Catalyst for Regional Progress

PVPC

Timothy W. Brennan, Executive Director

# Summary of Proposed Changes to the 2019-2023 Transportation Improvement Program (TIP) – April 2019

## HIGHWAY

**FFY 2019**

Section 1A Regionally Prioritized Projects

- Worthington 606912 – Change project description to read: WORTHINGTON- RECONSTRUCTION & RELATED WORK ON ROUTE 143 (PHASE I) COLD STREET TO CHESTERFIELD TOWN LINE

Section 1B Earmark or Discretionary Grant Funded Projects

- Add Project 609429 - PALMER- WARE- RESURFACING OF ROUTE 32 for $3,204,720 (HPP)
- Add Project PV0002 - LONGMEADOW - Rehabilitate Pondside Rd, a section of Tina Lane including a gravel parking area, replace 2 culverts for $2,260,000 (FLAP Funding)

Section 2A / State Prioritized Reliability Projects

- Change funding for Holyoke Systematic Bridge Maintenance (308251) from NHPP-off to NHPP-on

Section 2C / State Prioritized Expansion Projects

- Increase cost of 603783 Westfield Columbia Greenway Rail Trail (Center Section) from $6,532,895 to $7,474,369

Performance Measure Section of TIP

- Amendment to FFY 2019-2023 TIP outlining the MPO adopted federal performance measure targets; linkage to priority investments; and narrative for the target setting procedure

STP = Surface Transportation Program

HSIP = Highway Safety Improvement Program

SRS = Safe Routes to School

FLAP = Federal Lands Access Program

CMAQ = Congestion Mitigation Air Quality

SW = Statewide

NHFP = National Highway Freight Program

# 2019 Pioneer Valley Region Transportation Improvement Program

| Amendment / Adjustment Type ▼ | STIP Program ▼ | MassDOT Project ID ▼ | Metropolitan Planning Organization ▼ | Municipality Name ▼ | MassDOT Project Description▼ | MassDOT District ▼ | Funding Source ▼ | Total Programmed Funds ▼ | Federal Funds ▼ | Non-Federal Funds ▼ | Additional Information ▼ *Present information as follows, if applicable:* **a)** Planning / Design / or Construction; **b)** total project cost and funding sources used; **c)** advance construction |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **►Section 1A / Regionally Prioritized Projects** | | | | | | | | | | | |
| **►Regionally Prioritized Projects** | | | | | | | | | | | |
| | Intersection Improvements | 608411 | Pioneer Valley | Springfield | SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BAY STREET AND BERKSHIRE AVENUE | 2 | HSIP | $ 1,000,000 | $ 900,000 | $ 100,000 | Construction / (YOE $1,886,880 STP) / 49.5 TEC / 25% HSIP, CMAQ |
| | Intersection Improvements | 608411 | Pioneer Valley | Springfield | SPRINGFIELD- INTERSECTION IMPROVEMENTS AT BAY STREET AND BERKSHIRE AVENUE | 2 | CMAQ | $ 886,880 | $ 709,504 | $ 177,376 | Construction / (YOE $1,886,880 STP) / 49.5 TEC / 25% HSIP, CMAQ |
| | Roadway Reconstruction | 600513 | Pioneer Valley | Agawam | AGAWAM- RECONSTRUCTION OF ROUTE 187 FROM 425 FT. SOUTH OF S. WESTFIELD STREET TO ROUTE 57 (0.3 MILES - PHASE I) | 2 | STP | $ 2,622,622 | $ 2,098,098 | $ 524,524 | Construction / (YOE $2,622,622 STP) / 27 TEC / 25% STP |
| | Intersection Improvements | 608412 | Pioneer Valley | Belchertown | BELCHERTOWN- IMPROVEMENTS & RELATED WORK ON ROUTES 202 & 21, FROM TURKEY HILL ROAD TO SOUTH MAIN STREET (1.2 MILES) | 2 | STP | $ 5,143,503 | $ 4,114,802 | $ 1,028,701 | Construciton / (YOE $5,143,503 STP) / 59 TEC / 25% STP - 75% Due May 27, 2018 |
| | Intersection Improvements | 607987 | Pioneer Valley | Ware | WARE- INTERSECTION IMPROVEMENTS @ MAIN STREET, WEST STREET, NORTH STREET, SOUTH STREET & CHURCH STREET | 2 | STP | $ 1,000,000 | $ 800,000 | $ 200,000 | Construction / (YOE $2,475,087) STP) / 55 TEC / 75% STP, CMAQ, TAP |
| | Intersection Improvements | 607987 | Pioneer Valley | Ware | WARE- INTERSECTION IMPROVEMENTS @ MAIN STREET, WEST STREET, NORTH STREET, SOUTH STREET & CHURCH STREET | 2 | CMAQ | $ 1,000,000 | $ 800,000 | $ 200,000 | Construction / (YOE $2,475,087) STP) / 55 TEC / 75% STP, CMAQ, TAP |
| | Intersection Improvements | 607987 | Pioneer Valley | Ware | WARE- INTERSECTION IMPROVEMENTS @ MAIN STREET, WEST STREET, NORTH STREET, SOUTH STREET & CHURCH STREET | 2 | TAP | $ 475,087 | $ 380,070 | $ 95,017 | Construction / (YOE $2,475,087) STP) / 55 TEC / 75% STP, CMAQ, TAP |
| | Roadway Reconstruction | 604962 | Pioneer Valley | Holland | HOLLAND- RESURFACING & RELATED WORK ON BRIMFIELD ROAD, FROM THE BRIMFIELD/HOLLAND T.L. TO WALES ROAD (1.4 MILES - PHASE I) | 2 | STP | $ 2,919,446 | $ 2,335,557 | $ 583,889 | Construction / (YOE $2,919,446) STP) / 26.5 TEC / 25% - 25% Comment Received |
| AMENDMENT:Change Project Description | Roadway Reconstruction | 606912 | Pioneer Valley | Worthington | WORTHINGTON- RECONSTRUCTION & RELATED WORK ON ROUTE 143 (PHASE I) COLD STREET TO CHESTERFIELD TOWN LINE | 1 | STP | $ 8,900,000 | $ 7,120,000 | $ 1,780,000 | Construction / (YOE $8,900,000) STP / 41.5 TEC / 75% Project Phased Total project cost was $16,300,000 STP |
| | Planning / Adjustments / Pass-throughs | PV0001 | Pioneer Valley | multiple | P21 Express - Year 2 Operating | 2 | CMAQ | $ 500,000 | $ 400,000 | $ 100,000 | P21 Express - Year 2 Operating CMAQ |
| | | | | | | | Regionally Prioritized Projects subtotal ► | **$ 24,447,538** | $ 19,658,030 | $ 4,789,508 | ◄ 80% Federal + 20% Non-Federal |

