

On the Road to Zero: Putting Safety into Practice

Jackie DeWolfe

Director of Sustainable Mobility
Office of the Secretary, MassDOT



massDOT
Massachusetts Department of Transportation

Imagine
not a
single
person
dies in a
crash on
our
roadways.

Massachusetts



Strategic Highway Safety Plan

Vision:

A roadway system with zero roadway deaths and serious injuries.

Mission:

To work collaboratively on strategies that will reduce roadway fatalities and serious injuries.

Goal:

Our long-term goal is zero roadway fatalities and serious injuries. By year 2022, the SHSP interim goal is to reduce the five-year average fatalities by 12% and serious injuries by 21%.



Vision

Biking in Massachusetts will be a **safe, comfortable, and convenient** option for everyday travel.

Goal 1

Eliminate bicyclist fatalities and serious injuries.

Increase the percentage of everyday trips made by bicycling.

Goal 2

Vision

All people in Massachusetts will have a **safe, comfortable, and convenient** option to walk for short trips.

Goal 1

Eliminate pedestrian fatalities and serious injuries.

Increase the percentage of short trips made by walking.

Goal 2



Nov 2020 World Day of Remembrance



Jan 2019 Day Of Action for Road Safety at Massachusetts State House

1 life is too many...

- In 2020, 335 people lost their lives on Massachusetts roadways
- On average, 352 people lost their lives every year for the past five years, including:
 - 77 people walking
 - 51 people driving motorcycles
 - 9 people biking
 - 4 people working in work zones
- 2,206 people were seriously injured on Massachusetts roadways
 - An average of 6 people per day
- Plus injuries and near misses not captured in this data



<https://www.massdottracker.com/>



@tooledesign



@schlthss



Policy with Implementation

Policy requires all state transportation projects to increase biking, transit, and walking options.

Healthy Transportation Policy (2013)



New Engineering Directive – Design Criteria (2014)

Policy requires all state transportation projects to increase biking, transit, and walking options.



New controlling criteria for pedestrian and bicycle accommodation

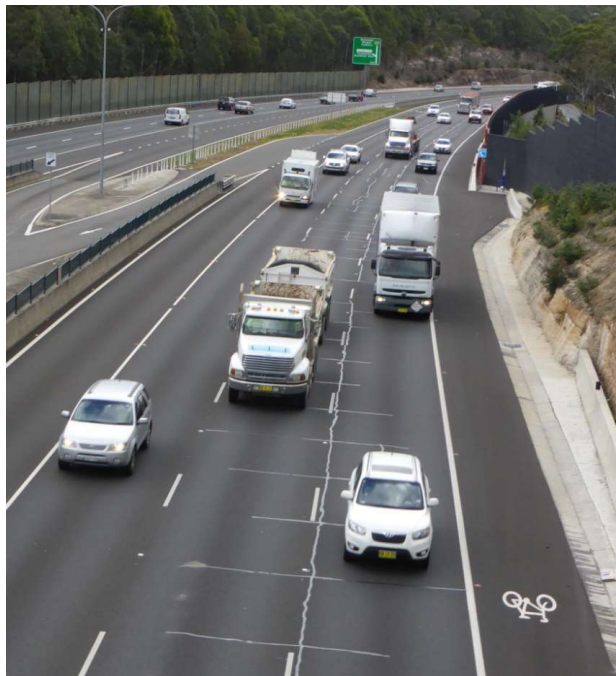
Policy Evaluation (2017-2018)



Updated Engineering Directive and new Design Justification Process (2020)

NEW criteria and process to ensure that people of all ages and abilities are afforded the opportunity for safe travel regardless of mode.

Design Criteria



5 foot minimum shoulder required

2014



2020

- Bicycle Facilities required
- Separation required via shared use paths, side path, separated bike lane, buffered bike lane if...
 - Posted speed limit ≥ 40 mph
 - Vehicular volumes $\geq 10,000$ 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 5' width or 10' for bi-directional width requirement 8



