

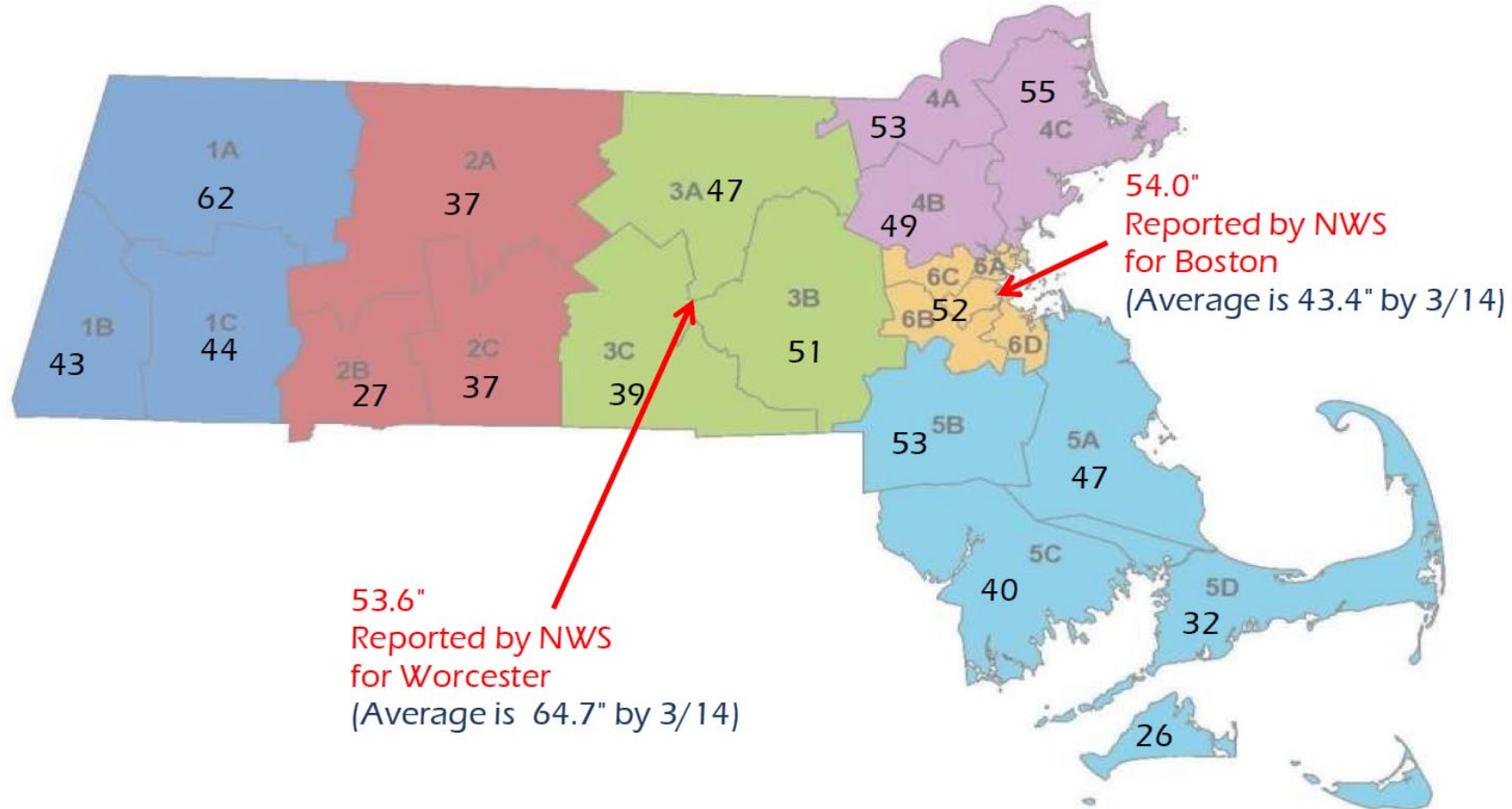
Highway Administrator's Report

Jonathan Gulliver, Highway Administrator

March 2022

Snow & Ice Update

FY21 Snow Fall Amounts by District Sub-Areas (inches) of 3/14/2022
Amounts are area averages reported by MassDOT personnel at depots throughout the season.