**►Section 1A / Fiscal Constraint Analysis**

| | | | | |
|---|---|---|---|---|
| **Total Regional Federal Aid Funds Programmed ►** | **$ 24,447,538** | **$ 24,855,247** | **◄Total Budget** | **$ 407,709** **Target Funds Available** |
| STP programmed ► | $ 20,585,571 | $ 16,468,457 | **◄ STP** | |
| HSIP programmed ► | $ 1,000,000 | $ 900,000 | **◄ HSIP** | |
| CMAQ programmed ► | $ 2,386,880 | $ 1,909,504 | **◄ CMAQ** | |
| TAP programmed ► | $ 475,087 | $ 380,070 | **◄ TAP** | |

*Section 1A instructions:* **MPO Template Name)** Choose Regional Name from dropdown list to populate header and MPO column; **Column C)** Enter ID from ProjectInfo; **Column E)** Choose Municipality Name from dropdown list; **Column H)** Choose the Funding Source being used for the project - if multiple funding sources are being used enter multiple lines; **Column I)** Enter the total amount of funds being programmed in this fiscal year and for each funding source; **Column J)** Federal funds autocalculates. Please verify the amount and only change if needed for flex. **Column K) N**on-federal funds autocalculates. Please verify the split/match - if matching

**►Section 1B / Earmark or Discretionary Grant Funded Projects**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **►Other Federal Aid** | | | | | | | | | | | |
| AMENDMENT:Add Project | Roadway Reconstruction | 609429 | Pioneer Valley | Palmer | PALMER- WARE- RESURFACING OF ROUTE 32 | 2 | HPP | $ 3,204,720 | $ 2,563,776 | $ 640,944 | Repurposed Earmark MA 117 |
| AMENDMENT:Add Project | Roadway Reconstruction | PV0002 | Pioneer Valley | Longmeadow | LONGMEADOW - Rehabilitate Pondside Rd, a section of Tina Lane including a gravel parking area, replace 2 culverts | 2 | Other FA | $ 2,260,000 | $ 1,808,000 | $ 452,000 | FLAP Funding |
| | | | | | | | Other Federal Aid subtotal ► | **$ 2,260,000** | $ 1,808,000 | $ 452,000 | ◄ Funding Split Varies by Funding Source |