2020

Transit Criteria

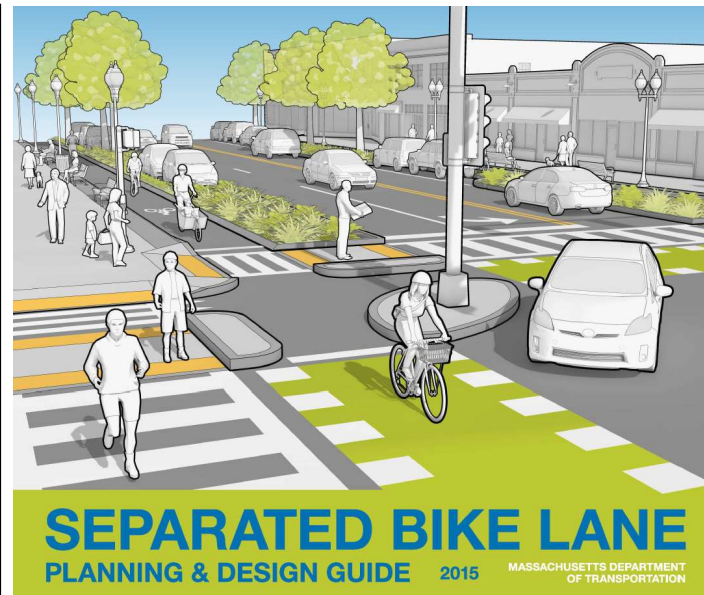
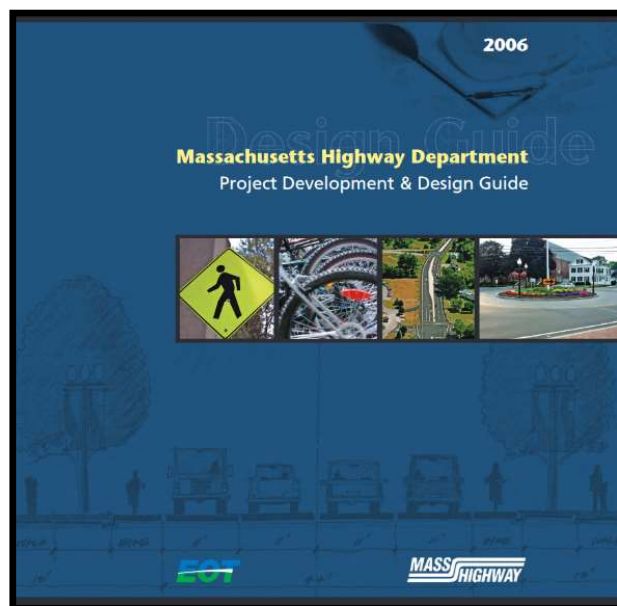
If roadway has existing or proposed transit route, transit facilities and amenities, and crosswalks

