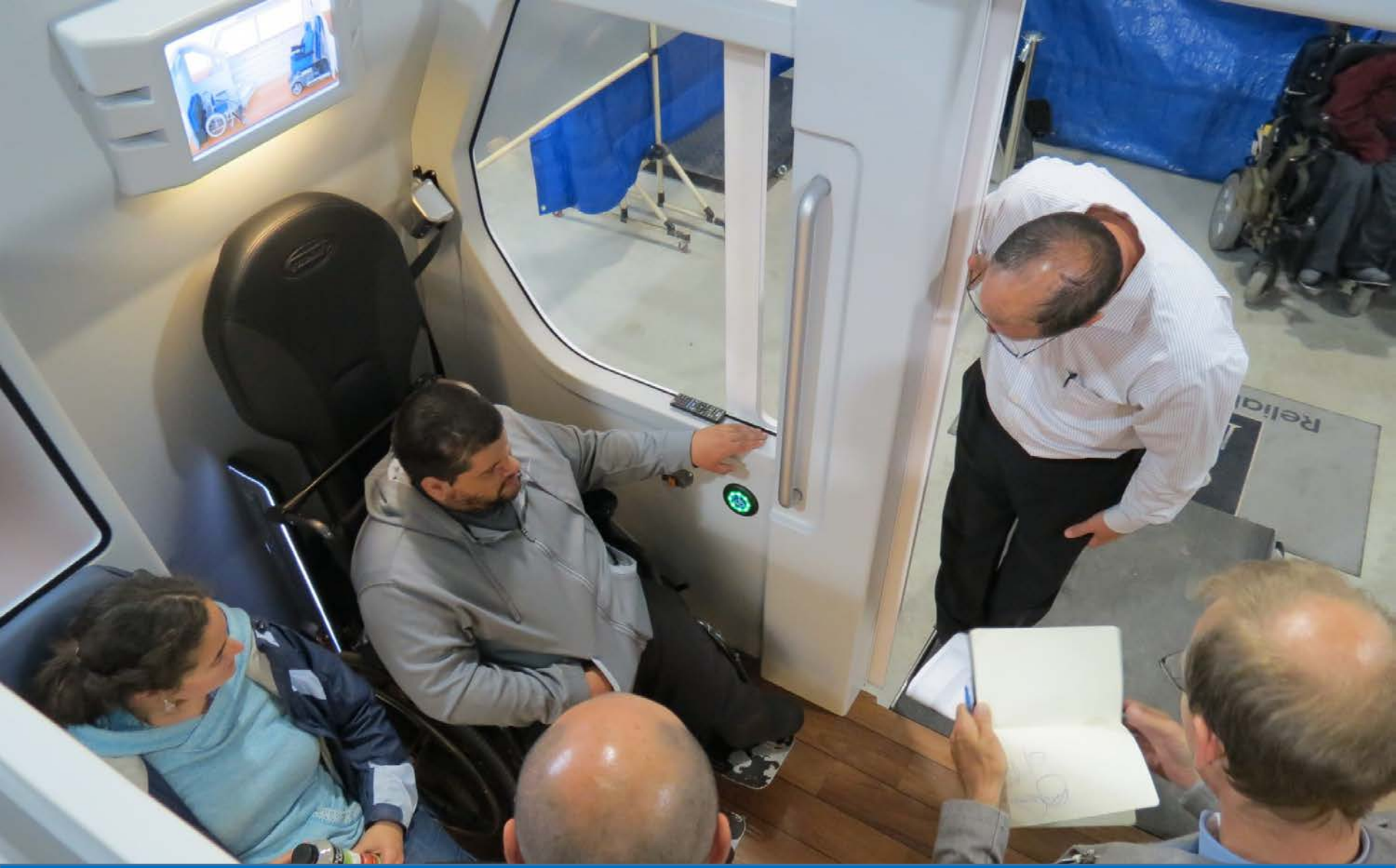
A Functional Model Was Created

User Groups Were Engaged to Validate the “Vestibule” Design

Our Current D Coach is Visible in the Background for Comparison

Users Engage with our Full Scale Model

Optimal Floor Layouts were Reviewed



Locations for Switches, Buttons are Key to Ease of Use

Features and Functionality Were Rated

Results… Prefer the New Design over Current D

Ranking Results: D Coach vs Vestibule Concept

	No Preference	Prefer Current D	Prefer New Design
Discretion/Privacy	0	0	10
Comfort	1	0	9
Ease (speed, efficiency)	0	1	9
Safety (ingress / egress)	1	1	8
Safety (securement)	3	1	6
Total:	5	3	42

