



PEDESTRIAN & BICYCLIST
FOCUSED APPROACH TO SAFETY

You can do it, too! Breaking down institutional barriers to improve safety for all road users

Monday, December 18, 2023



U.S. Department of Transportation
Federal Highway Administration

ZERO IS OUR GOAL
A SAFE SYSTEM IS HOW WE GET THERE



Disclaimer

This presentation was created and is being presented by contractors. The views and opinions expressed in this presentation are the presenters' and do not necessarily reflect those of the Federal Highway Administration (FHWA) or the U.S. Department of Transportation (USDOT). The contents do not necessarily reflect the official policy of the USDOT.

The U.S. Government does not endorse products or manufacturers. Trademarks or manufacturers' names appear in this presentation only because they are considered essential to the objective of the presentation. They are included for informational purposes only and are not intended to reflect a preference, approval, or endorsement of any one product or entity.

Webinar Logistics

- Please post questions at any time
- We will be saving time at the end of the session for questions and discussion
- Webinar slides and recording will be posted at

https://www.pedbikeinfo.org/webinars/webinar_details.cfm?id=129

Continuing Education Credits

- Webinar approved for 1.5 CM credits through AICP
- Brief questionnaire following webinar for sharing feedback.
- Information about webinar archive materials, recording and certificates of attendance will be sent in a follow-up email this afternoon.

Webinar Objectives

- Identify potential internal obstacles, barriers and challenges for improving nonmotorized road user safety.
- Learn from agencies that have undertaken efforts to revise internal policies and address these barriers.
- Understand the steps involved in conducting this work to identify and overcome your own institutional barriers.

Panelist Introductions

- Rebecca Crowe, FHWA
- Jacqueline DeWolfe, Massachusetts DOT
- Carrie Lavalley, Massachusetts DOT
- Commissioner Garrett T. Eucalitto, Connecticut DOT
- Natasha Fatu, Connecticut DOT



Institutionalizing Safety

Carrie Lavallee

Deputy Administrator/Chief Engineer

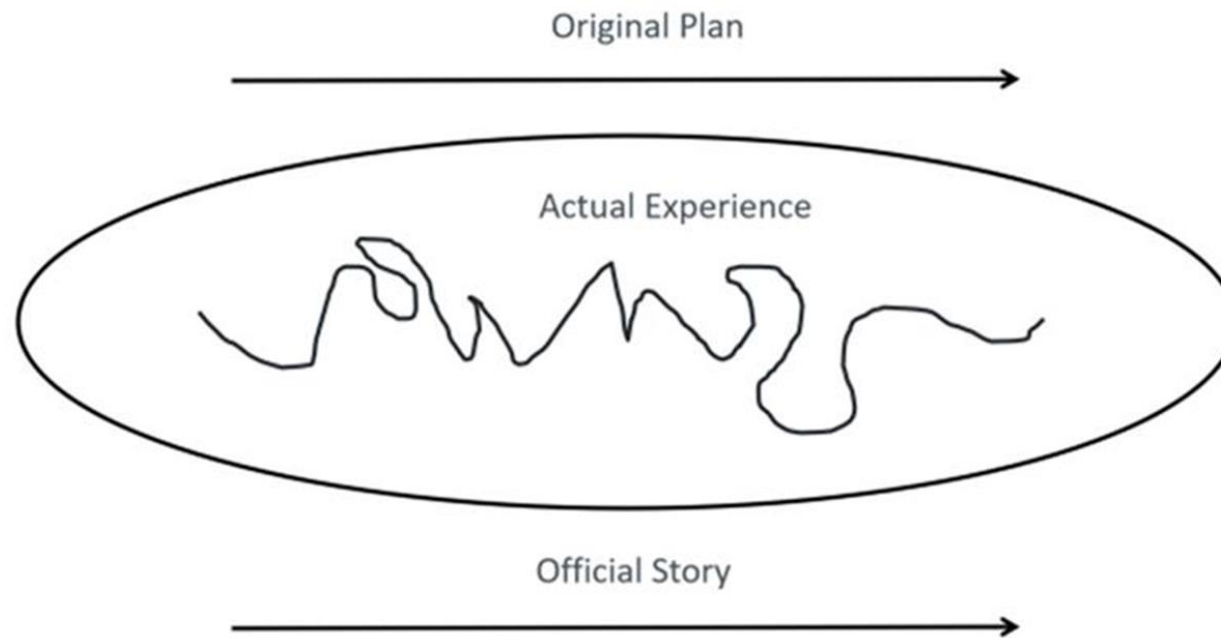
Jackie DeWolfe

Director of Mobility Policy and Program Management



FHWA Webinar / December 18, 2023

You can do it too!



Multipronged approach to institutionalizing safety in projects



Integrate



Initiate



Provide

1. Integrate safety for all into project development process
2. Initiate stand-alone complete streets / safety projects
3. Provide funding to municipalities to advance complete streets / safety locally

Long-term aim / outcomes / “north star”

Safety

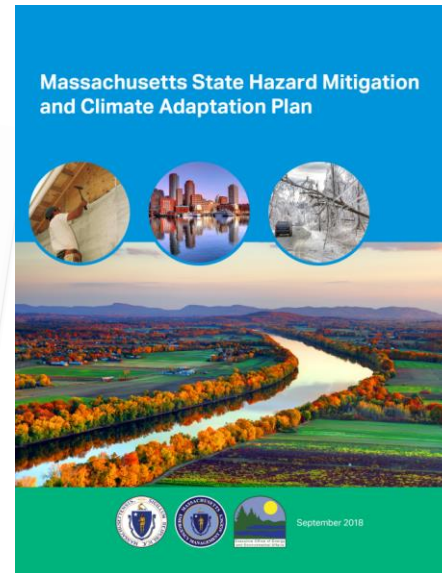
- Zero roadway deaths and serious injuries

Resiliency

- Improve the resiliency of our transportation network to better withstand natural hazards (i.e., sea level rise, flooding, heat)

Mobility

- Provide all people safe, comfortable, and convenient mobility options (walk, bike, transit, drive, etc.).