2020

Pedestrian Criteria

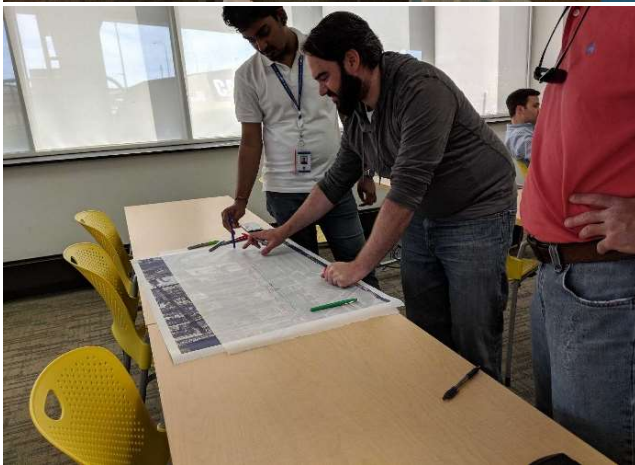
- Sidewalk and crosswalk requirements

Design Guides

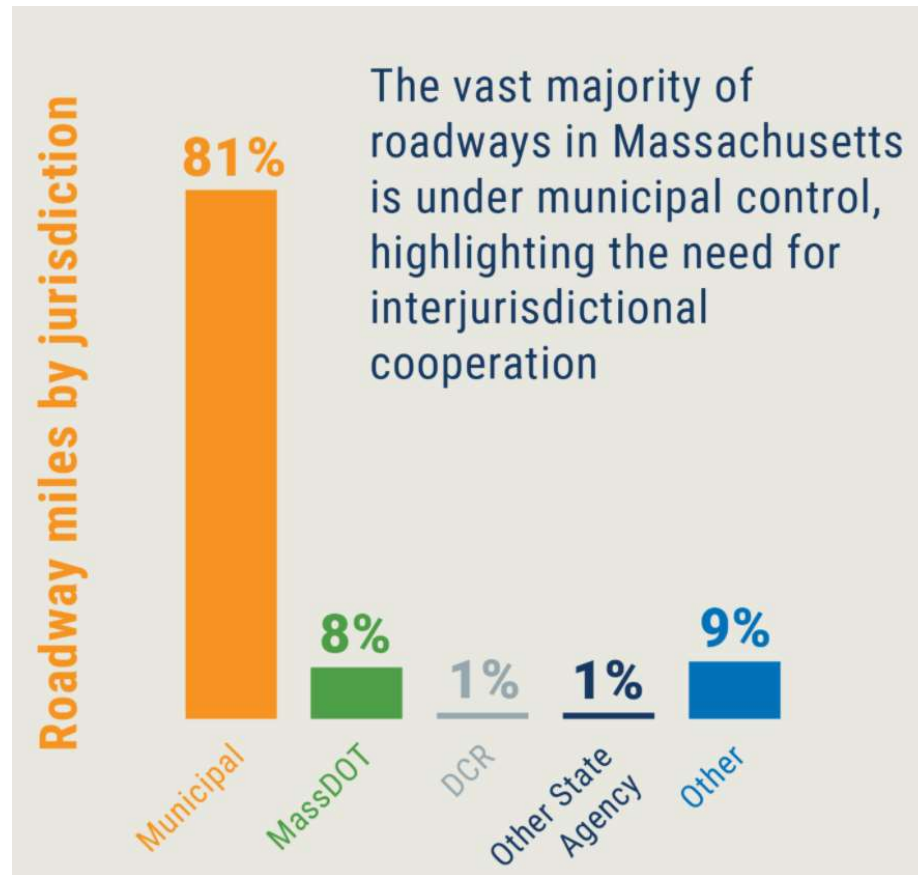


<https://www.mass.gov/lists/design-guides-and-manuals>

