

10

Financial

Financial

Introduction

Federal regulations regarding Regional Transportation Plans require that a financial analysis be included that examines the anticipated needs of the Region with reasonably expected federal and state funds. This chapter outlines the development of those funding estimates and determines if the Montachusett RTP is fiscally constrained.

Expected Funding – Highway

To assist in the development of the financial component of the RTP, the Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning (OTP) developed highway funding estimates to the year 2044. Federal and state highway funding estimates were developed in five-year increments. Data was provided for the entire Commonwealth as well as for each particular MPO. Refer to Table 10-1 below.

Table 10-1: Massachusetts Funding Estimates FFY 2024 to 2044

	Base OA in today's dollars w/ 2% increase starting in 2029	August redistribution	Base OA + August Redistribution	GANs repayment	Funding less GANs repayments	Funding w/ non-federal match	Statewide Items	Funding available for MPOs
								MARPA formula ►
2024	\$ 753,409,685	\$ 50,000,000	\$ 803,409,685	\$ 93,985,000	\$ 709,424,685	\$ 886,780,856	\$ 582,717,759	\$ 304,063,097
2025	\$ 768,478,798	\$ 50,000,000	\$ 818,478,798	\$ 122,185,000	\$ 696,293,798	\$ 870,367,248	\$ 571,469,513	\$ 298,897,735
2026	\$ 783,849,292	\$ 50,000,000	\$ 833,849,292	\$ 133,620,000	\$ 700,229,292	\$ 875,286,615	\$ 583,701,455	\$ 291,585,160
2027	\$ 799,527,245	\$ 50,000,000	\$ 849,527,245	\$ -	\$ 849,527,245	\$ 1,061,909,056	\$ 700,859,977	\$ 361,049,079
2028	\$ 815,517,790	\$ 50,000,000	\$ 865,517,790	\$ -	\$ 865,517,790	\$ 1,081,897,237	\$ 714,052,177	\$ 367,845,061
1st five years ►								
2029	\$ 831,828,146	\$ 50,000,000	\$ 881,828,146	\$ -	\$ 881,828,146	\$ 1,102,285,182	\$ 727,508,220	\$ 374,776,962
2030	\$ 848,464,709	\$ 50,000,000	\$ 898,464,709	\$ -	\$ 898,464,709	\$ 1,123,080,886	\$ 741,233,385	\$ 381,847,501
2031	\$ 865,434,003	\$ 50,000,000	\$ 915,434,003	\$ -	\$ 915,434,003	\$ 1,144,292,503	\$ 755,233,052	\$ 389,059,451
2032	\$ 882,742,683	\$ 50,000,000	\$ 932,742,683	\$ 15,000,000	\$ 917,742,683	\$ 1,147,178,354	\$ 757,137,713	\$ 390,040,640
2033	\$ 900,397,536	\$ 50,000,000	\$ 950,397,536	\$ 10,000,000	\$ 940,397,536	\$ 1,175,496,921	\$ 772,437,663	\$ 403,059,258
2nd five years ►								
2034	\$ 918,405,487	\$ 50,000,000	\$ 968,405,487	\$ 30,000,000	\$ 938,405,487	\$ 1,173,006,859	\$ 770,801,404	\$ 402,205,455
2035	\$ 936,773,597	\$ 50,000,000	\$ 986,773,597	\$ 30,000,000	\$ 956,773,597	\$ 1,195,966,996	\$ 785,888,874	\$ 410,078,122
2036	\$ 955,509,069	\$ 50,000,000	\$ 1,005,509,069	\$ 30,000,000	\$ 975,509,069	\$ 1,219,386,336	\$ 801,278,094	\$ 418,108,243
2037	\$ 974,619,250	\$ 50,000,000	\$ 1,024,619,250	\$ 30,000,000	\$ 994,619,250	\$ 1,243,274,063	\$ 816,975,098	\$ 426,298,965
2038	\$ 994,111,635	\$ 50,000,000	\$ 1,044,111,635	\$ 30,000,000	\$ 1,014,111,635	\$ 1,267,639,544	\$ 832,986,042	\$ 434,653,503
3rd five years ►								
2039	\$ 1,013,993,868	\$ 50,000,000	\$ 1,063,993,868	\$ 30,000,000	\$ 1,033,993,868	\$ 1,292,492,335	\$ 849,317,205	\$ 443,175,130
2040	\$ 1,034,273,745	\$ 50,000,000	\$ 1,084,273,745	\$ 30,000,000	\$ 1,054,273,745	\$ 1,317,842,182	\$ 865,974,991	\$ 451,867,191
2041	\$ 1,054,959,220	\$ 50,000,000	\$ 1,104,959,220	\$ 30,000,000	\$ 1,074,959,220	\$ 1,343,699,025	\$ 882,965,933	\$ 460,733,093
2042	\$ 1,076,058,405	\$ 50,000,000	\$ 1,126,058,405	\$ 35,000,000	\$ 1,091,058,405	\$ 1,363,823,006	\$ 896,189,719	\$ 467,633,287
2043	\$ 1,097,579,573	\$ 50,000,000	\$ 1,147,579,573	\$ 35,000,000	\$ 1,112,579,573	\$ 1,390,724,466	\$ 913,867,095	\$ 476,857,371
4th five years ►								
2044	\$ 1,119,531,164	\$ 50,000,000	\$ 1,169,531,164	\$ 25,000,000	\$ 1,144,531,164	\$ 1,430,663,955	\$ 940,111,967	\$ 490,551,989
5th five years ►								
							\$ 24,707,093,625	