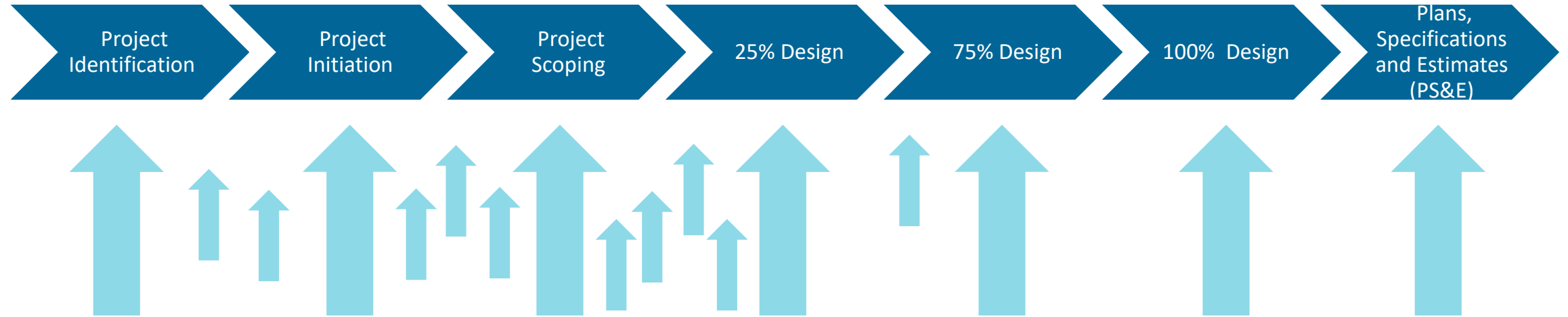




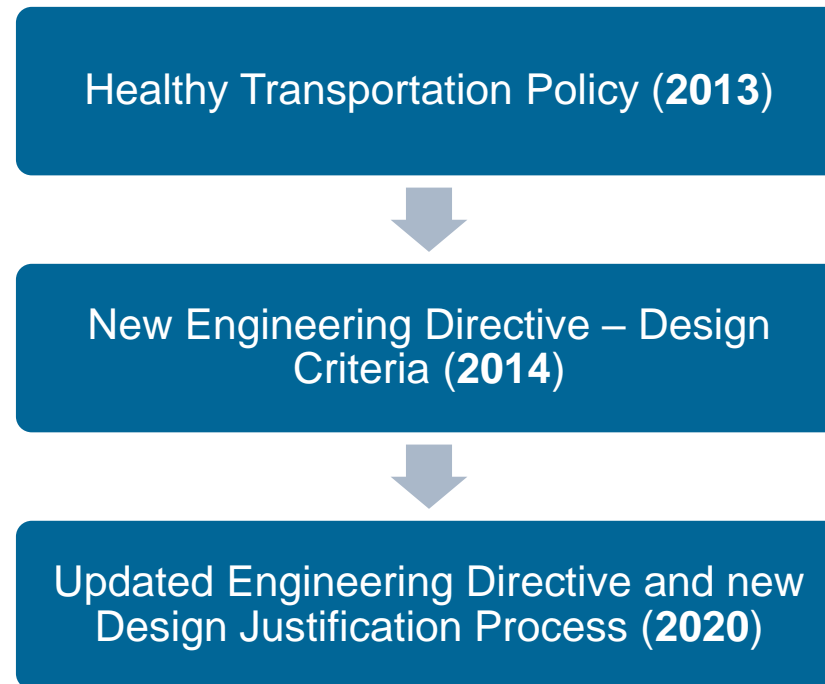
Safety for all in project development

Integrate

Changes at every step of the process = key



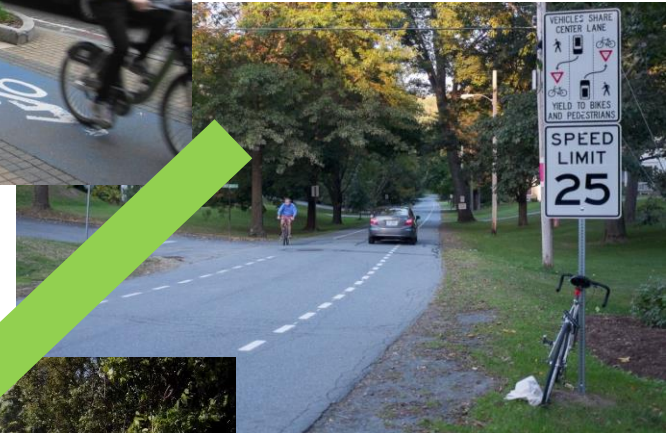
Controlling Criteria – a super short history



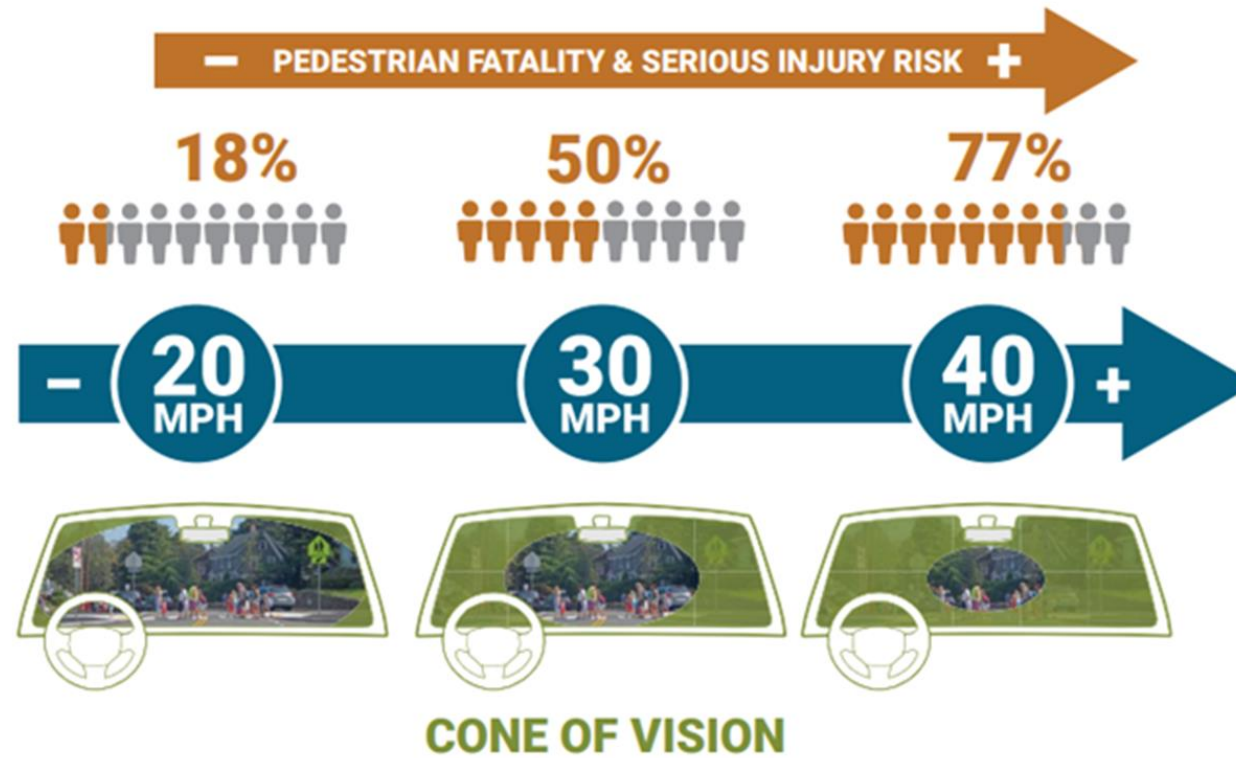
Update in progress (2024)