Snow & Ice Budget Update



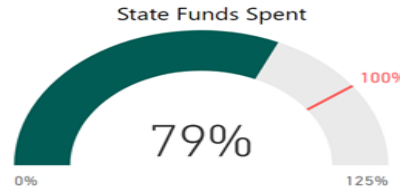
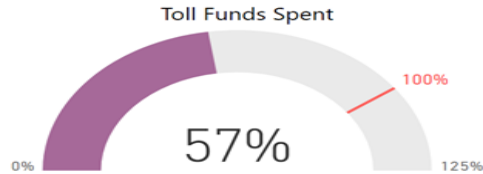
Snow & Ice
Budget and Expenditure Analysis

Total Annual Budget
\$102,714,249

Total YTD Expenditures
79,803,353

Budget Remaining
\$22,910,896

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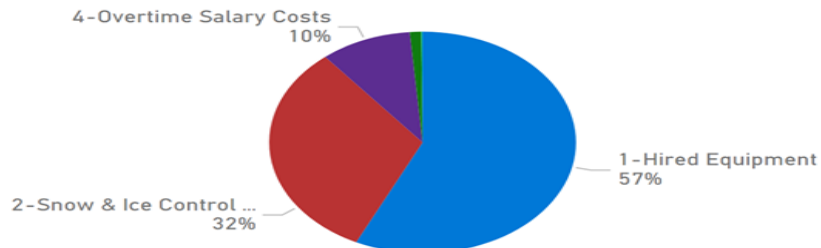
Expenditures from SIMS

\$54,043,619
Equipment Cost

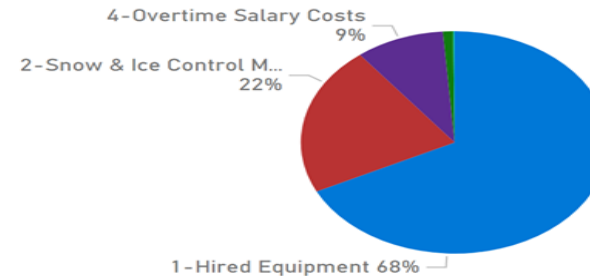
Budget & Expenditures Totals

Category	Budget	Actual YTD Expenditures	In Process (SIMS)	Budget Remaining
1-Hired Equipment	\$58,675,279	\$42,109,576	\$11,934,043	\$4,631,660
State Funded	\$58,675,279	\$42,109,576	\$11,934,043	\$4,631,660
2-Snow & Ice Control Materials	\$32,800,000	\$17,343,481		\$15,456,519
State Funded	\$28,000,000	\$15,003,726		\$12,996,274
Toll Funded	\$4,800,000	\$2,339,756		\$2,460,244
3-Equipment, Repairs & Accessories	\$1,237,500	\$857,363		\$380,137
State Funded	\$1,187,500	\$812,991		\$374,509
Toll Funded	\$50,000	\$44,373		\$5,627
4-Overtime Salary Costs	\$9,871,470	\$7,439,337		\$2,432,133
State Funded	\$7,000,581	\$5,457,474		\$1,543,107
Toll Funded	\$2,870,889	\$1,981,864		\$889,025
5-Operational Services	\$130,000	\$119,553		\$10,447
State Funded	\$130,000	\$119,553		\$10,447
State Funds	\$94,993,360	\$63,503,318	\$11,934,043	\$19,555,999
Toll Funds	\$7,720,889	\$4,365,992		\$3,354,897
Grand Total	\$102,714,249	\$67,869,310	\$11,934,043	\$22,910,896

Budget Distribution



Expenditure Distribution



"This report is real time data. It consists of expenditure transactions entered and accepted into the accounting system (MMARS) as well as incurred Hired Equipment expenses that are not reflected in MMARS due to timing."