Assumptions used in compiling this data were as follows:

1. Federal funding and state match for the period of 2024 – 2028 reflect current TIP allocations;
2. Beginning in 2029 a 2% growth rate (average of last 4 yrs. Of BIL) is applied to the federal funding amounts;
3. August redistribution of Federal Funds is assumed to be \$50million per year through to 2044;

4. GANs (Grant Anticipation Notes) repayment is currently expected to stop in 2027, and continue in 2032
5. Funding available for MPO Target Programming is approximately one-third (1/3) of the total Federal Aid and Non-Federal Aid funding. These funds are those that the MPO has discretion on project priorities through the Transportation Improvement Program (TIP).

The remaining available statewide figures are then separated out into funding programs, which are attached to specific improvement such as bridges and interstate maintenance. These statewide expenditures are under the discretion of MassDOT to be spent as they prioritize, not necessarily as a percentage in each region, but as statewide needs and management plans inform. These funding estimates are as follows:

Table 10-2: Massachusetts Funding Estimates FFY 2024 to 2044 by Statewide Categories

	Statewide Bridges	Interstate Pavement	Non-Interstate DOT Pavement	Remaining SW Programs
	Bridges	Lane Miles	Lane Miles	MARPA formula
2024	\$183,898,219	\$42,748,349	\$72,703,533	\$205,594,982
2025	\$176,617,938	\$42,748,349	\$72,703,533	\$223,095,613
2026	\$183,898,219	\$42,748,349	\$65,000,000	\$234,008,890
2027	\$255,592,933	\$42,748,349	\$72,703,533	\$166,091,396
2028	\$282,726,401	\$42,748,349	\$72,703,533	\$145,998,028
	\$1,082,733,710	\$213,741,745	\$355,814,132	\$974,788,910
2029	\$288,380,929	\$43,603,316	\$74,157,604	\$146,726,465
2030	\$294,148,548	\$44,475,382	\$75,640,756	\$147,366,783
2031	\$300,031,519	\$45,364,890	\$77,153,571	\$171,666,256
2032	\$306,032,149	\$46,272,188	\$78,696,642	\$176,966,061
2033	\$312,152,792	\$47,197,631	\$80,270,575	\$255,669,181
	\$1,500,745,936	\$226,913,407	\$385,919,148	\$898,394,745
2034	\$318,395,848	\$48,141,584	\$81,875,987	\$261,239,256
2035	\$324,763,765	\$49,104,416	\$83,513,506	\$266,949,458
2036	\$331,259,040	\$50,086,504	\$85,183,776	\$272,803,221
2037	\$337,884,221	\$51,088,234	\$86,887,452	\$278,804,062
2038	\$344,641,905	\$52,109,999	\$88,625,201	\$284,955,583
	\$1,656,944,778	\$250,530,737	\$426,085,922	\$1,364,751,580
2039	\$351,534,743	\$53,152,199	\$90,397,705	\$291,261,471
2040	\$358,565,438	\$54,215,243	\$92,205,659	\$297,725,504
2041	\$365,736,747	\$55,299,548	\$94,049,772	\$304,351,549
2042	\$373,051,482	\$56,405,539	\$95,930,768	\$311,143,567
2043	\$380,512,512	\$57,533,649	\$97,849,383	\$318,105,612
	\$1,829,400,922	\$276,606,178	\$470,433,288	\$1,522,587,704
2044	\$388,122,762	\$58,684,322	\$99,806,371	\$325,241,838
	\$6,457,948,108	\$1,026,476,390	\$1,738,058,860	\$5,085,764,777