2014 >>> 2020



Target Speed





Pedestrian Facilities Criteria

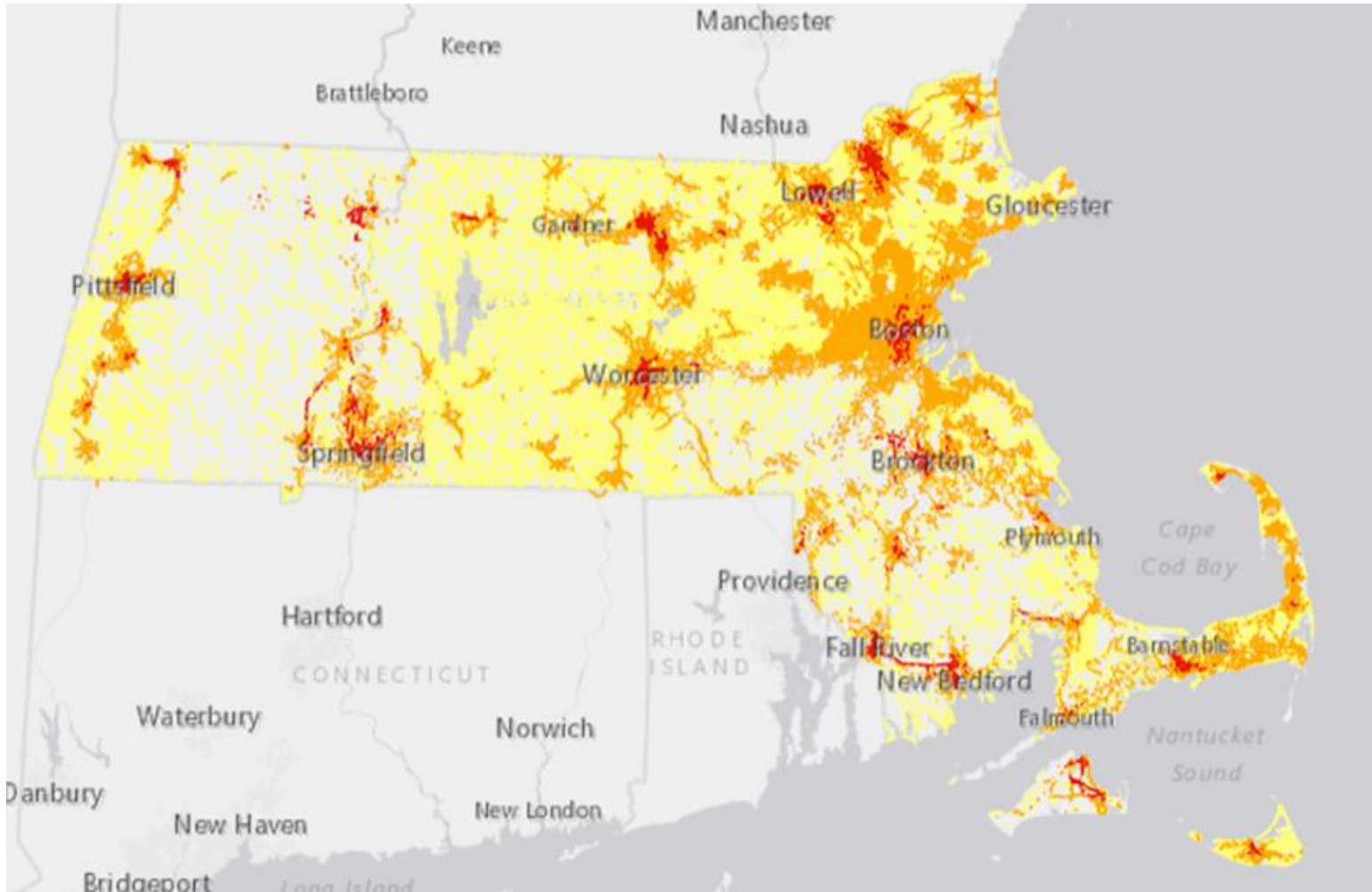
- **Sidewalks** on both sides required if...
 - Roadway in an urbanized area, urban cluster, or rural village (where pedestrians are legally allowed)
 - Roadway on or under a bridge where legally allowed
 - Roadways with a High Potential for Everyday Walking
- Minimum **width 5'-0"**
- Marked **crosswalks** across all legs of signalized intersections where sidewalks are present or proposed
- **Marked** crosswalks shall be provided at existing crosswalks

Bicycle Facilities Criteria

- Bicycle facilities **required** (where bicycles are legally allowed)
- Bicycle facilities shall **have separation** (shared use path, side path, separated bike lane, buffered bike lane) if...
 - Posted speed limit ≥ 40 MPH
 - Vehicular volumes $\geq 10,000$ vehicles per day
 - Roadway has more than one travel lane in a single direction
 - Intersection more than one travel lane in a single direction
 - Roadway classified as corridor with a High Potential for Everyday Biking
- Minimum **width** 5'-0" (single direction), 10'-0" (bi-directional)
 - Does not include curbs, buffers



Potential for Everyday Biking



Legend

Biking_Potential_Layer

Potential

- High
- Medium
- Low

Transit Provisions Criteria

- If roadway is within a service area of a Regional Transit Authority or MBTA has an existing or proposed transit route (rail or bus)
 - Consultants required to **submit** 25 Percent Design construction plans to RTA for review
 - **Invite** RTA/MBTA to planning or scoping meetings
- **Crosswalks** required within 250 feet of a transit stop
- A **shelter** or brequired at transit stop with 100 or more boardings a day
- Transit **priority treatment** required along transit routes with headways of 15 minutes or less



Design Justification Workbook

MassDOT Design Justification Workbook

Project: 60XXXX Description: MUNICIPALITY- PROJECT DESCRIPTION

PEDESTRIAN FACILITIES

Facility:

If pedestrians are not legally allowed on the facility, check this box and do not fill out this sheet.

*(Fill in information about the proposed Pedestrian Accommodations on this facility.)
(For the purposes of this Workbook, the entries for this criterion have been split into several "subcriteria".)*

Type of Pedestrian Accommodation:

Subcriterion: Width

Minimum: Existing: FT Proposed:

(If the width varies, provide a minimum.)

Source used for minimum:

Justify the proposed width.

(Attach additional sheets as necessary.)

Subcriterion: Presence

Pedestrian facilities exist on of the facility.
Pedestrian facilities are proposed on of the facility.

(Check the boxes if any of the following apply:)

- The roadway is in an urbanized area, an urban cluster, or a rural village.
- The project involves work on or underneath a bridge.
- The roadway is identified as having a High Potential of Walkable Trips in the Pedestrian P

Justify the proposed number of sidewalks.