10 out of 10 Preferred the New Design for Discretion/Privacy, Overwhelmingly Favored the Vestibule

Results… Prefer the New Design over Low Floor Transit Bus

Ranking Results: Low Floor Transit Bus vs Vestibule Concept

	No Preference	Prefer Low Floor	Prefer New Design
Discretion/Privacy	1	1	8
Comfort	0	1	9
Ease (speed, efficiency)	0	2	8
Safety (ingress / egress)	0	1	9
Safety (securement)	1	1	8
Total:	2	6	42

And Over Low Floor Transit Bus.

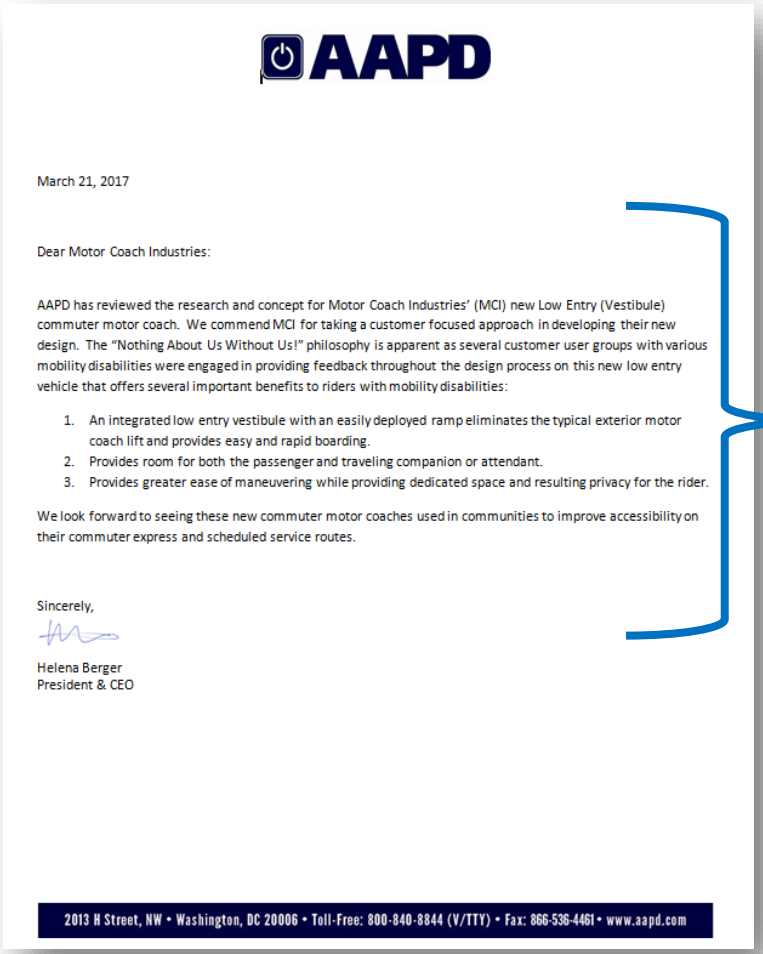
Concept Validated by Independent Sources

NCIL
National Council on Independent Living

AAPD

Groups Engaged in Design Process

Support Letter
American Association of People with Disabilities



AAPD

March 21, 2017

Dear Motor Coach Industries:

AAPD has reviewed the research and concept for Motor Coach Industries' (MCI) new Low Entry (Vestibule) commuter motor coach. We commend MCI for taking a customer focused approach in developing their new design. The "Nothing About Us Without Us!" philosophy is apparent as several customer user groups with various mobility disabilities were engaged in providing feedback throughout the design process on this new low entry vehicle that offers several important benefits to riders with mobility disabilities:

1. An integrated low entry vestibule with an easily deployed ramp eliminates the typical exterior motor coach lift and provides easy and rapid boarding.
2. Provides room for both the passenger and traveling companion or attendant.
3. Provides greater ease of maneuvering while providing dedicated space and resulting privacy for the rider.

We look forward to seeing these new commuter motor coaches used in communities to improve accessibility on their commuter express and scheduled service routes.

