2020 Update to the RTP
For the Pioneer Valley MPO

February 21, 2019
What is the RTP

A long range planning document that:

- Outlines the direction of transportation planning improvements.
- Identifies existing and future regional transportation needs.
- Presents strategies to alleviate deficiencies in the regional transportation system.
- Demonstrates Air Quality Conformity
- Is financially constrained.
- Advances both construction projects and planning studies.
- Is equitable for all transportation users

- Top 100 Crash Locations
- Congestion Bottlenecks
- Transit Route Studies
- Performance Based Planning
- Roadway, Bridge, Transit Improvements
**Vision, Goals, and Emphasis Areas**

**1 Vision**
The Pioneer Valley region strives to create and maintain a safe, dependable, resilient, environmentally sound, and equitable transportation system for all. We pledge to balance performance based strategies and projects that promote sustainable development, reduced use of fossil fuels, healthy and livable communities, provide for efficient movement of people and goods, advance economic vitality and enhance connectivity in the region.

**13 Goals**
1. Safety
2. Operations and Maintenance
3. Environment
4. Coordination
5. Energy Efficiency
6. Cost Effectiveness
7. Intermodal Access
8. Multimodal Choices
9. Economic Productivity
10. Quality of Life
11. Environmental Justice
12. Land Use
13. Climate Change

**5 Emphasis Areas**
1. Safety and Security
2. The Movement of People
3. The Movement of Goods
4. The Movement of Information
5. Sustainability
Massachusetts Statewide Planning

- Statewide Planning Goals must be incorporated into the RTP.
Key Challenges

Commission on the Future of Transportation in the Commonwealth

• We can’t know the future.
• Disruptive technological change is inevitable.
• Massachusetts is growing and aging.
• The existing transportation system is made up of transportation haves and have-nots.
• Transportation needs vary across the Commonwealth and its communities.
• The transportation system needs to move more people in fewer vehicles.
• Land use and development decisions drive transportation patterns.
• The transportation system needs to be de-carbonized.
• Transportation infrastructure needs to be made resilient to a changing climate.
• Needed investments need to be prioritized and paid for.
RTP Problem Statements

- There are seriously insufficient resources to support the state of good repair of the regional transportation system.
- Expanded regional passenger rail and transit service is integral to education, economic development and workforce development.
- There is a need for innovative, cost-effective solutions independent of the regional transit authorities to provide services to rural areas.
- Intermodal connections are necessary to support and enhance transportation options for downtown areas and village centers.
- Increased and comprehensive resources and policies to improve sustainability in the transportation sector are necessary if the region is to meet its fair share of GHG reductions to comply with the Massachusetts Global Warming Solutions Act.
- The regional transportation infrastructure does not sufficiently accommodate the movement and distribution of freight.
- The built environment for bicycling and walking is hampered by significant barriers that include: narrow road and bridge cross sections, disjointed/unconnected off-road trail networks, a lack of sidewalks, uniformity in signs/markings and maintenance issues.
FAST Act

• Fixing America’s Surface Transportation Act
  o Replaces and builds on MAP-21

• Signed into law – December 4, 2015.
  o 5 Year Bill

• More consultation and participation
  o Encourages MPO consultation with other types of planning activities

• Other changes to planning and performance
  o TIPs/long-range plans must include facilities that support intercity transportation
  o New planning considerations: resiliency/reliability, stormwater mitigation, and enhancement of travel/tourism
  o Performance measures and targets
  o Adds a new program for the National Highway Freight Program
Performance Measures