# 2019 Pioneer Valley Region Transportation Improvement Program

| Amendment / Adjustment Type ▼ | STIP Program ▼ | MassDOT Project ID ▼ | Metropolitan Planning Organization ▼ | Municipality Name ▼ | MassDOT Project Description▼ | MassDOT District ▼ | Funding Source ▼ | Total Programmed Funds ▼ | Federal Funds ▼ | Non-Federal Funds ▼ | Additional Information ▼ *Present information as follows, if applicable:* **a)** Planning / Design / or Construction; **b)** total project cost and funding sources used; **c)** advance construction |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **►Section 2A / State Prioritized Reliability Projects** | | | | | | | | | | | |
| **►Bridge Program / Inspections** | | | | | | | | | | | |
| | Bridge Program | | Pioneer Valley | | Bridge Inspection | | | $ - | $ - | $ - | |
| | | | | | | | Bridge Program / Inspections subtotal ► | **$ -** | $ - | $ - | ◄ Funding Split Varies by Funding Source |
| **►Bridge Program / Off-System** | | | | | | | | | | | |
| | Bridge Program | 608429 | Pioneer Valley | | MIDDLEFIELD- BRIDGE SUPERSTRUCTURE REPLACEMENT, M-19-010, CHESTER ROAD OVER SMART BROOK | 1 | STP-BR-OFF | $ 970,807 | $ 776,645 | $ 194,162 | |
| | | | | | | | Bridge Program / Off-System subtotal ► | **$ 970,807** | $ 776,645 | $ 194,162 | ◄ 80% Federal + 20% Non-Federal |
| **►Bridge Program / On-System (NHS)** | | | | | | | | | | | |
| | Bridge Program | | Pioneer Valley | | Bridge Program / On-System (NHS) | 1 | | | $ - | $ - | |
| | | | | | | | Bridge Program / On-System (NHS) subtotal ► | **$ -** | $ - | $ - | ◄ Funding Split Varies by Funding Source |
| **►Bridge Program / On-System (Non-NHS)** | | | | | | | | | | | |
| | Bridge Program | | Pioneer Valley | | Bridge Program / On-System (Non-NHS) | | | $ - | $ - | $ - | |
| | | | | | | | Bridge Program / On-System (Non-NHS) subtotal ► | **$ -** | $ - | $ - | ◄ 80% Federal + 20% Non-Federal |
| **►Bridge Program / Systematic Maintenance** | | | | | | | | | | | |
| | Bridge Program | 608928 | Pioneer Valley | Huntington | HUNTINGTON- SYSTEMATIC BRIDGE MAINTENANCE, H-27-019, ROUTE 112 OVER SYKES BROOK | 1 | NHPP-Off | $ 526,506 | $ 421,205 | $ 105,301 | |
| ADJUSTMENT:Change Funding Source | Bridge Program | 608251 | Pioneer Valley | Holyoke | HOLYOKE- SYSTEMATIC BRIDGE MAINTENANCE ON H-21-047 AND H-21-049 | 2 | NHPP-On | $ 1,989,000 | $ 1,591,200 | $ 397,800 | |
| | | | | | | | Bridge Program / Systematic Maintenance subtotal ► | **$ 1,989,000** | $ 1,591,200 | $ 397,800 | ◄ Funding Split Varies by Funding Source |
| **►Interstate Pavement** | | | | | | | | | | | |
| | Interstate Pavement | 607560 | Pioneer Valley | Multiple | CHICOPEE- HOLYOKE- INTERSTATE MAINTENANCE AND RELATED WORK ON I-391 | 2 | NHPP | $ 11,309,875 | $ 10,178,888 | $ 1,130,988 | |
| | | | | | | | Insterstate Pavement subtotal ► | **$ 11,309,875** | $ 10,178,888 | $ 1,130,988 | ◄ 90% Federal + 10% Non-Federal |
| **►Non-Interstate Pavement** | | | | | | | | | | | |
| | Non-Interstate Pavement | 607474 | Pioneer Valley | Multiple | GRANBY- SOUTH HADLEY- RESURFACING AND RELATED WORK ON ROTUE 202 | 2 | NHPP | $ 5,752,500 | $ 4,602,000 | $ 1,150,500 | |
| | | | | | | | Non-Interstate Pavement subtotal ► | **$ 5,752,500** | $ 4,602,000 | $ 1,150,500 | ◄ 80% Federal + 20% Non-Federal |
| **► Roadway Improvements** | | | | | | | | | | | |
| | Roadway Improvements | | Pioneer Valley | | Roadway Improvements | | | $ - | $ - | $ - | |
| | | | | | | | Roadway Improvements subtotal ► | **$ -** | $ - | $ - | ◄ 80% Federal + 20% Non-Federal |
| **► Safety Improvements** | | | | | | | | | | | |
| | Safety Improvements | 607736 | Pioneer Valley | Chicopee | CHICOPEE- SIGNAL & INTERSECTION IMPROVEMENTS AT 13 INTERSECTIONS ALONG ROUTE 33 (MEMORIAL DRIVE), FROM FULLER ROAD TO ABBEY STREET | 2 | HSIP | $ 6,001,387 | $ 5,401,248 | $ 600,139 | |
| | Safety Improvements | 608600 | Pioneer Valley | Multiple | CHICOPEE- WEST SPRINGFIELD- HIGHWAY LIGHTING UPGRADE ON I-91 | 2 | NHPP | $ 4,300,759 | $ 3,440,607 | $ 860,152 | |
| | | | | | | | Safety Improvements subtotal ► | **$ 10,302,146** | $ 8,841,855 | $ 1,460,291 | ◄ Funding Split Varies by Funding Source |
| **►Section 2B / State Prioritized Modernization Projects** | | | | | | | | | | | |
| **► ADA Retrofits** | | | | | | | | | | | |
| | ADA Retrofits | | Pioneer Valley | | ADA Retrofits | | | $ - | $ - | $ - | |