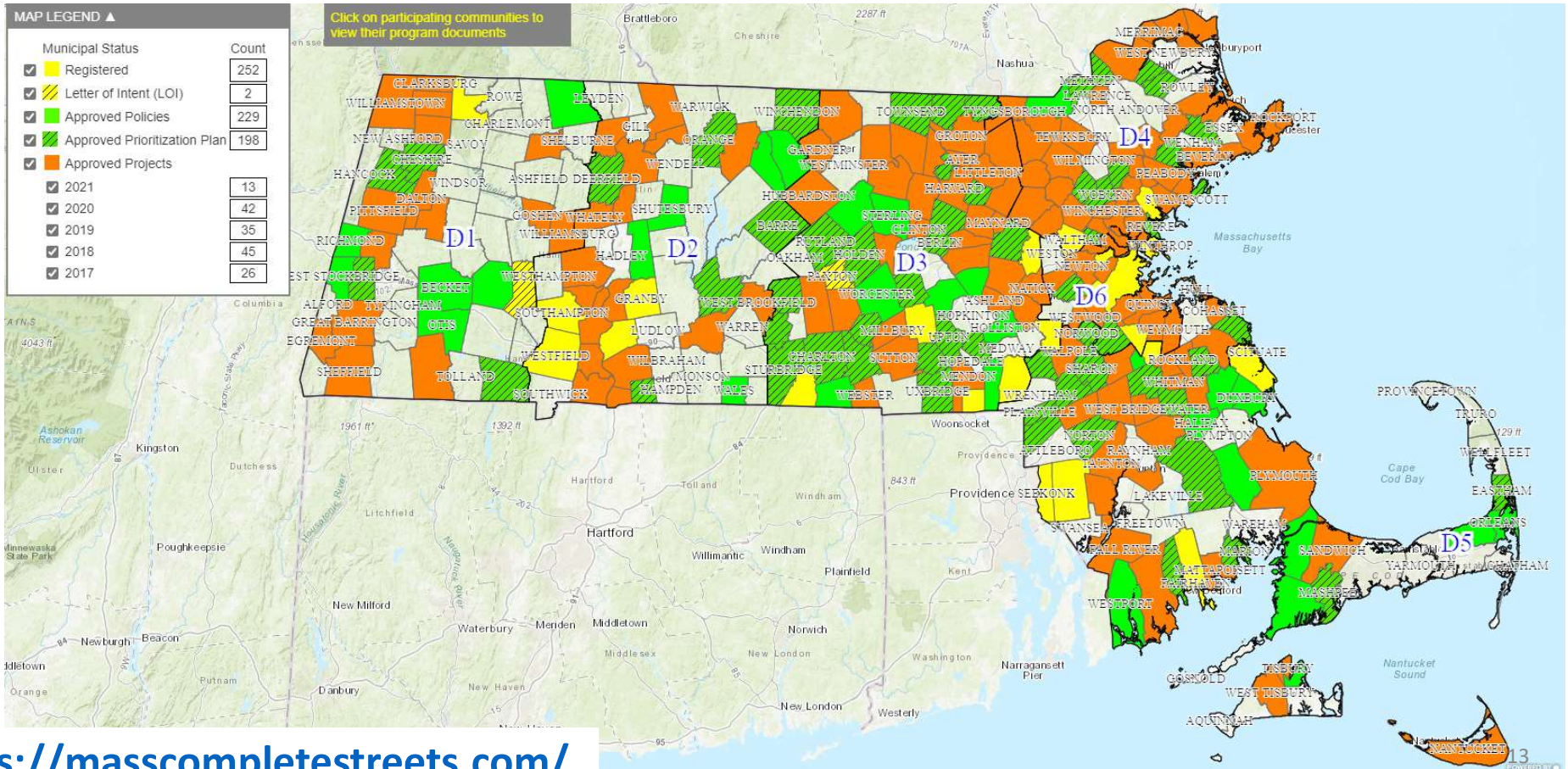
Design Trainings



Partnerships



Complete Streets Funding Program



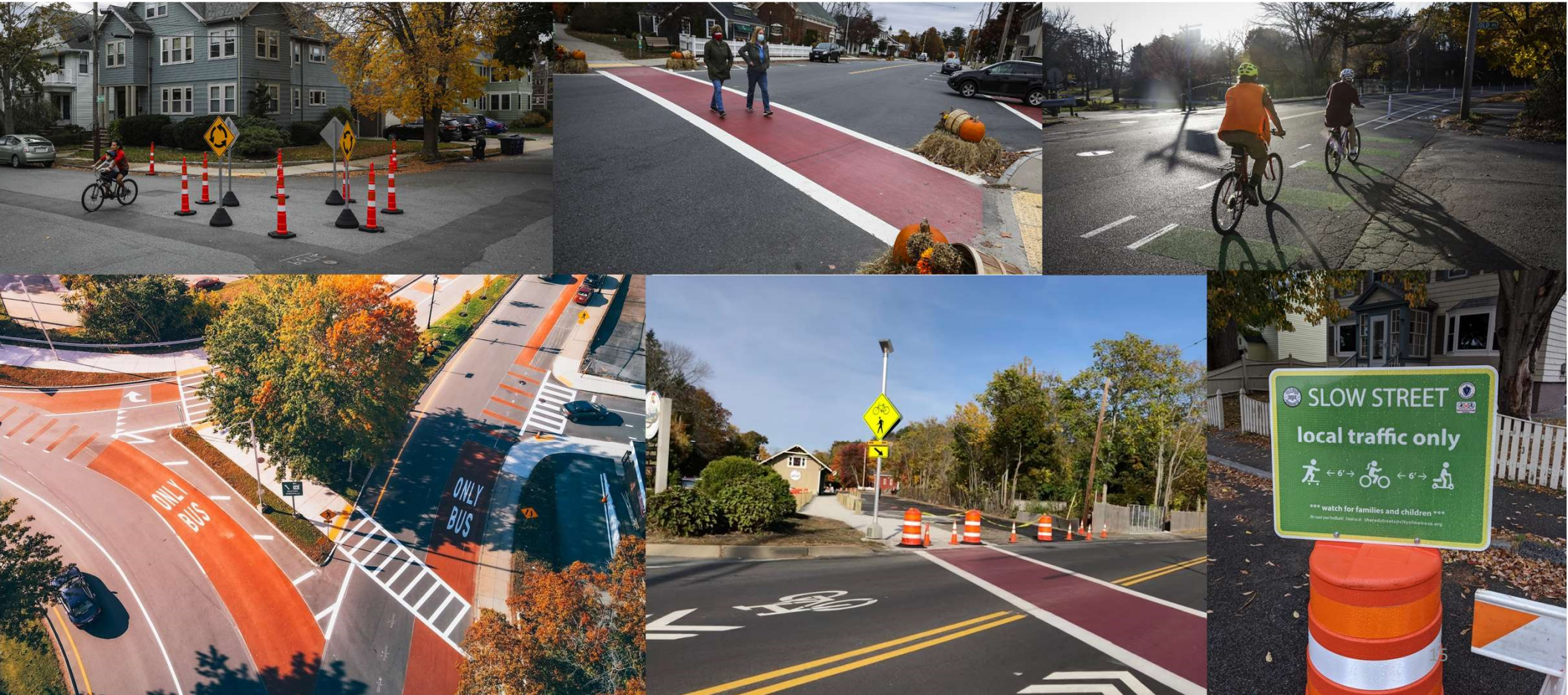
2020-2021 Shared Streets and Spaces Grant Program