Innovation Conference – May 24th & 25th

- May 24th and 25th at the DCU Center in Worcester
- Both in-person and there is a virtual option
- Registration is now open!
 - Municipal state and federal transportation leaders
 - Private Sector and Non-Profits
 - Students

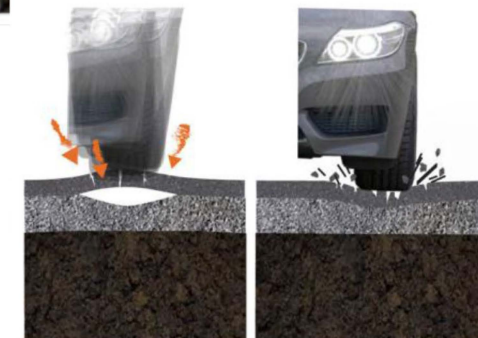
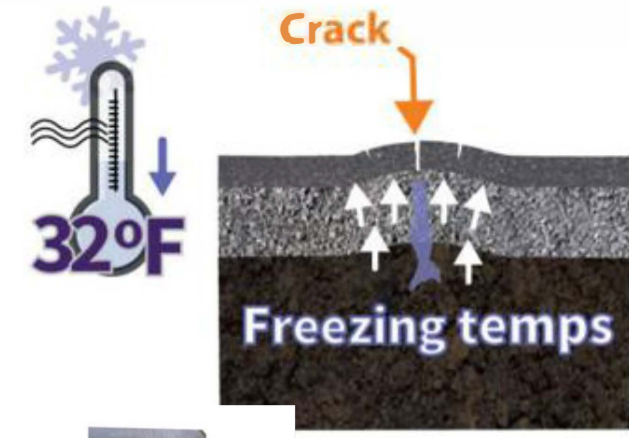
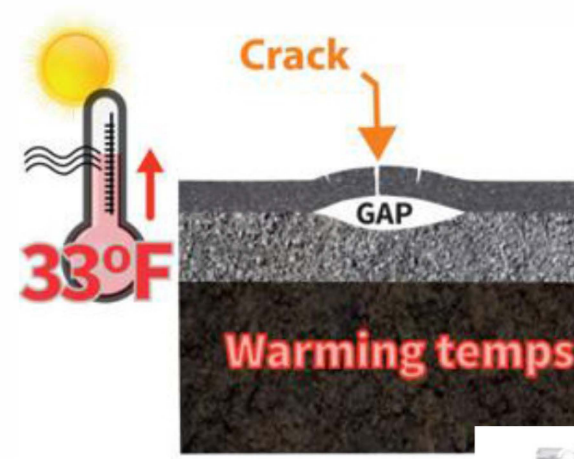
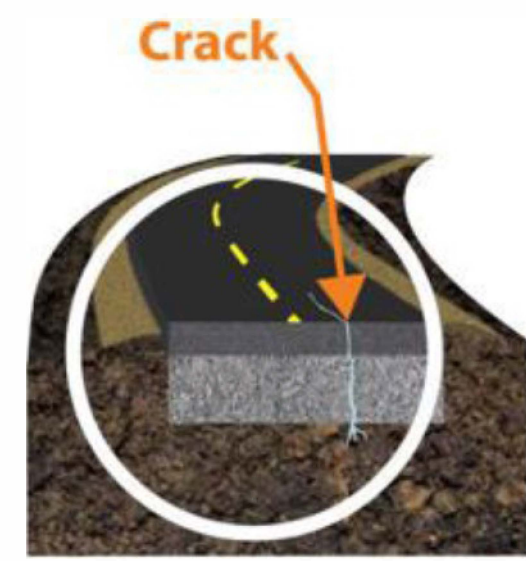
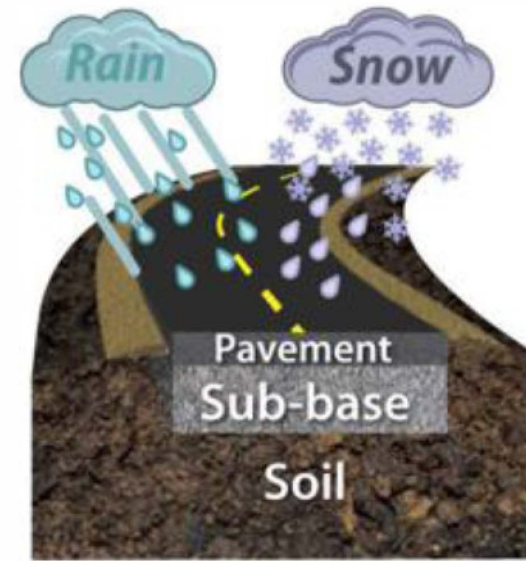
Conference topics include:

- Innovations in Construction Methods
- Promoting a Safe and Equitable Transportation Culture
- Streamlining the Project Delivery Process to Improve Infrastructure
- Best Practices in Municipal and Regional Transportation
- New Techniques in Design and Materials
- Implementing New Technologies



Pothole Season

1. Potholes begin when water seeps into the Sub-base and Soil under the pavement, most commonly through a crack.
2. When water in the Sub-base and soil freezes, the ground expands. The expansion can cause the pavement to raise.
3. When the ice thaws, the sub-base and soil return to normal levels but the pavement often remains raised, this creates a under the pavement.
4. When vehicles drive over this cavity, the pavement develops additional cracks and falls into the cavity and breaks apart.

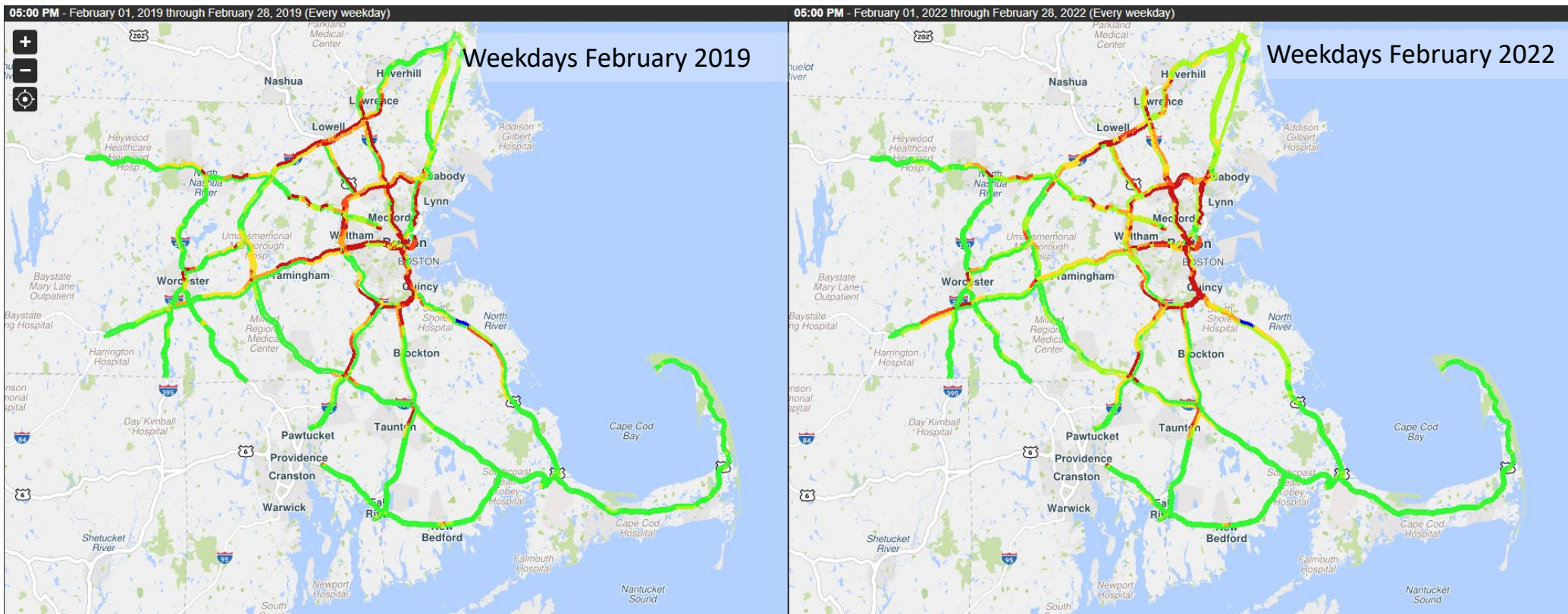


Trend Maps for Peak Periods: Average Weekday, Pre-COVID and Last Week

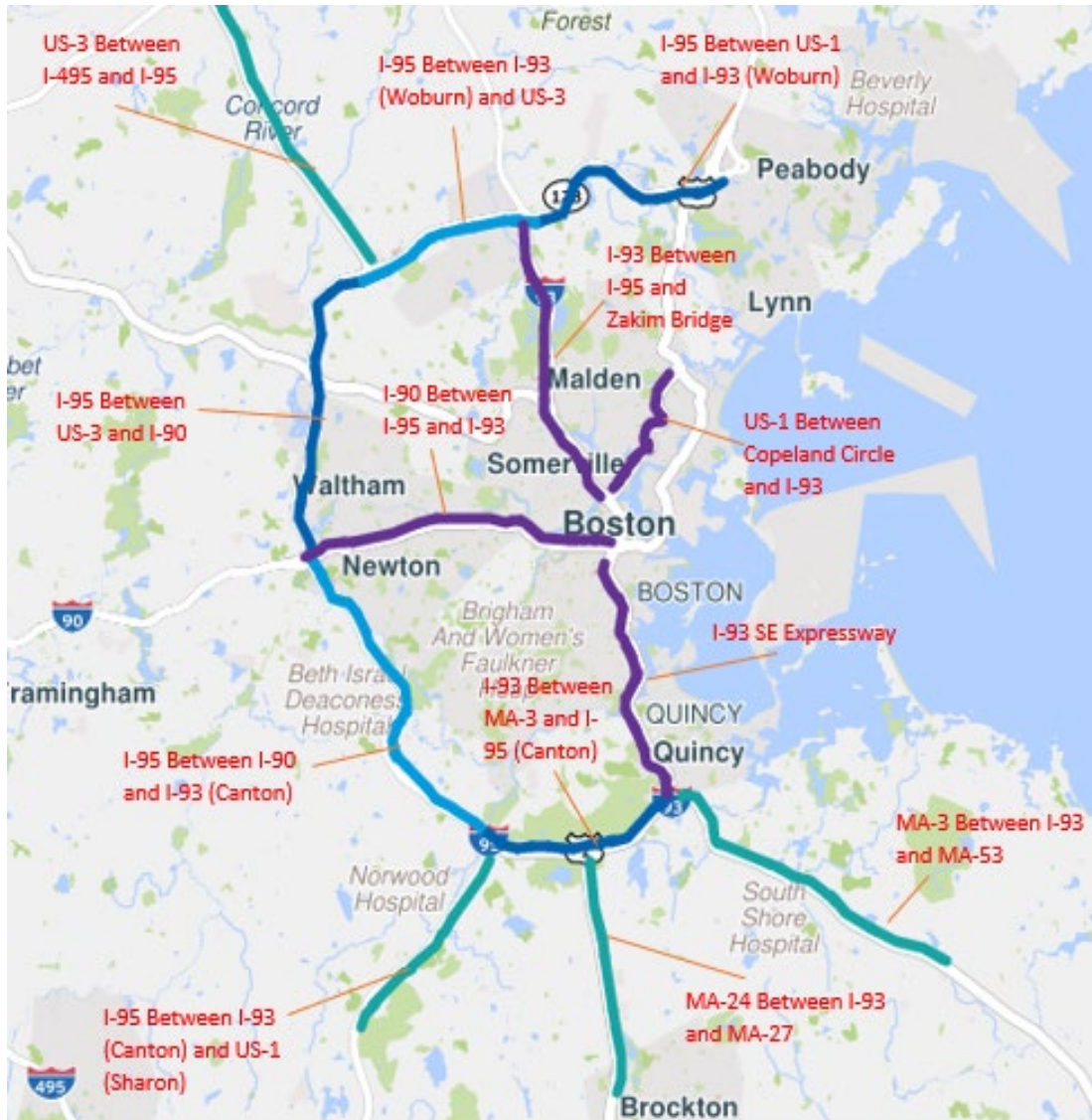
The maps below display planning time index (PTI), which shows how long a trip takes compared to an expected travel time. For instance, a PTI of 2 represents a segment travel time that takes twice as long as expected. The color scale below shows what range of PTI values each color represents.