# 2019 Pioneer Valley Region Transportation Improvement Program

| Amendment / Adjustment Type ▼ | STIP Program ▼ | MassDOT Project ID ▼ | Metropolitan Planning Organization ▼ | Municipality Name ▼ | MassDOT Project Description▼ | MassDOT District ▼ | Funding Source ▼ | Total Programmed Funds ▼ | Federal Funds ▼ | Non-Federal Funds ▼ | Additional Information ▼ *Present information as follows, if applicable:* **a)** Planning / Design / or Construction; **b)** total project cost and funding sources used; **c)** advance construction |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | ADA Retrofits subtotal ► | **$ -** | $ - | $ - | ◄ 80% Federal + 20% Non-Federal |
| **►Intersection Improvements** | | | | | | | | | | | |
| | Intersection Improvements | | Pioneer Valley | | Intersection Improvements | | | $ - | $ - | $ - | |
| | | | | | | | Intersection Improvements subtotal ► | **$ -** | $ - | $ - | ◄ Funding Split Varies by Funding Source |
| **►Intelligent Transportation Systems** | | | | | | | | | | | |
| | Intelligent Transportation Systems | | Pioneer Valley | | Intelligent Transportation Systems | | | $ - | $ - | $ - | |
| | | | | | | | Intelligent Transportation System subtotal ► | **$ -** | $ - | $ - | ◄ 80% Federal + 20% Non-Federal |
| **►Roadway Reconstruction** | | | | | | | | | | | |
| | Roadway Reconstruction | 608790 | Pioneer Valley | Holyoke | HOLYOKE- IMPROVEMENTS AT KELLY COMMUNITY SCHOOL (SRTS) | 2 | TAP | $ 1,264,935 | $ 1,011,948 | $ 252,987 | |
| | Roadway Reconstruction | 606555 | Pioneer Valley | Northampton | NORTHAMPTON- ROUNDABOUT CONSTRUCTION AT INTERSECTION ROUTES 5/10 (NORTH KING STREET) & HATFIELD STREET | 2 | CMAQ | $ 4,109,480 | $ 3,287,584 | $ 821,896 | |
| | | | | | | | Roadway Reconstruction subtotal ► | **$ 5,374,415** | $ 4,299,532 | $ 1,074,883 | ◄ Funding Split Varies by Funding Source |
| **►Section 2C / State Prioritized Expansion Projects** | | | | | | | | | | | |
| **►Bicycles and Pedestrians** | | | | | | | | | | | |
| AMENDMENT:Increase Cost | Bicycles and Pedestrians | 603783 | Pioneer Valley | Westfield | WESTFIELD- COLUMBIA GREENWAY RAIL TRAIL CONSTRUCTION (CENTER DOWNTOWN SECTION), FROM EAST SILVER STREET TO COWLES COURT, INCLUDES W-25,014, W-25-015, W-25-016, W-25-017, W-25-018 & W-25-019 | 2 | CMAQ | $ 7,474,369 | $ 5,979,495 | $ 1,494,874 | Construction / PSAC score 39.5 Increase cost from $6,532,895 |
| | | | | | | | Bicycles and Pedestrians subtotal ► | **$ 7,474,369** | $ 5,979,495 | $ 1,494,874 | ◄ 80% Federal + 20% Non-Federal |
| **►Capacity** | | | | | | | | | | | |
| | Capacity | | Pioneer Valley | | Capacity | | | $ - | $ - | $ - | |
| | | | | | | | Capacity subtotal ► | **$ -** | $ - | $ - | ◄ Funding Split Varies by Funding Source |
| **►Section 3 / Planning / Adjustments / Pass-throughs** | | | | | | | | | | | |
| **►Planning / Adjustments / Pass-throughs** | | | | | | | | | | | |
| | | | Pioneer Valley | | ABP GANS Repayment | Multiple | | $ - | $ - | $ - | |
| | | | | | | | Other Statewide Items subtotal ► | **$ -** | $ - | $ - | ◄ Funding Split Varies by Funding Source |
| **►Section 4 / Non-Federally Aided Projects** | | | | | | | | | | | |
| **►Non-Federally Aided Projects** | | | | | | | | | | | |
| | Non-Federal Aid | | Pioneer Valley | | Non-Federal Aid | | | $ - | | $ - | |
| | Non-Federally Aided Projects | | Pioneer Valley | | Non-Federal Aid | | | $ - | | $ - | |
| | | | | | | | Non-Federal Aid subtotal► | **$ -** | | $ - | ◄100% Non-Federal |