- To support public health, safe mobility, and renewed commerce
- Originally a \$5 million 100-day program; now a \$20m program through May 2021
- Improvements can be temporary, pilots, permanent, or turn pilots/temporary into permanent changes, but all implementation within months
- In 2020, awarded \$10.2 million over 100 days to 103 municipalities to support 123 projects
- Technical assistance provided to municipalities for free thanks to Barr Foundation



<https://www.mass.gov/shared-winter-streets-and-spaces-grant-program>

Shared Streets results... examples:



Speed Management to Prevent Serious Injuries and Fatalities Project

Purpose: Align speed-related policies, plans, projects and practices to help realize Massachusetts' vision of a roadway system with zero roadway deaths and serious injuries.

MassDOT role



Data collection



Roadway
planning and
design



Traffic operations



Speed limit
setting



Support enforcement
efforts



Education,
marketing



Identify and
analyze safety
hot spots



Funding

“Plan for human error:
design knowing
people will make
mistakes, but when
they do, we have
ability to lessen
potential that it is
fatal”

May 4, 2020

Rate of Fatalities on MA Roadways Doubled In April

With 50% less traffic, about same number of deaths as April 2019

Drivers urged to slow down

AAA Advises Motorists to Curb Their Speed in the Wake of Alarming Massachusetts Traffic Fatality Data for April

Car crashes deadlier as drivers speed during lockdowns

LONDON (Reuters) - Coronavirus lockdowns led to huge reductions in traffic and fewer car crashes this spring, but as drivers sped up on quieter roads, the collisions became deadlier in several cities, a Reuters analysis shows.