Eastern Massachusetts – 5 PM



Congestion Monitoring –Travel Times and Speeds by Major Corridor



Weekday Travel Times Along Corridors compared to 2019

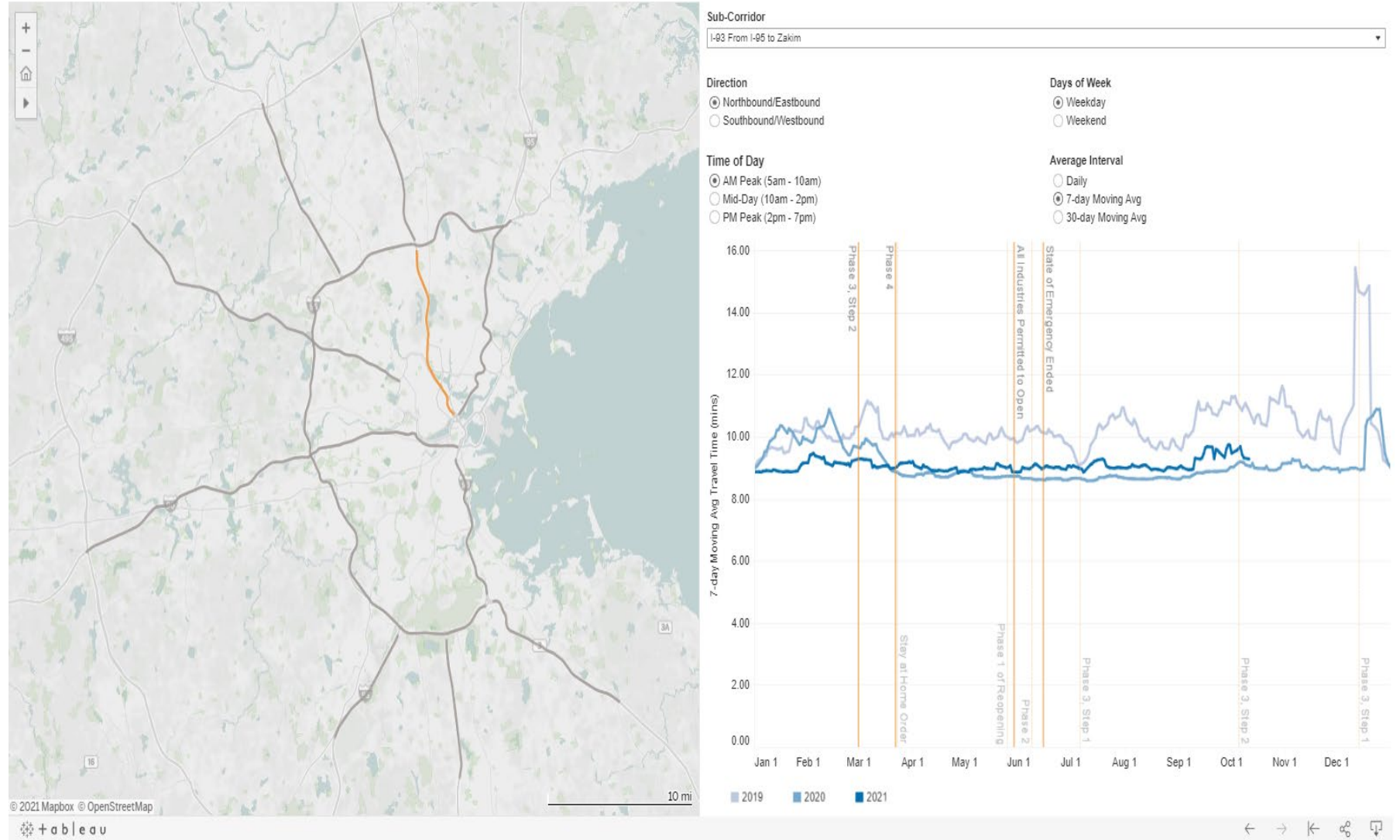
		Travel Time Difference (min)		Percent Difference	
	NB/SB	AM Peak	PM Peak	AM Peak	PM Peak
Highways in Boston					
I-93 SE Expressway between Braintree Split and Mass Ave Connector	NB	-3.3	3.0	-11%	20%
	SB	3.9	0.5	30%	2%
I-93 north of the City between I-95/128 and the Zakim Bridge	NB	-1.1	-3.9	-9%	-15%
	SB	-7.1	0.0	-24%	0%
I-90 between I-95/128 and I-93	EB	-2.1	-2.5	-9%	-14%
	WB	-2.0	-5.7	-15%	-24%
US 1 between Copeland Circle and I-93	NB	-0.2	-1.6	-4%	-17%
	SB	-4.4	-1.1	-25%	-17%
Outer Spokes					
MA-3 between I-93 and MA-53	NB	-2.9	0.7	-16%	6%
	SB	0.5	-1.2	5%	-8%
MA-24 between I-93 and MA-27	NB	-0.1	-1.1	-1%	-13%
	SB	0.2	-0.4	2%	-4%