(Attach additional sheets as necessary.)

Subcriterion: Width

Standard not met.

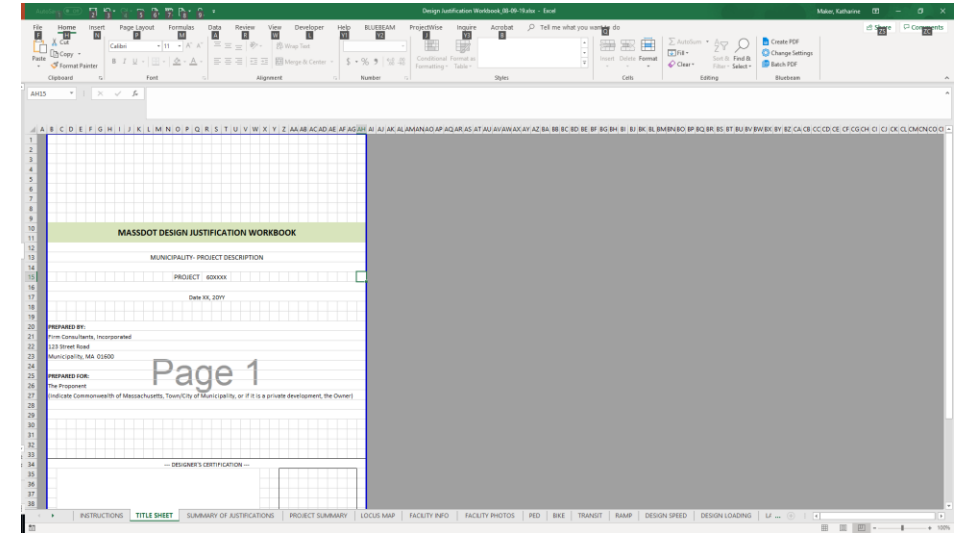
Minimum: Existing: FT Proposed:

(If the width varies, provide a minimum.)

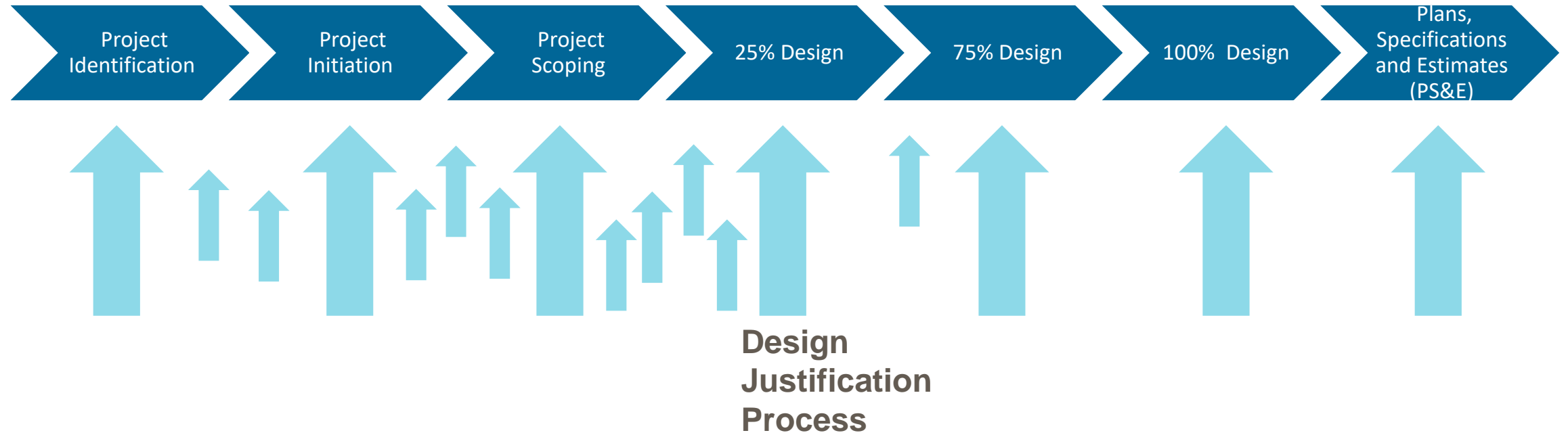
Source used for minimum:

Justify the proposed width.

(Attach additional sheets as necessary.)



Changes at every step of the process = key



Does not compute

- On time
- On budget
- Within scope
- Consultant scope of services
- Setting public and municipal expectations



- Add requirements
- Add process
- Add scope
- Add sign-offs/approvals
- Add committee meetings

Lessons

1. **Integrating** complete streets and safety early and often!
2. **Defining** what constitutes a pedestrian, bicycle, and transit accommodation
3. **Simplifying process:** Design Justification Workbook to document decision and design
4. **Approval** by Chief Engineer / Administrator / Secretary
5. **Exception process** for when accommodations cannot be made or stray from definition (= creativity!)

"design exceptions create exceptional designs"

- Assistant Chief Engineer



Initiate

Advance stand-alone projects too

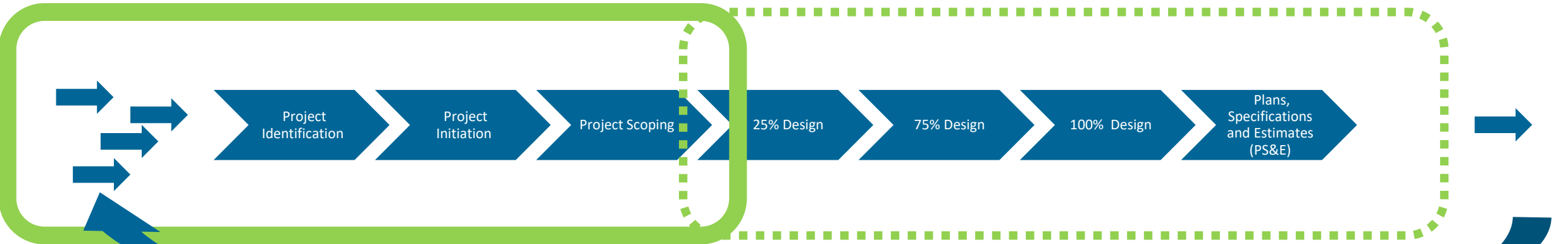
Created new function – Program Management

Where do projects come from in the first place?