Regional Highway Needs

A. Bridge Needs

As illustrated in the Infrastructure section of this RTP, the number of Structurally Deficient (SD) bridges in the Montachusett Region has trended slightly upward from thirty two in 2018 to thirty five in 2022. Overall, there has been a significant reduction in SD bridges from 2006, a decrease of some 17 bridges. This is due to the emphasis placed on bridges through the Accelerated Bridge program. In order to prevent any “backsliding” within the region, it is important to maintain an emphasis on repairing SD bridges by the Commonwealth as bridge priorities fall under the responsibility of MassDOT.

While it may be difficult to determine what will be the appropriate investments for bridges, the following points should be considered:

- As SD bridges are repaired, it is appropriate to assume additional bridges will deteriorate over time and become SD. There must be a consistent and focused investment in bridge infrastructure moving forward.
- A Performance Measure has been set through this RTP that states “Decrease the number of identified “Structurally Deficient” bridges within the region compared to what was reported in the 2024 RTP”.
- Bridge infrastructure projects vary in cost a great deal, depending on what is required for repair. Costs for bridges currently scheduled for repair in the region range over \$20,000,000 (\$4,265,492 to \$24,583,505).
- As important as adequate funding, is consistent bridge inspection and asset management tools to highlight trends and inform where and what needs exist
- While it is difficult to determine a dollar amount needed to prevent backsliding in the number of SD bridges, it is important to forecast if projected funding will be sufficient to maintain current overall network conditions.

From a review of projected Federal Bridge funds compared to historical allocations, it is reasonable to assume that there is enough funding to maintain current network conditions. It should be noted, however, that there is no “acceptable” amount of structurally deficient bridges in a network, but it is crucial to ensure that overall network condition does not deteriorate, spiraling to a level where it would be difficult to stop.

B. Pavement Needs

The region contains a mix of state and local jurisdiction federal aid eligible roads. In addition, those roads classified as NHS are eligible for Interstate Maintenance (IM) and NHS funding. Those roads are under the purview of MassDOT and are assumed to be funded from statewide NHS/IM allocations. These are approximately 222 miles (or 33%) of the total regional federal aid roads in this category. That leaves approximately 67%, or 445 miles, of roads that are eligible to be funded with regional discretionary, or target, funding, although many projects on these roads are also funded through categories under MassDOT discretion.

When determining what is needed to maintain a state of good repair on these roads the following points should be considered:

- It is important to maintain an accurate inventory of road conditions to monitor trends over time. Analyzing these trends is an important component in determining needs.
- A Performance Measure has been set through the RTP that states “Increase the percentage of categorized “Good” to “Excellent” federal aid eligible roadway miles within the region over a 10-year period dating back to 2016”.

