

2012 Regional Transportation Plan

Chapter VII Finance



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A. HIGHWAY PROGRAM REVENUES

SAFETEA-LU requires that the Regional Transportation Plan shows fiscal constraint and that the costs of projects and program improvements do not exceed reasonably expected revenues. Forecasting the amount of Federal and state revenues that can reasonably be expected over a twenty-five year planning horizon is difficult at best. Policy shifts at the state and federal levels, new federal transportation authorization, and state transportation bond bills are some of the factors that influence transportation funding.

MassDOT provided anticipated funding levels for the Statewide Road and Bridge Program to the MPO. Federal funding (the obligation authority and redistribution) and state match for the period of 2012 – 2014 reflect current STIP allocations. Funding for FFY 2015 is equal to estimates for FFY 2014. Federal funding grows 3% annually from 2016 to 2035. The Central Artery and Advance Bridge Program Grant Anticipation Notes (GANs) are deducted from the total Federal funds allocated to the Commonwealth. The complete base amount of Federal funds available for the Statewide Road and Bridge Program (SRBP) includes the required match and represent totals for each 5-year period.

Table VII-1 Statewide Funding for SRBP 2012-2035 (in \$1,000's)

	2012-2015	2016-2020	2021-2025	2026-2030	2031-2035	Total
Core Program Federal Funds Available	\$2,800,000	\$3,062,310	\$3,550,056	\$4,115,488	\$4,770,978	\$18,298,832
Assumed Redistribution	\$160,000	\$218,736	\$253,575	\$293,963	\$340,784	\$1,267,059
Total Federal Funds Allocated	\$2,960,000	\$3,281,046	\$3,803,631	\$4,409,451	\$5,111,763	\$19,565,891
Less GANs Payments	(\$835,675)	(\$750,000)	(\$208,000)	\$0	\$0	(\$1,793,675)
Net Federal Funds Available for SWRB	\$2,124,325	\$2,531,046	\$3,595,631	\$4,409,451	\$5,111,763	\$17,772,216
Total Funds Available (Including State Match)	\$2,575,337	\$3,082,235	\$4,392,039	\$5,390,043	\$6,248,537	\$21,688,190

An estimate of statewide planning, infrastructure maintenance, and extra work orders/cost adjustments funding needs are deducted from the total available funds. The major infrastructure project, National Highway System/ Interstate Maintenance, and Federal-aid bridge programs are also removed from the available funds prior to distribution, through formula, to the MPOs. This RTP does not anticipate future High Priority Project (HPP) awards that reduce the statewide program. MassDOT estimates funding for Major Infrastructure Projects, the NHS/IM Programs, the Federal Aid Bridge Program, and Infrastructure Maintenance increases 3% annually.

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Table VII-2 Statewide Charges from Federal Revenue 2012-2035 (in \$1,000's)

Deductions	2012-2015	2016-2020	2021-2025	2026-2030	2031-2035	Total
Total Federal Funds Available (Including State Match)	\$2,575,337	\$3,082,235	\$4,392,039	\$5,390,043	\$6,248,537	\$21,688,190
Statewide Planning	(\$115,000)	(\$125,773)	(\$145,806)	(\$169,029)	(\$195,951)	(\$751,559)
Statewide Extra Work Orders	(\$218,850)	(\$246,078)	(\$285,272)	(\$330,709)	(\$383,382)	(\$1,464,292)
Infrastructure Maintenance	(\$329,315)	(\$280,730)	(\$388,924)	(\$474,434)	(\$550,000)	(\$2,023,403)
Major Infrastructure Projects	(\$162,750)	(\$218,736)	(\$330,459)	(\$403,776)	(\$468,087)	(\$1,583,807)
Assumed Interstate Maintenance Program Needs	(\$404,036)	(\$432,978)	(\$649,914)	(\$793,237)	(\$919,579)	(\$3,199,743)
Assumed Federal Aid Bridge Needs	(\$633,977)	(\$698,496)	(\$1,045,163)	(\$1,274,963)	(\$1,478,032)	(\$5,130,632)
Balance Available for SWRB	\$711,409	\$1,106,893	\$1,567,763	\$1,966,511	\$2,279,726	\$7,632,302

The balance available for the Statewide Road and Bridge Program is a function of the other assumptions made in MassDOT's financial plan. The years 2012-2015 reflect the regional targets provided in the STIP. The years 2016 to 2020 fluctuate based upon 3% growth in revenue and programs costs, as well as the repayment schedule of the ABP GANs. A balloon payment completes the ABP GAN in 2022. The balance available amount grows unencumbered at a rate of 3% annually after 2022.