- A program is a set of related measures or activities with a particular long-term aim
- The MassDOT capital plan is organized by over a dozen programs – every project fits with a program
 - Programs include Bicycle & Pedestrian, Bridge, Safety, Intelligent Transportation Systems, Interstate Pavement, etc.
- Program managers look to maximize the outcome within their respect areas
- Identify and prioritize projects, facilitates project scoping, plans program financing



Program Management role in Project Development Process

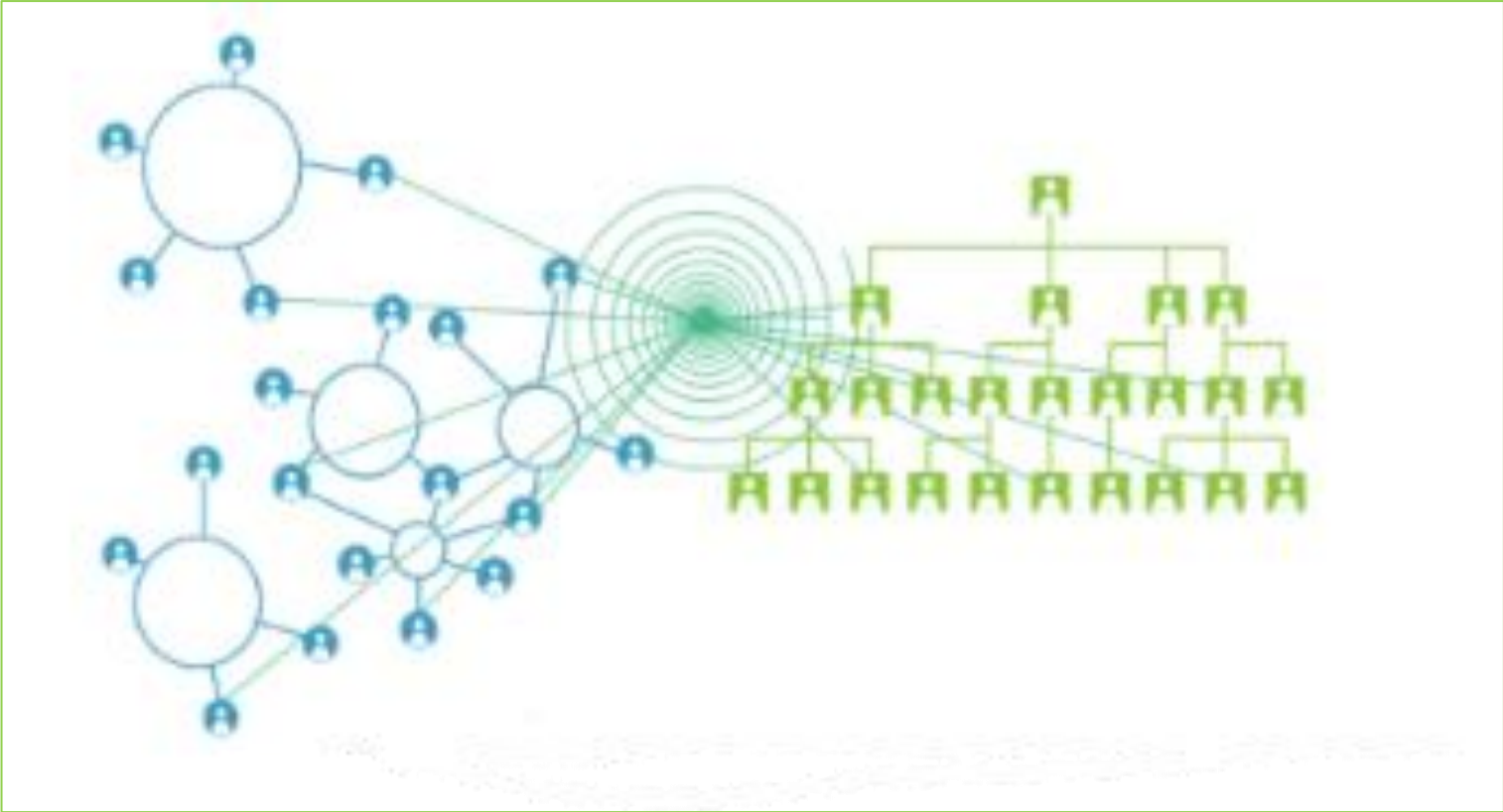


= Lead

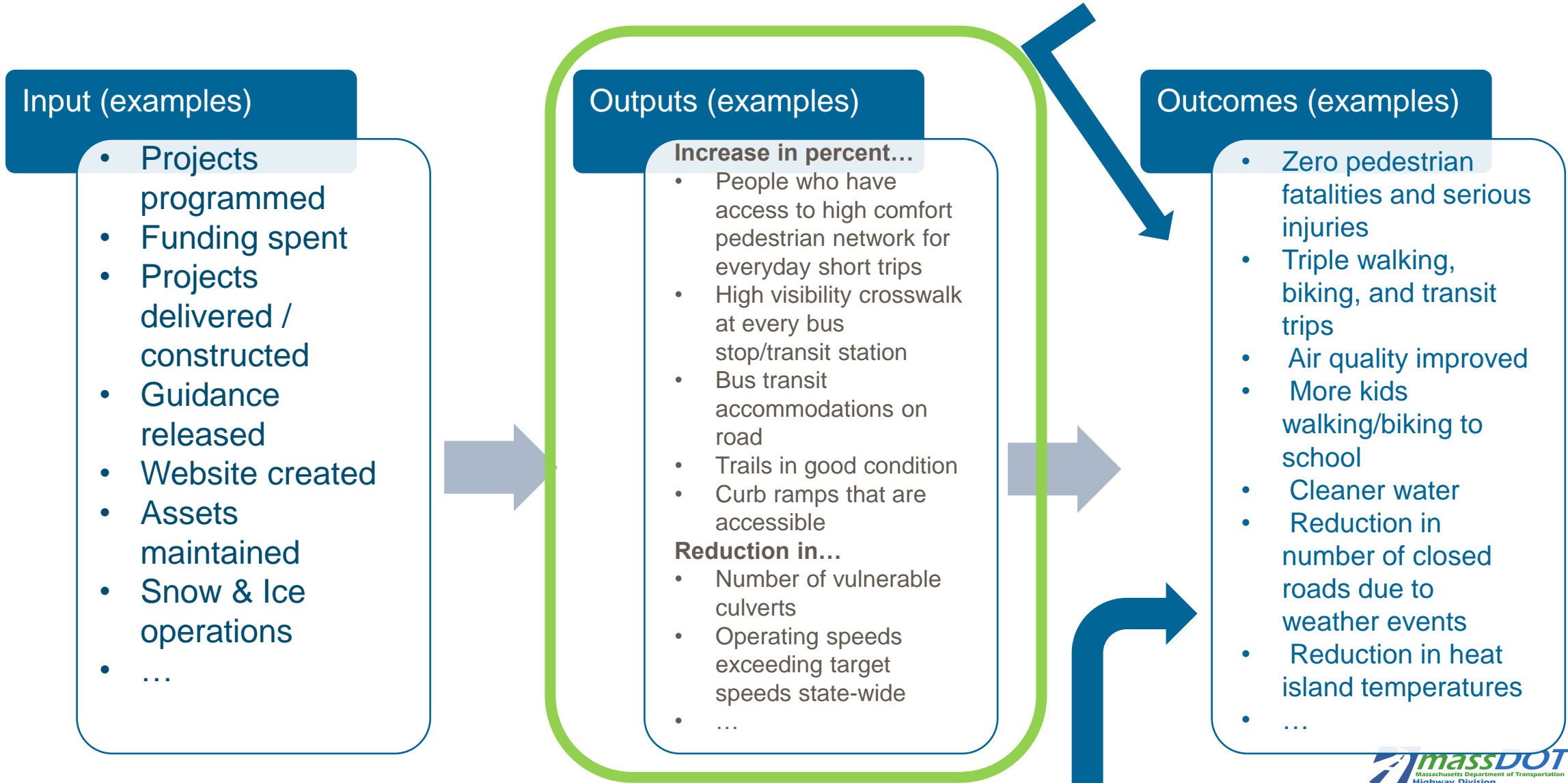


= Track / Assist

How we work



Focused on outputs we control in support of outcomes we desire