## 2019 Summary

| | TIP Section 1 - 3: ▼ | TIP Section 4: ▼ | Total of All Projects ▼ | |
|---|---|---|---|---|
| Total ► | $ 69,880,650 | $ - | $ 69,880,650 | ◄ Total Spending in Region |
| Federal Funds ► | $ 57,735,645 | | $ 57,735,645 | ◄ Total Federal Spending in Region |

# 2019 Pioneer Valley Region Transportation Improvement Program

| Amendment / Adjustment Type ▼ | STIP Program ▼ | MassDOT Project ID ▼ | Metropolitan Planning Organization ▼ | Municipality Name ▼ | MassDOT Project Description▼ | MassDOT District ▼ | Funding Source ▼ | Total Programmed Funds ▼ | Federal Funds ▼ | Non-Federal Funds ▼ | Additional Information ▼ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Non-Federal Funds ► | $ 12,145,005 | $ - | $ 12,145,005 | ◄ Total Non-Federal Spending in Region |

***Present information as follows, if applicable:*** **a)** Planning / Design / or Construction; **b)** total project cost and funding sources used; **c)** advance construction

701 CMR 7.00 Use of Road Flaggers and Police Details on Public Works Projects / 701 CMR 7.00 (the Regulation) was promulgated and became law on October 3, 2008. Under this Regulation, the CMR is applicable to any Public works Project that is performed within the limits of, or that impact traffic on, any

## PERFORMANCE MEASURES

The FAST Act requires MPOs, in collaboration with the state DOT and transit agencies, to formally establish targets for performance measures aligned with the national goals. Performance Based Planning and Programming (PBPP) refers to the application of performance management within the parameters of the FAST Act to achieve desired outcomes for the multimodal transportation system. It is intended advance transportation investments based on their ability to meet established goals. This includes setting targets for the performance measures identified in the FAST Act.

Performance measures are intended to monitor and track performance over time and assess the effectiveness of projects and strategies in meeting the national goal areas. In the Pioneer Valley region, performance based planning methods have been used in the development of the Transportation Evaluation Criteria to program projects as part of the Regional Transportation Improvement Program for many years.

USDOT implemented the federal PBPP requirements through a series of phased rulemakings. At the conclusion of this rulemaking process, the Commonwealth of Massachusetts has twelve months to establish statewide performance targets for each required federal performance measure. The Pioneer Valley MPO has 180 days from the date of Commonwealth's adoption of the statewide performance targets to either adopt the statewide targets or establish their own regional performance targets.

The Federal Transit Administration has finalized a rule to define requirements for transit asset management. This rule requires public transportation providers to develop and implement transit asset management (TAM) plans. TAM plans must include an asset inventory, condition assessments of inventoried assets, and a prioritized list of investments to improve the state of good repair of capital assets. This rule also establishes state of good repair standards and four state of good repair performance measures.

**Table 1 Regional Performance Measure Status**

| Final Rule | Effective Date | Status | Updated |
|---|---|---|---|
| Safety Performance Measures (PM1) | April 14, 2016 | MPO adopted state targets on February 26, 2019 | Annually |
| Pavement/Bridge Performance Measures (PM2) | May 20, 2017 | MPO adopted state targets on October 23, 2018 | Every Two Years |
| System Performance Measures (PM3) | May 20, 2017 | MPO adopted state targets on September 25, 2018 | Every Two Years |
| Transit Asset Management Plan (TAM) | July 26, 2016 | March 26, 2019 | Every Four Years |

As can be seen from the above table, the Pioneer Valley MPO has elected to adopt the State performance targets for PM1, PM2 and PM3. The MPO will continue to work in close collaboration with the PVTA to incorporate their TAM performance targets in to the regional transportation planning process. The UPWP includes specific tasks to support the performance based planning and programming for the Pioneer Valley MPO. The latest performance target for each adopted performance measure is presented in the following section.

