

Background:

This year's Safe Streets Smart Trips video contest theme is ***Empathy at the Intersection***. This theme was first used at the 2024 MassDOT's Innovation Conference, in which participants were invited to experience a mock intersection "in someone else's shoes." People could engage with large trucks to understand the visibility truck drivers have in these vehicles; put on the Age Gain Now Empathy System (AGNES) suit to simulate the physical challenges associated with aging; or participate in an urban driving virtual reality simulation.

The roads are part of our daily routines. But as individuals, we are used to the particular ways we interact with transportation infrastructure. The goal of the Innovation Conference exhibit, and this video contest, is to encourage people to explore what transportation may look and feel like for others and to empathize with those in our communities who are at greater risk on our roads. Below, we provide some examples of and resources for specific topics, but they are by no means the only relevant topics.

Direct Vision

Direct vision refers to what a driver can see with their own eyes while operating a vehicle. Everything they see through mirrors and/or cameras instead is called indirect vision, while the areas they can't see at all are called blind zones. When driving, you might be used to thinking of the blind spot behind you that your side mirrors don't quite cover. But there's areas in front of the car, behind the A-pillars (the front roof supports), and beyond the passenger side door, too. In total, these create areas where people, especially young children, people in wheelchairs, and other vulnerable road users can't be seen at all, putting them at greater risk. In large trucks, such as trash trucks and semi-trucks, these blind zones can be even worse. Adaptations such as side guards, cross over mirrors, convex mirrors, cameras, and more can help. But a combination of better vehicle design, more technology countermeasures, and awareness is critical to protect vulnerable road users.

Mobility Impairment

Mobility impairment is a broad category, referring to any disability that makes movement different or more difficult. It's difficult to simulate disabilities themselves. After all, each individual's experience is unique and highly contextual to the community they live in and the resources available to them. At the Innovation

Conference, we focused on how some types of mobility impairments may change the way individuals interact with transportation infrastructure. For example, tactile surfaces help those with low vision detect intersections, but they may make it harder for people using wheelchairs to navigate ramps on and off the street. There are so many design options within ADA to accommodate the wide variety of mobility impairments. What is helpful? What could be better? Do you have personal experience with this? Or could you reach out to those in your community or online who might be able to offer their personal perspective?

Bicycling & Transit Riding

To address climate issues in Massachusetts we continue to try to grow the number of people that use active transportation and public transit as their travel mode of choice. Among those are two we want to highlight here to build empathy for riders. Biking is becoming an increasingly common form of transportation and recreation, as bike lane networks and shared use trails grow, and people prioritize cheaper, greener, and more active transportation options. However, more people biking can also mean more potential for conflicts between people on bikes, car drivers, and others. There's a lot of uncertainty on both sides regarding right of way, following distance, acceptable behaviors, and visibility. And if a crash between a driver and a person on a bike occurs, the person on the bike is at far greater risk of injury, given the laws of physics. Creating awareness of new (like the four-foot passing rule) or forgotten rules is important to keep everyone safe. At the Innovation Conference we showcased how quickly the environment around you changes when you glance down at your phone while driving, even at a red light.

The state, transit agencies, and cities are also increasing the number of exclusive bus-only lanes in the Commonwealth. Bus lanes speed up trip times and increase the reliability of the system, a key element to rider satisfaction. In recent months, MBTA busses carried over 300,000 people, close to the number of people using all the subway lines combined. Bus riders in recent years are experiencing delays, crowding, and a range of changes to service connected to the lingering impacts of the pandemic. Riding the bus supports climate goals by reducing emissions and the number of vehicles on roadways. However, it is a collective action that can be interrupted by a single person. One vehicle parked in a bus lane slows down the trip for dozens of people on the bus and adds to the stress of the bus operator moving in and out of lanes to swerve around a parked car. Blocking a bus stop can force a rider using a wheelchair to board the bus from the street or a person with a vision

impairment to struggle to navigate to the curb. It's also important to remember that we ultimately share the road and that your individual choices and behaviors can impact others.

Additional Resources:

General

- <https://www.mass.gov/doc/massachusetts-shsp-2023/download>

Direct Vision

- <https://www.iihs.org/news/detail/suvs-other-large-vehicles-often-hit-pedestrians-while-turning>
- <https://view2.blindzonesafety.org/>
- <https://tfl.gov.uk/info-for/deliveries-in-london/delivering-safely/direct-vision-in-heavy-goods-vehicles>
- <https://content.tfl.gov.uk/road-safety-benefits-of-direct-vs-indirect-vision-in-hgv-cabs-summary.pdf>
- <https://nacto.org/2023/08/02/stop-giving-5-star-safety-ratings-to-dangerous-vehicles/>

Mobility Impairments

- <https://agelab.mit.edu/transportation-and-livable-communities/overview/>
- <https://www.transit.dot.gov/regulations-and-guidance/civil-rights-ada/ada-guidance>
- <https://www.nadtc.org/access-matters-video-series/>
- <https://www.easterseals.com/programs-and-services/transportation.html>

Bicycling + Active Transportation

- <https://www.mass.gov/info-details/active-transportation-for-older-adults-and-people-with-disabilities>
- https://www.mass.gov/files/documents/2019/06/13/2019_Municipal_Resource_Guide_for_Bikeability.pdf
- <https://www.mass.gov/bicycle-and-pedestrian-transportation>
- <https://www.boston.gov/departments/boston-bikes>
- <https://www.nhtsa.gov/book/countermeasures-that-work/bicycle-safety>

Bus Riding

- <https://nacto.org/publication/transit-street-design-guide/>

- <https://www.mbta.com/performance-metrics/ridership-the-t>

- <https://www.mbta.com/projects/bus-transit-priority>

<https://www.mass.gov/info-details/public-transportation-in-massachusetts>