• Required under MAP-21 (Section 1203), continued with FAST Act
• MPO Performance Measure targets required for the following:
  o PM1 – Safety Measures – Set in February 2018 – Updated Annually
    • Total number of fatalities
    • Rate of fatalities per 100 million vehicle miles traveled (VMT)
    • Total number of incapacitating injuries
    • Rate of incapacitating injuries per 100 million VMT
    • Total number of combined incapacitating injuries and fatalities for non-motorized modes
  o PM2 – Pavement/Bridge Performance – Set in November 2018
  o PM3 – System Performance Measures – Set in November 2018
• Other Information:
  o MPOs establish their own set of quantifiable performance targets or
  o MPOs adopt state performance targets (for the entire Commonwealth – no quantifiable targets required for region)
  o Targets must be incorporated into Certification Documents
2019 MassDOT Safety Performance Measures

Total Incapacitating Injuries
(5-year Averages)

- '08-'12: 3595
- '09-'13: 3438
- '10-'14: 3366
- '11-'15: 3265
- '12-'16: 3146
- '13-'17: Projected CY18 Target 2896
- '14-'18: Projected CY19 Target 2801
- '15-'19: 5.01

Incapacitating Injury Rate (per 100 million VMT)
- Actual Injuries
- Projected Targets
- Injury Rate
- Injury Rate Targets
- Trend Line (Injury Rate)
Comparison – Massachusetts Vs. Pioneer Valley

### Total Incapacitating Injuries - 5 Year Averages

<table>
<thead>
<tr>
<th>Year</th>
<th>Massachusetts Total</th>
<th>PVPC Total</th>
<th>Massachusetts Rate</th>
<th>PVPC Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-2012</td>
<td>3595</td>
<td>406.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009-2013</td>
<td>3438</td>
<td>439.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010-2014</td>
<td>3366</td>
<td>465.2</td>
<td></td>
<td></td>
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<tr>
<td>2011-2015</td>
<td>3265</td>
<td>478.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012-2016</td>
<td>3146</td>
<td>426</td>
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</table>
# Transportation Evaluation Criteria

<table>
<thead>
<tr>
<th>System Preservation, Modernization and Efficiency</th>
<th>Liveability</th>
<th>Mobility</th>
<th>Smart Growth and Economic Development</th>
<th>Safety and Security</th>
<th>Environment and Climate Change</th>
<th>Quality of Life</th>
<th>Environmental Justice and Title VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improves Substandard Pavement</td>
<td>8</td>
<td>3</td>
<td></td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Provides multi-modal access</td>
<td>6</td>
<td>2</td>
<td></td>
<td>5</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Reduces auto-dependency</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project serves a targeted development site</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completes off-road bike and pedestrian network</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improves Intermodal Connections</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduces congestion on freight routes</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Maximum Score

<table>
<thead>
<tr>
<th></th>
<th>19</th>
<th>12</th>
<th>17</th>
<th>10</th>
<th>16</th>
<th>12</th>
<th>11</th>
<th>3</th>
</tr>
</thead>
</table>

Enhances or preserves greenways and blueways
Reduces and limits disproportionate impacts on an EJ community
Reduces and limits disproportionate impacts on Title VI community
Improves transit for EJ populations
Improves transit for Title VI populations
Creates an EJ Burden
Creates an Title VI Burden
Length of Time Project has been in queue for TIP funding
Supports designated scenic byways
Implements ITS Strategies
Improves Network Wayfinding
Supports Green Communities
Health Impact Assessment
Improves storm resilience
# RTP Survey

- [https://www.surveymonkey.com/r/T3N5M2K](https://www.surveymonkey.com/r/T3N5M2K)

## What type of projects are most important to you?

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects that improve the roadway surface.</td>
<td>4.64</td>
</tr>
<tr>
<td>Projects that enhance the movement and connectivity of pedestrians and bicycles.</td>
<td>7.17</td>
</tr>
<tr>
<td>Projects that expand or enhance transit.</td>
<td>6.29</td>
</tr>
<tr>
<td>Projects that reduce traffic congestion and travel time.</td>
<td>3.58</td>
</tr>
<tr>
<td>Projects that promote responsible economic growth and development.</td>
<td>4.42</td>
</tr>
<tr>
<td>Projects that improve safety.</td>
<td>5.58</td>
</tr>
<tr>
<td>Projects that protect or enhance environmental resources</td>
<td>4.88</td>
</tr>
<tr>
<td>Projects that preserve existing regional assets</td>
<td>4.64</td>
</tr>
<tr>
<td>Bridge projects</td>
<td>3.80</td>
</tr>
</tbody>
</table>