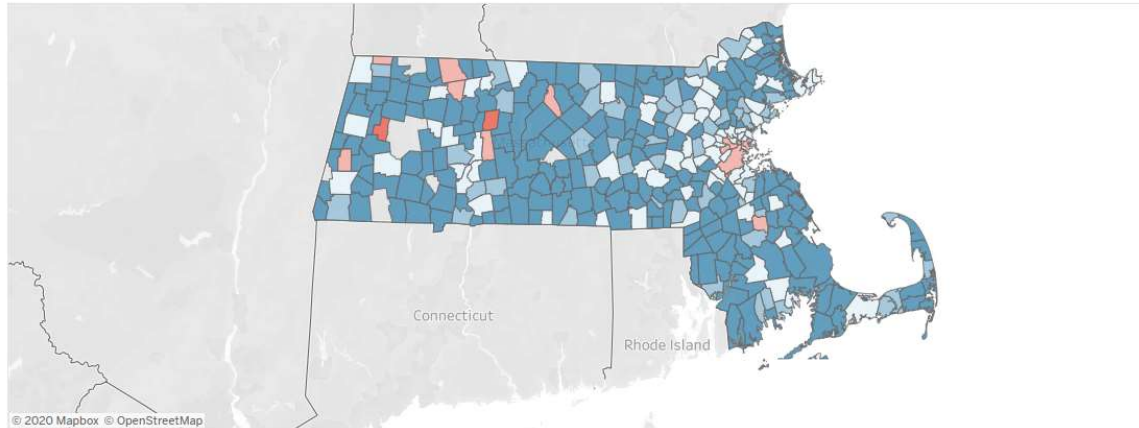
MassDOT MOBILITY DASHBOARD

% Change, 2019 - 2020

- Less than -50%
- -50% to -25%
- -25% to 25%
- 25% to 50%
- Greater than 50%

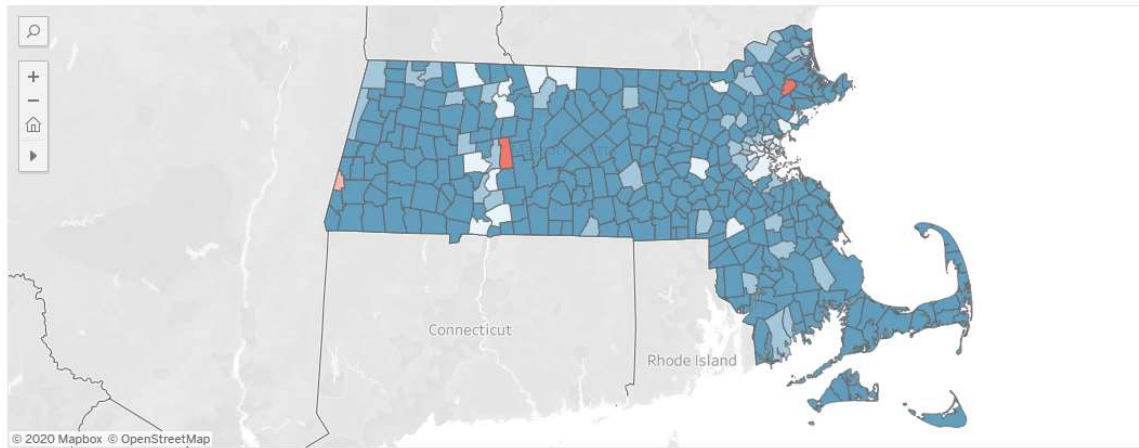
Change in Bicycle Activity by Municipality (Monthly), January through October 2019 vs 2020

October, 2019 vs 2020



Change in Pedestrian Activity by Municipality (Monthly), January through October 2019 vs 2020

October, 2019 vs 2020



<https://mobility-massdot.hub.arcgis.com/>

Interactive Mapping Portal for Analysis and Crash Tracking (IMPACT)

DATA EXTRACTION

Open Data Portal
This service should be used when trying to obtain statewide crash data that may be filtered at the crash, vehicle, or person level that could be downloaded in several formats. [VIEW](#)

Standard Data Report Request Form (for crash level data)
By completing the fields below, an email should be sent to you within 5-10 minutes with a link to the resulting data. For a small or medium sized town you may be able to use this form for multiple years of data. For multiple towns you can make multiple requests using this form. For statewide data, the Open Data Portal should be used instead.

Email Address * Confirm Email *

Report Start Year * Report End Year * Municipality *

File Format *
xlsx

[EXTRACT DATA](#)

IMPACT Home Welcome, Guest User [Log In](#)

IMPACT is designed to encourage public safety initiatives and awareness specific to crash information. Within IMPACT you can engage with crash related data through easy to understand pre-built reports or conduct your own self-driven analysis. Please take the time to explore the various options and find what is right for you.

Interactive Data Dashboards
IMPACT dashboards help powerful data stories using maps, charts and tables based on complex analyses. These pre-built dashboards allow for interactive analysis and data exploration specific to a given data theme in a range of categories. [INTERACT](#)

Data Query and Visualization
Using the Data Query and Visualization tool you can conduct simple to sophisticated data queries to generate subsets of the crash data. This may be done at the crash level, the vehicle level or the person level. Once generated you can then visualize the data in three core ways: on charts, on tables, or spatially on a map. Though noted separately, these elements all work in tandem providing the ability to switch between the visualization methods seamlessly. [EXPLORE](#)

Data Extraction
Using the data extraction service, you can request publicly available data by municipality and date range in several formats. The standard data report request form should be used when trying to obtain datasets of town-wide crash data for specific years. In addition, a link is provided to MassDOT's Open Data Portal for more large-scale data download capabilities where the entire crash data file may be downloaded for each year. [EXTRACT](#)

Reports
IMPACT provides a suite of pre-built reports for rapid access to clearly organized information across a spectrum of categories. Some reports are configurable given desired date ranges and all are downloadable in several formats. [REPORTS](#)

Crash Tabulation and Charting
IMPACT provides this tool to aggregate selected data in a matrix to display two or more variables. The crosstab provides summary data and can be used to summarize the full crash database as well as subsets of the data, based on the user selected options. [EXPLORE](#)

Reported Crashes YTD
As of Fri Jan 15 2021
1,171

Reported Fatalities YTD (FARS)
As of Thu Jan 14 2021
9

Reported Pedestrian Crashes YTD
As of Fri Jan 15 2021
16

Reported Bicyclist Crashes YTD
As of Fri Jan 15 2021
4

Reported Crash Severity By Year (CDS)
As of Fri Jan 15 2021

Reported Ages of Drivers in Crashes YTD
As of Fri Jan 15 2021
278 drivers with ages unknown

Live Dashboard

4,385 Serious Injury Crashes
33,820 Minor Injury Crashes
175,209 Possible Injury Crashes
205,651 No Injury Crashes
1,131,070 Other Crashes (unknown, not reported, etc.)
124,848

Top 5% Town Intersection Crash Locations 2017
Based on Equivalent Property Damage Only (EPDO)

2015-2017 Top 5% Crash Clusters by Town

Crash Types Summary

Top Town-5% Intersection...