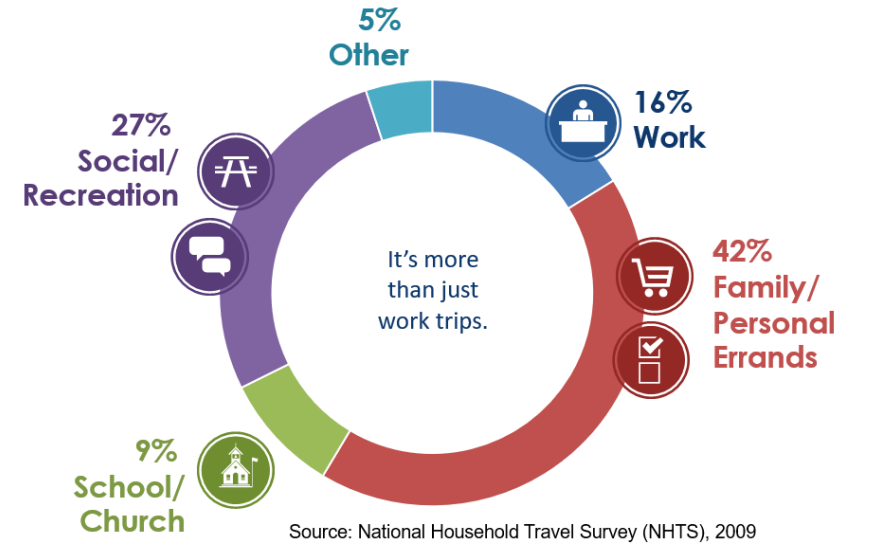


Mobility

Every day short trips

More than 50% of all trips are less than 3 miles
 3 miles = 16-minute bike ride

Majority of trips are not commute trips



Distance Buckets	Percentage of all trips	Bicycle	Pedestrian	Vehicle
0 – .5 mi	27%	.5%	97%	2%
.5 – 3 mi	34%	2%	48%	50%
3 – 6mi	13%	1%	5%	94%
All trips	---	1%	44%	55%

MassDOT Tracker, 2021

Program development examples

Systemic Safety Example



554 State Rd
Dartmouth, Massachusetts
Google Street View
Jun 2023 See more dates

about
ment

Sidewalk Network Example



Image: LiDAR scanning proposal for MassDOT

Project examples

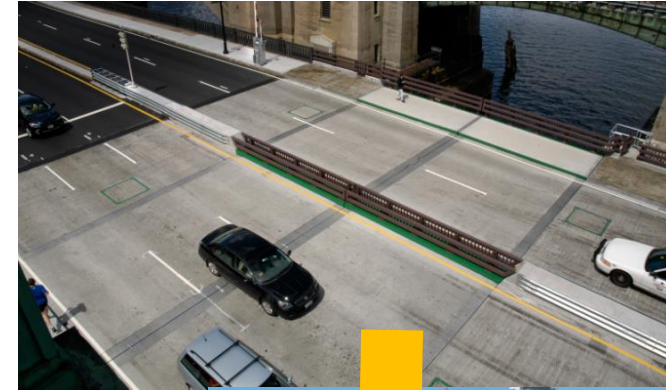
Project type examples



Constructing Bass River Bridge, Cape Cod (now complete)