## Top 3 Transportation Improvements

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Mass Turnpike Exit</td>
<td>15%</td>
</tr>
<tr>
<td>East/West Passenger Rail to Boston</td>
<td>75%</td>
</tr>
<tr>
<td>Improvements to I-91 in Springfield</td>
<td>12%</td>
</tr>
<tr>
<td>Adequate Regional Transit Funding</td>
<td>72%</td>
</tr>
<tr>
<td>Bicycle/Pedestrian Connectivity</td>
<td>68%</td>
</tr>
<tr>
<td>Adequate Road Maintenance Funds</td>
<td>41%</td>
</tr>
<tr>
<td>Other</td>
<td>15%</td>
</tr>
</tbody>
</table>

## Mode Preferences

<table>
<thead>
<tr>
<th>Mode</th>
<th>Primary</th>
<th>Desired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>71%</td>
<td>19%</td>
</tr>
<tr>
<td>Bus</td>
<td>6%</td>
<td>13%</td>
</tr>
<tr>
<td>Train</td>
<td>0%</td>
<td>9%</td>
</tr>
<tr>
<td>Walking</td>
<td>10%</td>
<td>17%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>10%</td>
<td>36%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>6%</td>
</tr>
</tbody>
</table>
What does regional transportation mean to you?
Demographics

- The RTP considers projected changes in population, households, and employment.
  - Used for Air Quality Conformity and to identify traffic impacts of future improvements.
- MassDOT led effort coordinated with a statewide committee.
  - UMass Donahue Institute hired to assist
- Population and Households both projected to increase. Employment is projected to slightly decrease.

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>621,570</td>
<td>632,012</td>
<td>647,277</td>
<td>656,992</td>
</tr>
<tr>
<td>Households</td>
<td>238,629</td>
<td>255,326</td>
<td>270,293</td>
<td>278,094</td>
</tr>
<tr>
<td>Employment</td>
<td>252,156</td>
<td>261,527</td>
<td>260,253</td>
<td>260,838</td>
</tr>
</tbody>
</table>
• PVPC Employment Scenario results in an additional 23,105 employees.
• MassDOT Employment Projections will be used for Air Quality Conformity
• PVPC Employment Projections will be used in the Regional Transportation Model.
## Funding

- Projects must come from a conforming RTP in order to be eligible for Federal Funding
- The RTP must demonstrate Financial Constraint
- As transportation construction costs continue to rise, it is becoming much more difficult to maintain the regional transportation system
- FY2020 Highway TIP Funding = $25,782,146 (not including bridges)
- Must consider the impacts of inflation – currently 4%/year

<table>
<thead>
<tr>
<th></th>
<th>2020-2024</th>
<th>2025-2029</th>
<th>2030-2034</th>
<th>2035-2039</th>
<th>2040</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highway Financial</strong></td>
<td>$134,136,805</td>
<td>$153,789,263</td>
<td>$188,833,296</td>
<td>$209,293,530</td>
<td>$44,516,326</td>
<td>$730,569,220</td>
</tr>
<tr>
<td><strong>Interstate Pavement</strong></td>
<td>$13,381,406</td>
<td>$16,897,096</td>
<td>$20,747,445</td>
<td>$22,995,447</td>
<td>$4,891,087</td>
<td>$78,912,481</td>
</tr>
<tr>
<td><strong>Non-Interstate Pavement</strong></td>
<td>$47,144,718</td>
<td>$56,120,172</td>
<td>$68,908,303</td>
<td>$76,374,571</td>
<td>$16,244,722</td>
<td>$264,792,486</td>
</tr>
<tr>
<td><strong>Remaining Statewide Programs</strong></td>
<td>$121,332,223</td>
<td>$136,359,264</td>
<td>$167,431,515</td>
<td>$185,572,848</td>
<td>$39,470,984</td>
<td>$650,166,834</td>
</tr>
<tr>
<td><strong>Bridge Preservation</strong></td>
<td>$54,049,500</td>
<td>$55,238,589</td>
<td>$56,453,838</td>
<td>$57,695,822</td>
<td>$11,793,026</td>
<td>$235,230,775</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$370,044,652</td>
<td>$418,404,384</td>
<td>$502,374,397</td>
<td>$551,932,218</td>
<td>$116,916,145</td>
<td>$1,959,671,796</td>
</tr>
</tbody>
</table>
Roadway Maintenance Needs