Analysis conducted in the Infrastructure section of this plan reported condition trends in the federal aid pavement network. Trends indicated that the performance measure listed above is being met. From 2017 to 2022 there has been an increase in the percentage of roads categorized “Good” to “Excellent”. This is an indication that adequate funding is being allocated to maintain a state of good repair on these roadways. Much like SD bridges, there is no

acceptable level of “Poor” condition roadways to have on a network, but it is important to make sure overall network condition does not deteriorate.

C. Non-Funded Major Infrastructure Projects

Through the development of this RTP, several projects or needs were identified. Some of these are relatively large in terms of scope, design or possibly cost. These projects are not incorporated into the financial plan of the RTP as these are still concepts with little analysis and subsequently, no cost estimates. These have been identified as “Major Infrastructure” projects. They will likely entail several years of study, public outreach and design before implementation.

- Route 2 at South Athol Road: The town of Athol has presented a project to construct a new interchange with Route 2 at South Athol Road. This new interchange would help the town improve access to Route 2 for commercial and passenger vehicles, thus relieving congestion on smaller local roads, extending the pavement life of those roads, expanding the town’s economic base and provide quicker emergency response times.
- Route 2 Lane Addition from Phillipston to Athol: The town of Athol has raised the question of a possible expansion of Route 2 from its current two-lane configuration to four lanes. The project limits start from the Phillipston town line to approximately Route 202 near the Athol/Orange town line.
- Route 2 at Mt. Elam Road: For a number of years, the state has tried to address a safety, access and environmental issue along Route 2 in the vicinity of Mt Elam Road. Bordering the Notown Reservoir, the state must address an environmental issue related to runoff into the city of Leominster’s drinking supply. Additionally, a traffic signal currently exists at the Route 2/Mt Elam Road intersection that is the site of many vehicular crashes.
- Wachusett Station Improvements: Wachusett Station is a new commuter rail parking lot and train station on the Fitchburg Commuter Rail Line. Built to house over 400 vehicles, this station is the start and end point for this line into Boston. The need for a

solution to the current railroad underpass on Route 31 located just north of the station which constricts all modes of traffic in that area, and bicycle and pedestrian accommodations should be considered.

D. Remaining Regional Needs

The remaining project needs identified in this RTP include various safety improvements at intersections or along corridors, congestion improvements, pedestrian/bicycle improvements, etc. The funding for these improvements is assumed to be derived from the statewide funding as well as through the discretionary MPO Funding (“Target”) amounts.

Projects include, but are not limited to, those listed in the various parts of this RTP. Some of these projects are assumed to be implemented during the timeframe of this RTP. Most are in need of further study in order to determine potential solutions for the location.

Funding estimates in the following table column labelled “Montachusett MPO Targets” represent the funds that are utilized in the development of the annual Transportation Improvement Program (TIP). By providing these “Target” funding levels, the MPO’s are able to develop fiscally constrained TIP’s for each Federal Fiscal Year (FFY). These funds are also considered discretionary in that the MPO has direct input into the types of projects that are prioritized and funded. In addition to typical road projects, bicycle and pedestrian projects, site specific intersection projects, congestion relief projects, safety improvement projects, and projects with air quality benefits are funded through these targets.

Table 10-3: Montachusett MPO Projected Target Funds

	Funding available for Montachusett MPO	
	MPOs	Target Funds
	MARPA formula ►	4.46%
2024	\$304,063,097	\$13,559,998
2025	\$298,897,735	\$13,329,643
2026	\$291,585,160	\$13,003,532
2027	\$361,049,079	\$16,101,345
2028	\$367,845,061	\$16,404,418
	1st five years ►	\$72,398,936
2029	\$374,776,962	\$16,713,553
2030	\$381,847,501	\$17,028,871
2031	\$389,059,451	\$17,350,495
2032	\$390,040,640	\$17,394,252
2033	\$403,059,258	\$17,974,831
	2nd five years ►	\$86,462,003
2034	\$402,205,455	\$17,936,754
2035	\$410,078,122	\$18,287,844
2036	\$418,108,243	\$18,645,955
2037	\$426,298,965	\$19,011,229
2038	\$434,653,503	\$19,383,808
	3rd five years ►	\$93,265,590
2039	\$443,175,130	\$19,763,838
2040	\$451,867,191	\$20,151,469
2041	\$460,733,093	\$20,546,853
2042	\$467,633,287	\$20,854,574
2043	\$476,857,371	\$21,265,931
	4th five years ►	\$102,582,666
2044	\$490,551,989	\$21,876,656
	Total ►	\$376,585,851