### SAFETY PERFORMANCE MEASURES (PM1)

Pioneer Valley has chosen to adopt the statewide safety performance measure targets set by MassDOT for Calendar Year (CY) 2019. In setting these targets, MassDOT has followed FHWA guidelines by using statewide crash data and Highway Performance Monitoring System (HPMS) data for vehicle miles traveled (VMT) in order to calculate 5 year, rolling average trend lines for all FHWA-defined safety measures. For CY 2019 targets, four of the five safety measures—total number of fatalities, rate of fatalities per 100 million vehicle miles traveled, total number of incapacitating injuries, and rate of incapacitating injuries per 100 million VMT—were established by extending their trend lines into the 2015-2019 period. All four of these measures reflect a modest decrease in statewide trends. The fifth safety measure, the total number of combined incapacitating injuries and fatalities for non-motorized modes, is the only safety measure for which the statewide trend line depicts an increase. MassDOT's effort to increase non-motorized mode share throughout the Commonwealth has posed a challenge to simultaneously reducing non-motorized injuries and fatalities. Rather than adopt a target that depicts an increase in the trend line, MassDOT has elected to establish a target of non-motorized fatalities and injuries and for CY 2019 that remains constant from the rolling average for 2012–2016. In recent years, MassDOT and the Pioneer Valley have invested in "complete streets," bicycle and pedestrian infrastructure, intersection and safety improvements in both the Capital Investment Plan (CIP) and Statewide Transportation Improvement Program (STIP) to address increasing mode share and to incorporate safety mitigation elements into projects. Moving forward, Pioneer Valley, alongside MassDOT, is actively seeking to improve data collection and methodology for bicycle and pedestrian VMT counts and to continue analyzing crash clusters and crash counts that include both motorized and non-motorized modes in order to address safety issues at these locations.

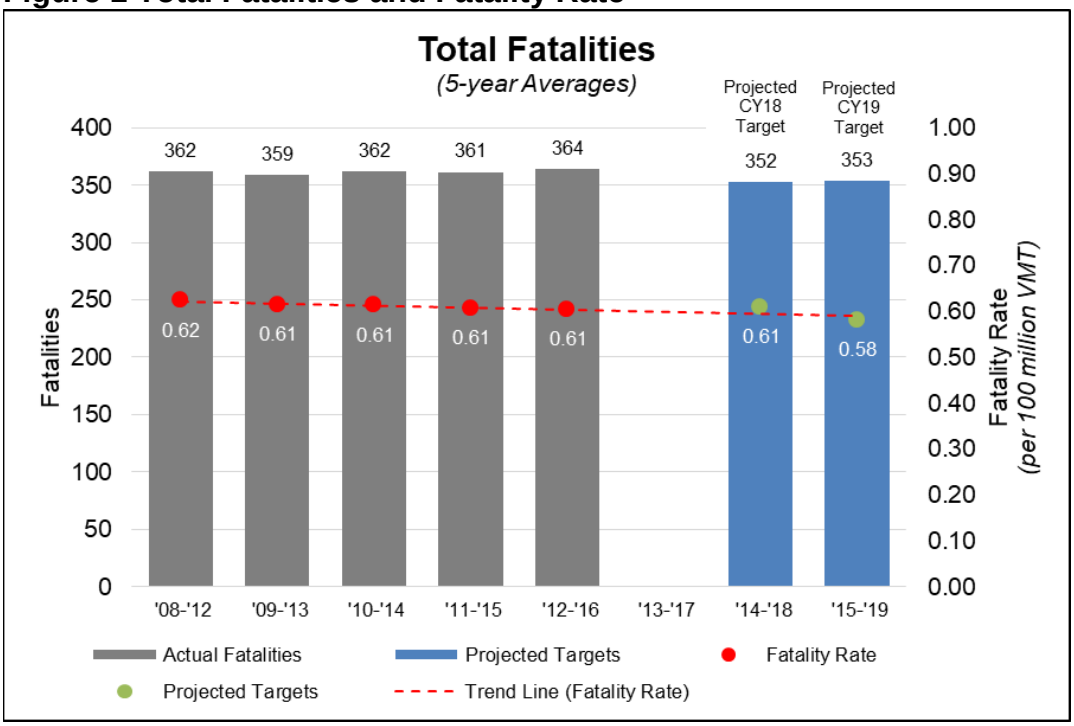
In all safety categories, MassDOT has established a long-term target of "Toward Zero Deaths" through MassDOT's Performance Measures Tracker[1] and will be establishing safety targets for the MPO to consider for adoption each calendar year. While the MPO is not required by FHWA to report on annual safety performance targets, FHWA guidelines require MPOs to adopt MassDOT's annual targets or to establish their own each year.

The safety measures MassDOT has established for CY 2019, and that Pioneer Valley has adopted, are as follows:

[1] https://www.mass.gov/lists/tracker-annual-performance-management-reports

1) Fatalities: The target number of fatalities for years CY 2019 is 353, down from an average of 364 fatalities for the years 2012–2016. [See Figure 1 for Our MPO vs. statewide comparison of the trend for this performance measure]