- Scenario Planning used in 2016 RTP Update to estimate the investment needs to bring federal aid eligible roadways to a state of good repair.
- Scenario 4 assumes investments are made to increase regional pavement condition by 5% by 2025. This required more than double the current investment - $328 million over 5 years.
- Local Roads account for 66% of regional roadway miles.
# Transit Funding Needs

## STATE ASSISTANCE TO PVTA

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Funding</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY14</td>
<td>$18.40M</td>
<td>Transportation Reform Act</td>
</tr>
<tr>
<td>FY15</td>
<td>$22.90M</td>
<td>Service added; ridership hits 12M</td>
</tr>
<tr>
<td>FY16</td>
<td>$23.56M</td>
<td>More Service; ridership hits 12.5M</td>
</tr>
<tr>
<td>FY17</td>
<td>$23.55M</td>
<td>Used Capital Funds to cover deficit</td>
</tr>
<tr>
<td>FY18</td>
<td>$23.00M</td>
<td>Deficit $1.2M; service cut 4%; ridership drops 800,000</td>
</tr>
<tr>
<td>FY19</td>
<td>$23.00M</td>
<td>Fare increase implemented 7/1/2018, $800,000 in service reductions implemented 9/1/2018</td>
</tr>
</tbody>
</table>

**FY20 $23.00M** – Governor’s Budget = Level Funding
New Massachusetts Turnpike Interchange

Algerie Road, Otis

Blandford Maintenance Area

Blandford Rest Area
Passenger Rail

• North - South Improvements
  o Springfield to New Haven
    • Joint project with Connecticut
    • Expanded service to 12 total southbound trips/day in 2018.
  o Greenfield to Springfield
    • Currently 1 train/day (Vermonter)
    • Exploring possibility of providing additional trips/day
    • Increased service could begin June/July.

• East – West Improvements
  o Currently 1 train/day (Amtrak Lake Shore Limited)
  o Ongoing study for passenger rail service connections between Pittsfield and Boston.
    • Unlike previous NNEIRI Study (2014) this will not include service to Montreal and will include 1 high speed (>90 mph) option.
  o Study expected to be complete in late 2019/early 2020
Travel Operations and Performance

- Pittsfield to Springfield: Amtrak 1/day, 52 miles, 1:16
- Springfield to Worcester: Amtrak 1/day, 54 miles, 1:15
- Worcester to Boston: MBTA 20/weekday, Amtrak 1/day, 44.4 miles, 1:06 - 1:20/1:13
- Pittsfield to Boston: I-90 54 miles, 1:00 - 1:15
- Springfield to Worcester: I-90 53 miles, 0:50 - 1:20
- Worcester to Boston: I-90 45 miles, 0:45 - 2:30
RTP Development Schedule

- Focus Groups – Nov./Dec. 2018
- RTP Project Website
- RTP Survey – ongoing
- Existing Conditions – early March
- Environmental Consultation – early April
- Financial Plan/Conformity – April/May 2019
- Draft RTP – June 2019
- 21 Day Public Comment Period
- Plan Endorsement – 7/23/2019

Comments to: gmroux@pvpc.org