Expected Funding - Transit

The following table summarizes anticipated needs by the Regional Transit Authority over the life of this plan. Currently the only identified needs are within the time period of the 2024-2028 TIP. These first five years are shown along with available funding from each fund category. Years 2029-2044 in Table 10-13 show estimated funding levels which will be fully utilized by MART for capitol and operating needs. Funding for years 2029-2044 are estimates only and assume the same 2% increase in funding per year that was used for highway funding.

Table 10-4: Transit Funds Programmed in 2024 -2028 TIP

Funding Category	FFY 2024	FFY 2025	FFY 2026	FFY 2027	FFY 2028	Total FFY 2024- 2028
Bond Cap State 100% State	\$3,600,360	\$3,157,000	\$3,172,500	\$3,153,777	\$3,194,600	\$16,278,237
Federal FTA Section 5307	\$5,701,440	\$4,528,000	\$4,590,000	\$4,515,108	\$4,678,400	\$24,012,948
Federal FTA Section 5309	\$0	\$0	\$0	\$0	\$0	\$0
Federal FTA Section 5310	\$0	\$0	\$0	\$0	\$0	\$0
Federal FTA Section 5337	\$0	\$0	\$0	\$0	\$0	\$0
Federal FTA Section 5339 Non-Competitive	\$600,000	\$0	\$0	\$0	\$0	\$600,000
Federal FTA Section 5339 Small Urban	\$0	\$0	\$0	\$0	\$0	\$0
Federal FTA Section 5339 Statewide	\$0	\$0	\$0	\$0	\$0	\$0
Federal FTA Other Federal Transit	\$0	\$0	\$0	\$0	\$0	\$0
Operating Additional State Assistance State Contract Assistance	\$0	\$0	\$0	\$0	\$0	\$0
Other Municipal and Local Transit	\$0	\$0	\$0	\$0	\$0	\$0
VW Mitigation Funds	\$3,000,000	\$0	\$0	\$0	\$0	\$3,000,000
Federal FHWA Transportation Development Credits	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$12,901,800	\$7,685,000	\$7,762,500	\$7,668,885	\$7,873,000	\$43,891,185

Table 10-5: MART Projected Transit Funds

Estimated Funds	2024-2028	2029-2033	2034-2038	2039-2043	2044	Total
TOTAL	\$43,891,185	\$48,280,303.50	\$53,108,333.85	\$58,419,167.24	\$12,852,217	\$216,551,206.38

In the first 5 years of the RTP (2024-2028) fiscal constraint was demonstrated through the projects listed on the 2024-2028 TIP and available funds. As with the highway network, any additional available funds for the transit system will be utilized in an attempt to further expand options available to the region. Several needs have been identified within this RTP that highlight the potential to broaden the reach and use of transit to serve multiple purposes from medical to commercial.

Fiscal Constraint Conclusion

It is necessary that a financial analysis in this plan demonstrates fiscal constraint. Recommendations within the sections of the Plan, along with the Goals and Performance Measures set through the Plan, have been considered in relation to the projected funding detailed in this chapter. Although it is difficult to forecast needs and available funding through the lifetime of the RTP, it is determined that our regional highway and transit needs will be satisfied with projected funding. This is primarily proven by analysis detailed in the infrastructure section. A major factor in future financial planning in the region will continue to be the monitoring of assets such as bridges and pavements and needs such as safety improvements and congestion relief. As the conditions of these assets and needs change so must resources allocated to these factors.