Sincerely,

Helena Berger
President & CEO

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Support Letter
National Council on Independent Living

NCIL
National Council on Independent Living

www.ncil.org

Kelly Buckland
Executive Director

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Region X
Doug Toelle
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Dear Motor Coach Industries,

We at NCIL have reviewed both the research conducted by MCI (Motor Coach Industries) with various user groups and have personally viewed and tested the Low Entry "Vestibule" commuter motor coach concept that MCI is in the process of conducting final vehicle testing. This new motorcoach will provide a new design which includes a lowered "Vestibule" area that is easily accessed by a low entry flip ramp that is well integrated into the overall vehicle design and can accommodate up to 2 mobility devices plus traveling companions. We believe that this product offers many advantages over standard high-floor motor coaches, primarily used in Commuter Express and scheduled route service.

These benefits include the more rapid and less intrusive low floor ramp entry that avoids the user being be raised on the vehicle exterior, as well as the integrated vestibule area that provides greater mobility, dedicated space and resulting privacy for the rider. We are grateful that an equipment manufacturer sought user input in advance of and during the development.

Sincerely,

Kelly Buckland
Executive Director

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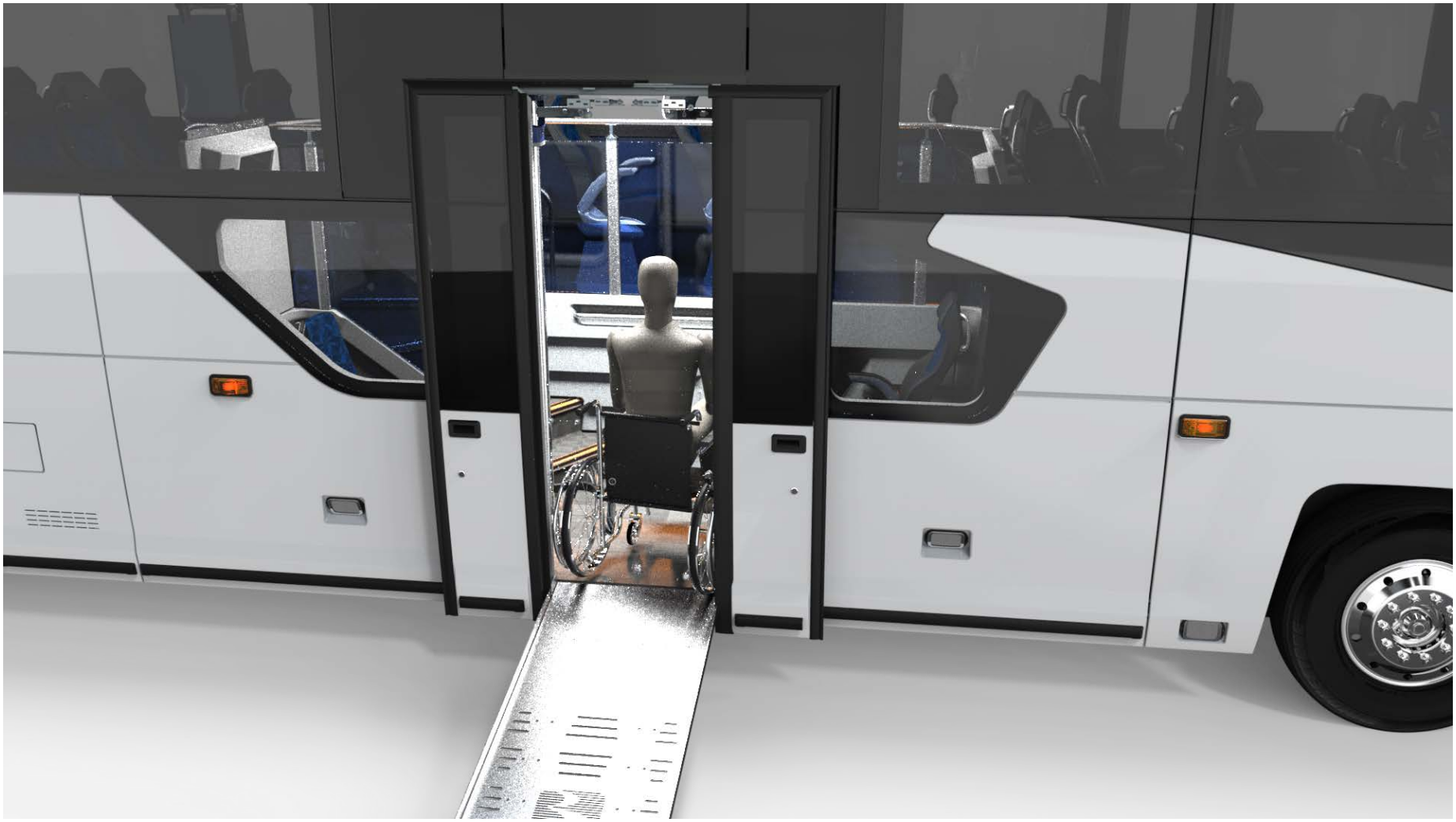
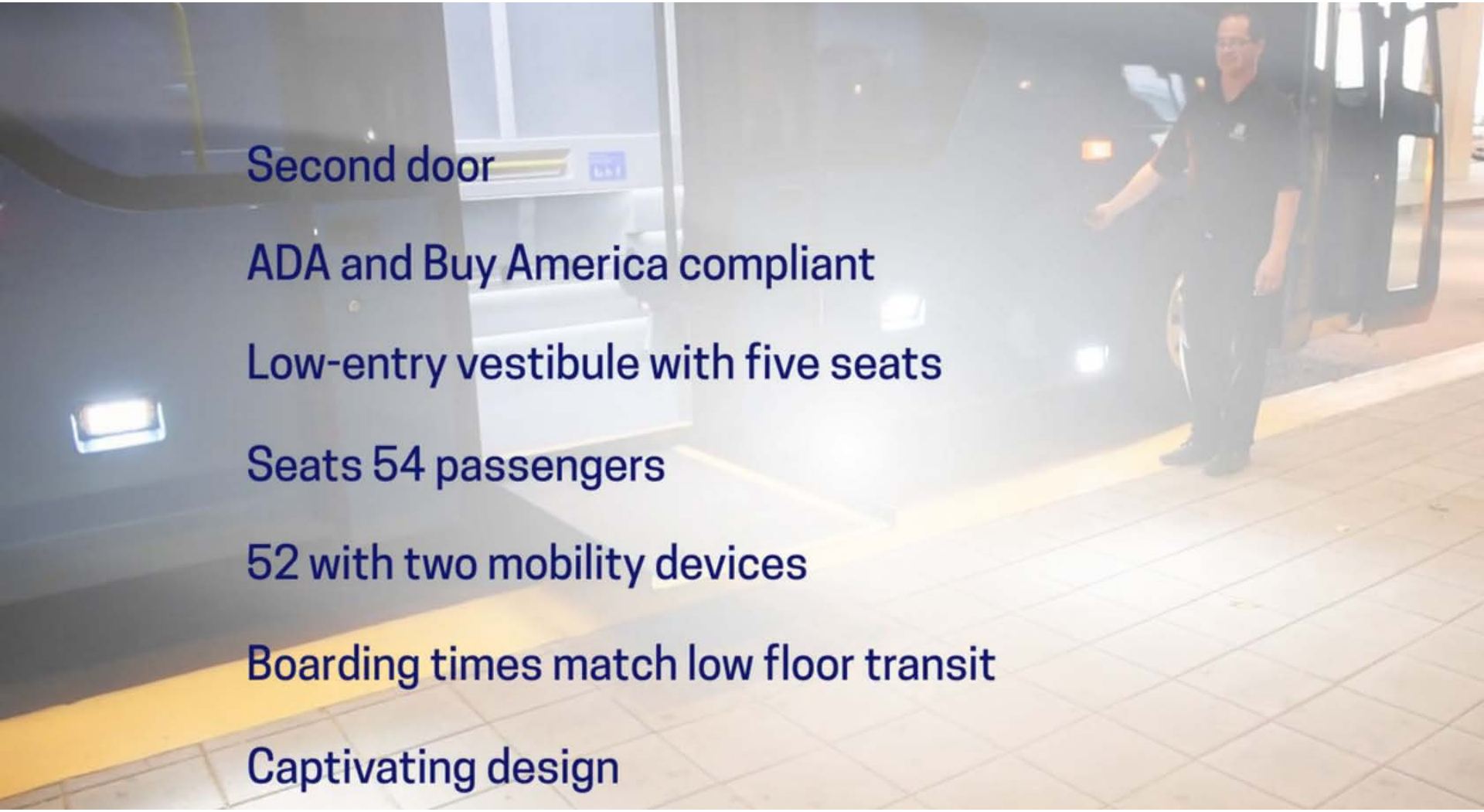
Video



Key Advantages



Thank You

MCI Reliability DRIVEN™