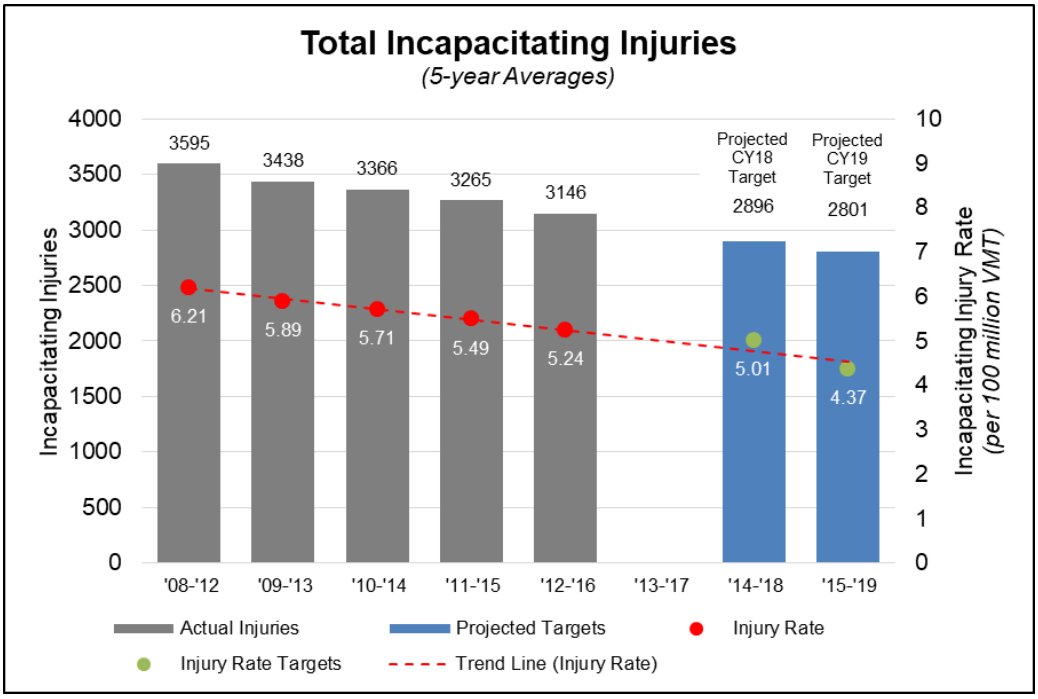
**Figure 1 Total Fatalities and Fatality Rate**




2) Rate of Fatalities per 100 million VMT: The target fatality rate for years CY 2019 is 0.58, down from a 0.61 average for years 2012–2016. [See Figure 1 for Our MPO vs. statewide comparison of the trend for this performance measure]

3) Serious Injuries: The target number of incapacitating injuries for CY2019 is 2801, down from the average of 3146 for years 2012–2016. [See Figure 2 for Our MPO vs. statewide comparison of the trend for this performance measure]

**Figure 2 Total Incapacitating Injuries and Injury Rate**




4) Rate of Incapacitating Injuries per 100 million VMT: The incapacitating injury rate target for CY2019 is 4.37 per year, down from the 5.24 average rate for years 2012–2016. [See Figure 2 for Our MPO vs. statewide comparison of the trend for this performance measure]

## Bridge & Pavement Performance Measures (PM2)

Pioneer Valley has chosen to adopt the 2-year (2020) and 4-year (2022) statewide bridge and pavement performance measure targets set by MassDOT. MassDOT was required to adopt a statewide target by May 20th, 2018, with MPOs either adopting the statewide target or establishing their own by November 2018. In setting these targets, MassDOT has followed FHWA guidelines by measuring bridges and pavement condition using the 9-point National Bridge Inventory Standards (NBIS); the International Roughness Index (IRI); the presence of pavement rutting; and the presence of pavement cracking. 2-year and 4-year targets were set for six individual performance measures: percent of bridges in good condition; percent of bridges in poor condition; percent of Interstate pavement in good condition; percent of Interstate pavement in poor condition; percent of non-Interstate pavement in good condition; and percent of non-Interstate pavement in poor condition. All of the above performance measures are tracked in greater detail in MassDOT's Transportation Asset Management Plan (TAMP), which is due to be finalized in July 2019.

Targets for bridge-related performance measures were determined by identifying which bridge projects are programmed and projecting at what rate bridge conditions deteriorate. The bridge-related performance measures measure the percentage of deck area, rather than the total number of bridges.

Performance targets for pavement-related performance measures were based on a single year of data collection, and thus were set to remain steady under the guidance of FHWA. These measures are to be revisited at the 2-year mark (2020), once three years of data are available, for more informed target setting.

MassDOT continues to measure pavement quality and to set statewide short-term and long-term targets in the MassDOT Performance Management Tracker using the Pavement Serviceability Index (PSI), which differs from IRI. These measures and targets are used in conjunction with federal measures to inform program sizing and project selection.

| Performance Measure | Current (2017) | 2-year target (2020) | 4-year target (2022) |
|---|---|---|---|
| **Bridges in good condition** | 15.22% | 15% | 16% |
| **Bridges in poor condition** | 12.37% | 13% | 12% |
| **Interstate Pavement in good condition** | 74.2% | 70% | 70% |
| **Interstate Pavement in poor condition** | 0.1% | 4% | 4% |
| **Non-Interstate Pavement in good condition** | 32.9% | 30% | 30% |
| **Non-Interstate Pavement in poor condition** | 31.4% | 30% | 30% |

## Reliability, Congestion, & Emissions Performance Measures (PM3)

Pioneer Valley has chosen to adopt the 2-year (2020) and 4-year (2022) statewide reliability, congestion, and emissions performance measure targets set by MassDOT. MassDOT was required to adopt a statewide target by May 20th, 2018, with MPOs either adopting the statewide target or establishing their own by November 2018.