I-95 between I-93 Canton and US-1 Sharon	NB	-1.4	0.6	-13%	9%
	SB	-0.1	-2.3	-2%	-22%
US-3 between I-495 and I-95	NB	0.2	-3.9	2%	-18%
	SB	-2.0	0.0	-12%	0%
Inner Beltway					
I-95 between US-1 Peabody and I-93 Woburn	NB	-0.5	-2.1	-5%	-14%
	SB	-2.4	2.4	-15%	24%
I-95 between I-93 Woburn and US-3	NB	0.1	-0.2	2%	-1%
	SB	-1.2	0.2	-12%	2%
I-95 between US-3 and I-90	NB	-2.0	0.4	-13%	2%
	SB	-6.1	-3.5	-30%	-20%
I-95 between I-90 and I-93 Canton	NB	-6.7	-0.4	-29%	-3%
	SB	-0.1	0.8	-1%	5%
I-93 between MA-3 and I-95	NB	-1.1	-1.0	-12%	-8%
	SB	-2.0	-0.1	-21%	-1%

Mobility Dashboard Travel Time Differences Tool

Travel Time Differences on Select Corridors, 2019 vs 2020 vs 2021

Update Frequency: **Weekly**

I-93 From I-95 to Zakim: Northbound



The Travel Time Differences tool on the Mobility Dashboard can be used to compare AM Peak, mid day, and PM peak average travel times from 2019, 2020, and 2021.