New roundabout on Route 140, Princeton, MA



Newly built Kelley Square, Worcester

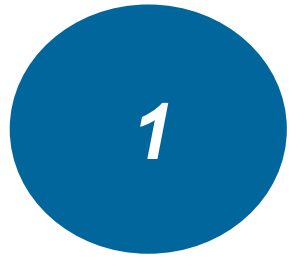
Project type examples



Lane markings for safety



New bridges for shared use path

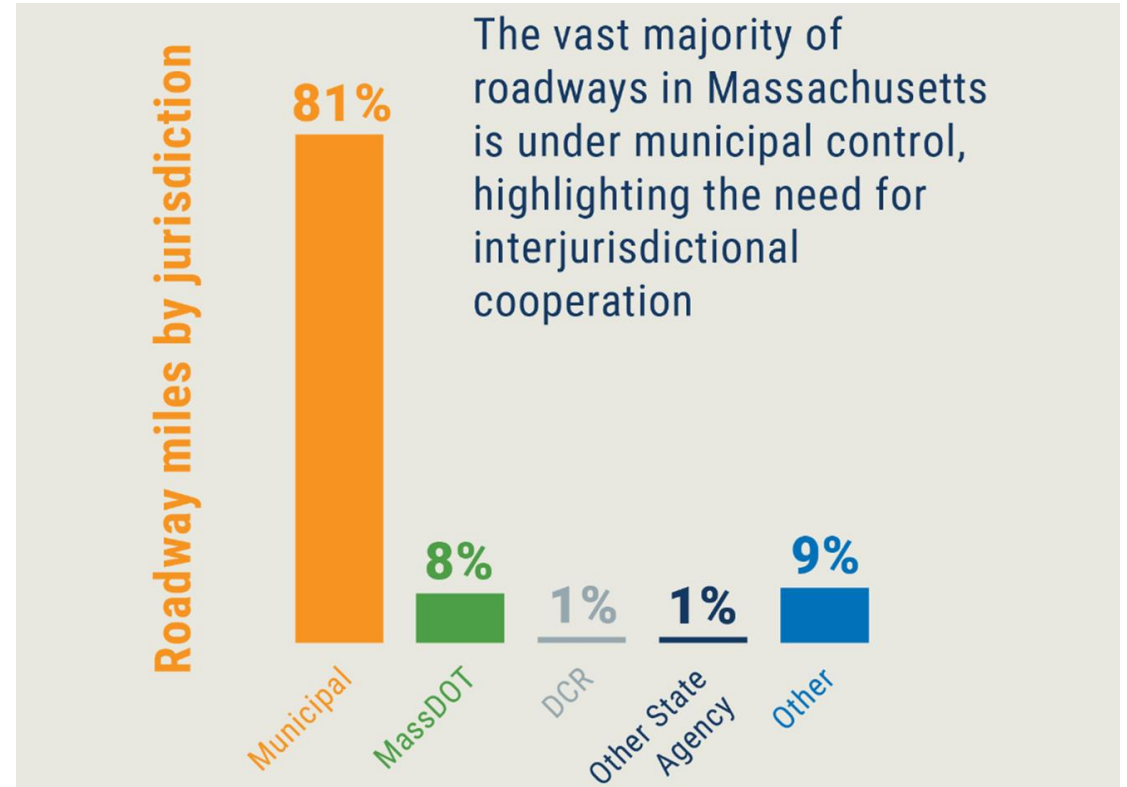


Support local projects

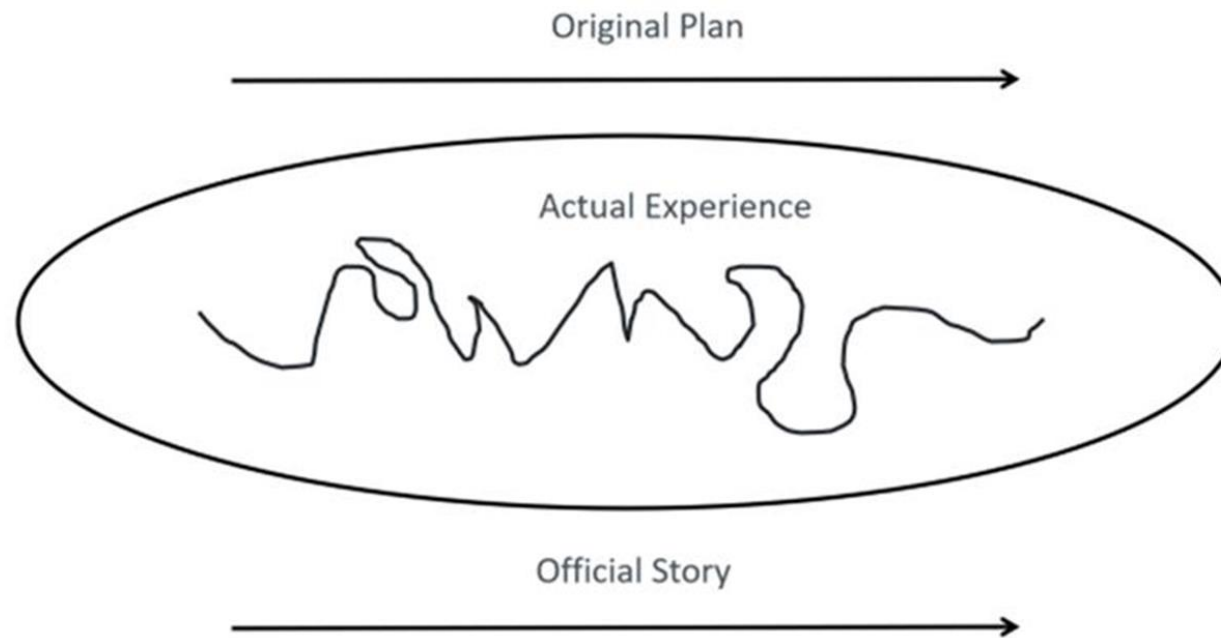
Provide

Community / Municipal Funding

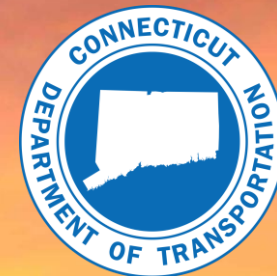
- Chapter 90
- Safe Routes to School
- Small Bridge
- Complete Streets
- Shared Streets and Spaces
- MassTrails
- *And more!*



You can do it too!



INSTITUTIONALIZING SAFETY



Founder's Bridge, Hartford, CT

Garrett Eucalitto, Commissioner
Natasha Fatu, Transportation Principal Engineer
Connecticut Department of Transportation

December 18, 2023

Sponsored by FHWA

Goal

To connect Transportation Professionals (planners, engineers, public health professionals, and their partners) working for a variety of agencies and organizations with case studies and success stories related to bicycling, walking, and road safety.

To inspire State DOTs to look closely at any internal policies, practices, or guidance that may be keeping them from advancing safety and truly “institutionalizing” road safety as a priority in their work.



Data Collection

Improving transportation safety is a data-driven process

Collect and Analyze Data:

- Crash Data
- Traffic Volume Data
- Roadway Geometric Data
- Vehicle Data
- Driver Data
- Law Enforcement Data
- Injury Surveillance Data
- Demographic and Land Use Data



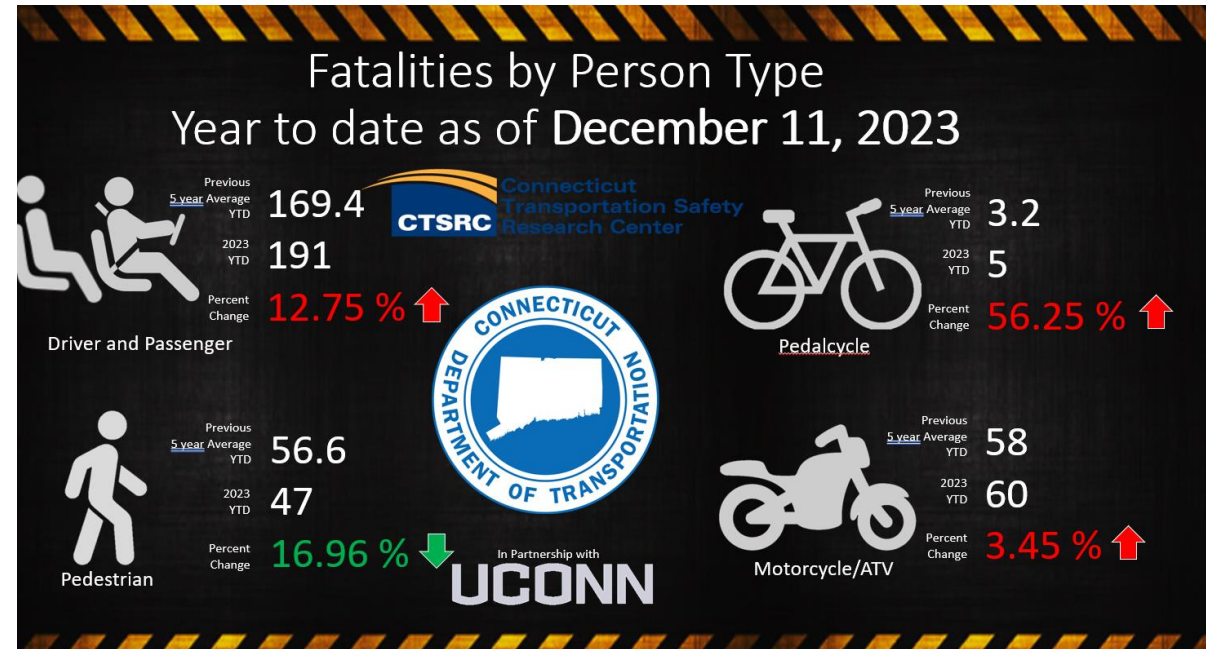
Identify:

- Systemic safety issues, as well as high-crash corridors, intersections, and/or facility types
- Crash types
- Roadway facility types where crashes are likely to occur
- Contributing crash factors
- Roadway characteristics associated with crashes
- Human factors or behaviors associated with the number and severity of crashes



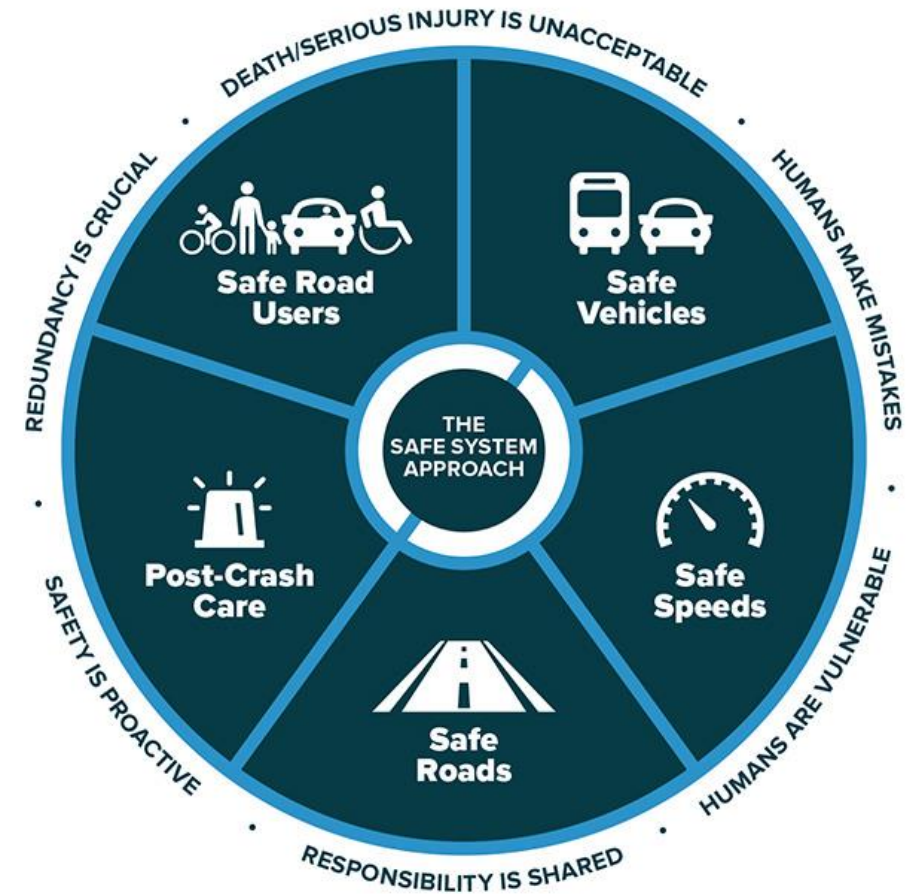
Motivation

- Continual review of data and trends
- Fatal and Serious Injury Trends – Graphs and Bullets
- Despite all the positive changes performance is trending down
- Recognition to do more
- What we had been doing was no longer working



Institutionalizing Safety at CTDOT

- Vision Zero Council
 - Multi-disciplinary group of traditional and non-traditional partners
 - Advances legislative and policy level initiatives
- SHSP
 - Vulnerable Road User Safety Assessment
 - Multi-disciplinary Partners
 - Identifies risk factors and priority areas
- Highway Safety Plan (HSP)
- Road Safety Audits
- Participated in Smart Growth America Complete Streets Leadership Academy
- Community Connectivity Grant Program
- Highway Design Manual/Signal Design Manual
- Controlling Design Criteria
- Agency Reorganization



Source: FHWA.



Background

- Safety Performance Target Setting
 - VISION ZERO
 - Highway Safety Plan (HSP)
 - Sets goals to get to zero by focusing on driver behavior initiatives.
 - Strategic Highway Safety Plan (SHSP)
 - Sets incremental goals to get to zero
 - Current goal is 15% reduction in number of fatalities and serious injuries on all public roads in CT by 2026.
- Commissioner's Priorities: Safety, Accessibility, Sustainability



CTDOT Crews, Newington

Complete Streets Controlling Design Criteria

The Department has instituted three new controlling design criteria on applicable CTDOT projects.

Pedestrian Facilities



- Sidewalk (both sides of roads) Minimum Width – 5'-0"
- Marked Crosswalks – shall be provided at every leg of a signalized intersection where sidewalks are present and/or proposed
- Illumination – shall be provided for marked crosswalks on all State roads

Bicycle Facilities



- Bicycle Facility Selection Matrix & Updated Standards

Bicycle Facility	Min. Width (feet)
Paved shoulder and Bicycle Lane	5
Buffered Bicycle Lane*	5
Separated Bicycle Lane (one-way)*	5 ¹
Separated Bicycle Lane (two-way)*	8 ²
Shared Use Path and Side path	10

Transit Provisions



- Office of Transit and Ridesharing and Office of Rails input required on all projects
- Shelter or Bench to be provided at all transit stops with high levels of boarding per day or low levels of frequency of service
- Marked Crosswalks within 400' of existing or proposed transit stops
- Illumination provided at all transit stops
- ADA compliance



Complete Streets Controlling Design Criteria

- Project Application:
 - CTDOT is the project proponent
 - CTDOT administers the project
 - CTDOT is responsible for providing project funding (state or federally aid)
 - CTDOT controls the affected infrastructure (State Highway)
- Design Exceptions:
 - Design Exceptions for CSCDC may only be granted by the Chief Engineer, with reporting requirements to the Commissioner.
 - This elevates the Design Exceptions review process for the CSCDC, as the approval of any requested Design Exceptions for the other 13 Controlling Design Criteria are determined by Engineering Administrator.



Challenges

- Project Screening requires robust enterprise level data
- Traffic Safety Culture
- Training
- Project Scoping, identifying opportunities
- NEPA/Environmental impacts
- ROW
- Evolving Standards



Farmington Canal Heritage Trail, Simsbury

Lessons Learned...

...TO BE DETERMINED

Commissioner Garrett Eucalitto

Garrett.Eucalitto@ct.gov

Natasha Fatu, P.E., PTOE

Natasha.Fatu@ct.gov



Complete Streets Rendering, FHWA





Questions and Discussion

Thanks for joining!

- Be on the lookout for an email with:
 - An evaluation survey
 - Meeting materials (with contact information)