MassDOT followed FHWA regulation in measuring Level of Travel Time Reliability (LOTTR) on both the Interstate and non-Interstate NHS as well as Truck Travel Time Reliability (TTTR) on the Interstate system using the National Performance Management Research Dataset (NPMRDS) provided by FHWA. These performance measures aim to identify the predictability of travel times on the roadway network by comparing the average travel time along a given segment against longer travel times. For LOTTR, the performance of all segments of the Interstate and of the non-Interstate NHS are defined as either reliable or unreliable based on a comparison between the 50th percentile travel time and the 80th percentile travel time, and the proportion of reliable segments is reported. For TTTR, the ratio between the 50th percentile travel time and the 90th percentile travel time for trucks only along the Interstate system is reported as a statewide measure. As this data set has but one year of consistent data, FHWA guidance has been to set conservative targets and to adjust future targets once more data becomes available. To that end, MassDOT's reliability performance targets are set to remain the same.

Emissions reduction targets are measured as the sum total of all emissions reductions anticipated through CMAQ-funded projects in non-attainment or air quality maintenance areas (currently the cities of Lowell, Springfield, Waltham, and Worcester, and the town of Oak Bluffs) identified in the Statewide Transportation Improvement Program (STIP). This anticipated emissions reduction is calculated using the existing CMAQ processes.

| Measure | Current (2017) | 2-year (2020) | 4-year (2022) |
|---|---|---|---|
| **Non-Interstate LOTTR** | 80% | 80% | 80% |
| **Interstate LOTTR** | 68% | 68% | 68% |
| **TTTR** | 1.85 | 1.85 | 1.85 |

| | | | |
|---|---|---|---|
| **PHED (Boston UZA)** | 18.31 | 18.31 | 18.31 |
| **% non-SOV (Boston UZA)** | 33.6% (2016) | 34.82% | 35.46% |
| **Emissions Reductions** | Baseline (FFY 14–17) | 1,622 CO<br>497.9 Ozone | TBD CO (Springfield)<br>1.1 Ozone |

## TRANSIT ASSET MANAGEMENT PLAN (TAM)

The Federal Transit Administration (FTA) defines transit asset management as a strategic and systematic process through which an organization procures, operates, maintains, rehabilitates, and replaces transit assets to manage their performance, risks, and costs over their lifecycle to provide cost-effective, reliable, and safe service to current and future customers.

As part of the Moving Ahead for Progress in the 21st Century (MAP-21) Act and the subsequent Fixing America's Surface Transportation (FAST) ACT, the FTA enacted regulations for transit asset management that require transit service providers to establish asset management performance measures and targets and to develop a TAM Plan. The final TAM rule was published on July 26, 2016 and went into effect on October 1, 2016.

The Pioneer Valley Transit Authority (PVTA) manages a range of assets that include a fleet of heavy duty transit buses, paratransit vehicles, support vehicles, and nine facilities, plus other capital assets required to support operations across a service territory encompassing 24 communities. PVTA recognizes that an effective approach to asset management incorporates the people, processes, technology, data and information and continual improvement needed to support better management of assets over their entire lifecycle. PVTA has developed the following TAM Plan as a roadmap to systematically identify and address assets and asset management practices in need of improvement; establish a benchmark for where their inventory and policies stand; identify gaps in their practice; establish new, measurable key performance indicators and use a data-driven approach to achieve its goals.

PVTA has developed this TAM plan, not as an end, but instead as the beginning of an on-going effort to develop and integrate asset management practices throughout the entire organization. Over the coming years PVTA plans to continue to build upon this foundation and will work to implement successful and effective policies, practices and processes that reinforce and complement the goals and objectives outlined in the TAM plan. PVTA therefore expects that this TAM plan will be a living document that is updated annually.

| Rule | Performance Measure | State Target |
|---|---|---|
| TAM | Percent of revenue vehicles by asset class that have met or exceeded their Useful Life Benchmark (ULB) | Articulated Bus = 0%, Bus = 20%, Minibus = 100%, Cutaway Bus = 25%, Minivan = 30%, Trolleybus = 100% |
| TAM | Percent of vehicles that have met or exceeded their Useful Life Benchmark (ULB) | Automobiles = 25%<br>Trucks and other Rubber Tire Vehicles = 25% |
| TAM | Percent of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale | Administrative and Maintenance = 25%<br>Passenger and Parking = 0% |

## Performance Measure Linked Investments

Insert Table showing project investment and corresponding PM