Average travel times are available for 18 corridors within I-495 and can be viewed day-by-day, or by a rolling 7 or 30-day rolling average. Data is available for just weekdays or just weekends.

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

Chapter 90 Program

- Chapter 90 entitles cities and towns to reimbursements on transportation projects
 - Formula-based apportionments determined by lane miles, population, and employment
- Eligible project costs include:
 - Highway construction, preservation and improvement projects
 - Pedestrian and bicycle facilities
 - Road building machinery and equipment
 - Consultant services for transportation planning
- Governor Baker filed the following:
 - \$200 million in Chapter 90
 - \$100 million in additional Chapter 90 funding
 - \$100 million for municipal resiliency and pothole repairs



Chapter 90 Apportionments and Spending

Fiscal Year	Apportionment	Spend
FY19	\$240M	\$211.4M
FY20	\$220M	\$213M
FY21	\$200M	\$210M
FY22	\$200M	--

Chapter 90 Program

- New Guidance Document released in August
 - Provides better service to our municipalities with both new and clarified information
 - Centralized and easy-to-read
 - Supports local decision-making and investment planning with new tools:
 - Planning Toolkit
 - Quick-Start Guide
- Website overhaul reorganized all new content
- Significant outreach conducted and more planned

Chapter 90 Program

Authorized through Massachusetts General Laws, Chapter 90A, Section 34, the Chapter 90 Program provides funding for the implementation of transportation projects.

The purpose of the Chapter 90 Program is to provide a source for improvements to and investment in the Commonwealth's transportation infrastructure. Funding in the Commonwealth is allocated accordingly, and allows municipalities to evaluate the funding dollars accordingly.

Chapter 90 Program
Municipal Guidance Document

August 2021

Using MaPIT for Chapter 90

- MaPIT is more than a place for submitting forms.
- The MassDOT GIS Services group hosts Geographic Information System (GIS) data for in-house ArcGIS users, and maintains a public portal for the public.
- These are all available on MaPIT to view, what:
- Road Inventory Layer
- Rail Inventory
- Bridge Database
- Highway Facilities/Assets
- Crash Data
- Transit
- Survey and Layouts
- EJ and Title VI
- Environmental Layers

Watch on YouTube

Chapter 90 Planning Toolkit

Instructions for Use

The Chapter 90 Planning Toolkit is an Excel spreadsheet that includes a collection of tabs that can be used to help plan projects funded through the Chapter 90 Program. More detailed guidance and information can be found on the Chapter 90 webpage: www.mass.gov/chapter-90-program.

Document Contents & Description	
Chapter 90 Planning Checklist	A basic list of steps that can be taken on an annual basis to prepare for Chapter 90 funding decisions.
Asset Condition List	A template that can be used to list all assets that may require maintenance as well as track year installed/built, most recent inspection date, and conditions.
Bridge Inventory List	A template that can be used to list all bridges and summarize key data from Inspection Reports to identify urgent needs.
Infrastructure Budget	A basic budget template to compile anticipated revenue from various funding sources, as well as anticipated uses of funds, for a given fiscal year.
Project Planning	A long-term planning tool that lists all potential projects and forecasts their costs into the future, projecting Chapter 90 allocations/carry-overs.
Unweighted Prioritization Matrix	A tool to prioritize or rank potential projects using criteria set by the user, where projects are scored evenly based on all the criteria.
Weighted Prioritization Matrix	A tool to prioritize or rank potential projects, allowing the user to input percent-weights to each category and rank accordingly.

How to Use this Document

The intent of the Chapter 90 Planning Toolkit is to provide municipalities with a basic resource for planning. The Planning Toolkit may be used as a guide for planning as deemed appropriate by the municipality. It should be noted that altering the format Excel document from its template form may undermine any preset formulas and conditions of the cells, thereby potentially resulting in mathematical errors. Municipalities should verify that all work is accurate. The Planning Toolkit does not replace any required local, state, or federal planning methods or approvals. This tool requires a fundamental understanding of Excel.