Crashes by Maximum Injury Severity Level

Crash Tabulation & Charting

Open Save Export Grid Charts

Fields
Drag and drop fields to arrange

All Fields: **Expand All**

- Driver Contributing Circ (All Drivers)
- Driver Distracted By (All Drivers)
- Exit Number
- Exit Rte
- Federal Functional Classification-linked RD
- First Harmful Event
- First Harmful Event Location
- FMCSA Reportable (Crash)
- Functional Classification-linked RD
- Ht and Run
- Is Oeocoded
- Jurisdiction-linked RD
- Left Shoulder Turn-linked RD

Data Query & Visualization

4. Visualization Results

Crash Chart

Crash Severity

Crash Data Vehicle Data Person Data

Person Data Level Fields

Select the fields you would like in your output

Crash Number	City/Town Name	Crash Date	Crash Severity	Crash Status	Crash Time	Crash Year	Max Injury Severity Rep.	Photo Mode
4480107	BROOKLINE	1/8/2018	Property damage only (inc.)	Open	1:55 PM	2018	No injury	<input type="checkbox"/>
4483664	BROOKLINE	1/30/2018	Property damage only (inc.)	Open	5:14 PM	2018	No injury	<input type="checkbox"/>
4488447	BROOKLINE	2/4/2018	Unknown	Open	2:15 AM	2018	Not reported	<input type="checkbox"/>
4508873	BROOKLINE	2/28/2018	Property damage	Unknown				<input type="checkbox"/>
4523203	BROOKLINE	4/1/2018	Property damage	Unknown				<input type="checkbox"/>
4515930	BROOKLINE	4/28/2018	Property damage	Unknown				<input type="checkbox"/>
4537883	BROOKLINE	5/6/2018	Unknown	Unknown				<input type="checkbox"/>
4539819	BROOKLINE	5/16/2018	Property damage	Unknown				<input type="checkbox"/>
4540687	BROOKLINE	5/2/2018	Property damage	Unknown				<input type="checkbox"/>
4540977	BROOKLINE	5/18/2018	Unknown	Unknown				<input type="checkbox"/>
4543168	BROOKLINE	5/23/2018	Non-fatal injury	Unknown				<input type="checkbox"/>
4548983	BROOKLINE	5/28/2018	Non-fatal injury	Unknown				<input type="checkbox"/>
4550333	BROOKLINE	6/6/2018	Property damage	Unknown				<input type="checkbox"/>
4561809	BROOKLINE	7/5/2018	Unknown	Unknown				<input type="checkbox"/>

Standardized Reports

Report Categories > Standardized Reports > Grant Application - Crashes

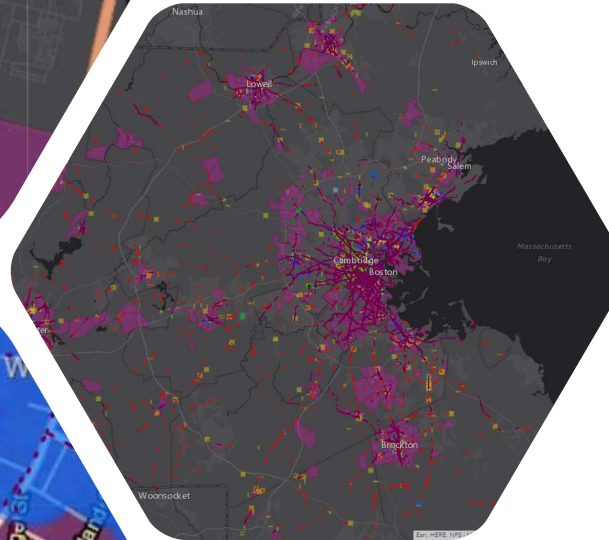
One data needed to facilitate applications for community grants involving traffic and safety issues.

Town Name: **QUINCY** Start Year: **2017** End Year: **2021**

2017-2021 QUINCY Crashes at a Glance created: 1/15/2021

	2017	2018	2019	2020	2021
Total Fatal crashes	7	3	3	7	0
Total Serious Injury crashes	53	36	29	17	0
Total Non-Serious Injury crashes	501	429	444	346	0
Total crashes with no reported injuries, Unknown, Non-reported, etc.	1,869	1,791	1,698	1,241	2
Total crashes entered into RMV crash system	2,430	2,259	2,174	1,611	2
Total Pedestrian crashes	67	53	69	48	0
Total Pedestrian fatalities	3	1	1	5	0
Total Pedestrian injuries	61	46	57	36	0
Total Bicyclist crashes	22	21	14	17	0
Total Bicyclist fatalities	0	0	0	0	0
Total Bicyclist injuries	18	15	11	11	0

<https://apps.impact.dot.state.ma.us/cdp/home>



Legend

Bike Pedestrian and Top 200 Equity HotSpot Project Candidate - Areas



Risk Screening: Statewide Bicyclist Risk

..... Top 5%

Risk Screening: MPO Bike Risk

..... Top 5%

Risk Screening: Statewide Pedestria

..... Top 5%

Risk Screening: MPO Pedestrian Ris

..... Top 5%

Excess Expected Fatal & Serious Injury by MPO at Street Level

..... Top 5%

Excess Expected All Crash by State Level

..... Top 5%

Excess Expected All Crash by MPO

..... Top 5%

Excess Expected Fatal & Serious Inj at Street Level

..... Top 5%

Excess Expected Fatal & Serious Injury by MPO at Street Level

..... Top 5%

All Coincident Top5% Risks

HSIP Top 200 Intersection Clusters 2015-2017 25M

2015-2017 HSIP Cluster

2008-2017 HSIP Bicycle Clusters

2008-2017 HSIP Pedestrian Cluster

Environmental Justice 2010 Populations

Environmental Justice 2010 Populations

Safety Risk Factor Analysis

Awareness

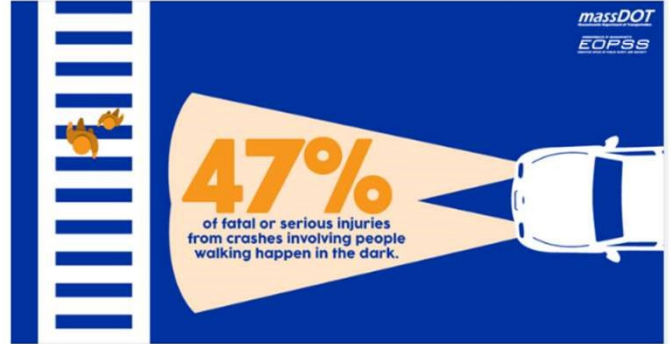


Mass. Transportation
@MassDOT

Recently, a number of fatal crashes involved occupants not wearing seatbelts. @NHTSA research has shown a 45% reduction in the risk of fatal injury to front-seat car occupants when seat belts are used. #Seatbelts save lives, #BuckleUp every trip, every time. #DriveSafe



47% of fatal or serious injuries from crashes involving people walking happen in the dark in #MA. With Halloween and Daylight Savings happening this weekend, remember to #ScanTheStreet for wheels and feet, whether you are driving, walking or biking. #PedestrianSafetyMonth



AGGRESSIVE IS GOOD FOR HANDWASHING... NOT DRIVING.



Liked by kirstenjohnson and others
massdot Aggressive hand sanitizing is a good habit, but #AggressiveDriving is not.

This #LaborDay weekend, please drive sober, follow the speed limit, wear your seat belt, and have a safe holiday.



<https://twitter.com/MassDOT>

Driver Education

GUIDE

First Time Driver? Start here...

This guide will step you through the process to get a passenger (Class D) learner's permit and driver's license, which allows you to legally operate a passenger vehicle, van or small truck. Information includes steps to get a driver's license, parent/guardian information, safe driving tips, as well as study materials.



TABLE OF CONTENTS

- ▼ Steps to Get Your Driver's License
- ▼ Parent/Guardian Information
- ▼ Safe Driving Tips
- ▼ Did you study for your learner's permit or road test?
- ▼ Time to take your Permit!

Feedback

<https://www.mass.gov/guides/first-time-driver-start-here>

High School Video Contest



<https://www.mass.gov/roadway-safety-video>



Thank you for all that you are doing.

Jackie DeWolfe

Jacqueline.DeWolfe@state.ma.us