The Non-Federal Aid (NFA) program remains the same from 2011 - 2015. Beginning in 2016 and thereafter, NFA funding increases 3% annually.

Table VII-3 Statewide Non-Federal Aid 2011-2035 (in \$1,000's)

	2012-2015	2016-2020	2021-2025	2026-2030	2031-2035	Total
Roads	\$437,473	\$507,151	\$587,927	\$681,568	\$790,125	\$3,004,244
Bridges	\$312,527	\$313,111	\$362,981	\$420,794	\$487,816	\$1,897,229

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MassDOT then allocated the estimated funding to the MPOs based upon the existing Massachusetts Association of Regional Planning Associations formula for TIP targets, except the Interstate Maintenance and Bridge Programs. Interstate Maintenance funds are allocated based upon the regional share of Interstate lane mileage, exclusive of the MassPike. The Bridge Program funds are allocated for the Regional Transportation Plans based upon each region's percentage of federal-aid eligible bridges.

Table VII-4 Berkshire Distribution Federal Revenue 2012-2035 (in \$1,000's)

	2012-2015	2016-2020	2021-2025	2026-2030	2031-2035	Total
Major Infrastructure	\$5,793	\$7,786	\$11,763	\$14,373	\$16,662	\$45,200
Federal Aid Bridge	\$53,413	\$58,848	\$88,055	\$107,416	\$124,524	\$432,256
NHS/IM	\$16,703	\$17,882	\$26,841	\$32,761	\$37,979	\$132,166
Statewide Maintenance	\$38,419	\$39,191	\$47,693	\$56,128	\$65,067	\$246,498
Regional Target Funds	\$25,323	\$39,401	\$55,806	\$70,000	\$81,149	\$271,679
Total	\$139,651	\$163,108	\$230,518	\$280,677	\$325,381	\$1,138,976

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B. HIGHWAY EXPENDITURES

The RTP must provide a project list that does not exceed projected revenues. This list is required to include any projects that add roadway capacity to the extent that needs inclusion in the Western Massachusetts Air Quality Model. There are no projects estimated over \$20 Million dollars for the plan period in the Berkshires that are not included in air quality conformity analysis. The remainder of the projects proposed in the plan (and the majority of the past federally funded projects in the region) are rehabilitating or reconstructing roadways. The RTP groups these projects into “program accounts” because they do not add network capacity and have relatively minor environmental impact.

Table VII-5 Fiscally Constrained Project List (in \$1,000's)

RTP ID	LOCATION	FACILITY	LENGTH	START	END	DESCRIPTION	STATUS	COST \$1,000's	SUM
2012-2015									
R4	Pittsfield	BMC Area Improvements	Various	N/A	N/A	Various Intersection Improvements	Planning	\$4,000	\$4,000
R2	Great Barrington	Main Street	0.4	St. James Pl	Cottage St.	Reconstruct and signal improvements	2013 CON	\$3,800	\$7,800
N/A	Various	Various	Various	N/A	N/A	Rehabilitate or reconstruct various roads	N/A	\$17,523	\$25,323
2016-2020									
R8	Pittsfield	East Street	0.35	Lyman St.	Fourth	Reconstruction	Planning	\$3,650	\$3,650
R44	Great Barrington	State Rd	0.2	N/A	N/A	Realign and Widen State Rd. Intersection with Main	Planning	\$3,628	\$7,278
R6	Pittsfield	First	0.12	East	Fenn	Widen to two NB lanes and improve intersections	Planning	\$3,705	\$10,983
R13	Pittsfield	East St (Mass Route 9)	0.57	Lyman St.	Merrill Rd.	Reconstruction	25% Design	\$7,796	\$18,779
N/A	Various	Various	Various	N/A	N/A	Rehabilitate or reconstruct various roads	N/A	\$20,622	\$39,401
2021-2025									
N/A	Various	Various	Various	N/A	N/A	Rehabilitate or reconstruct various roads	N/A	\$55,806	\$55,806
2026-2030									
R10	Pittsfield	Hubbard Ave	N/A	N/A	N/A	CSX Rail Overpass reconstruct to 5 lanes	Planning	\$36,000	\$36,000
N/A	Various	Various	Various	N/A	N/A	Rehabilitate or reconstruct various roads	N/A	\$34,000	\$70,000
2031-2035									
R23	Cheshire, Lanesborough	Mass Route 8	4	Old State Rd.	Weigh Station	Construct passing lanes	Planning	\$8,876	\$8,876
R7	Pittsfield	Westside Connector	2.5	West Housatonic	West	Install Connector Street Parallel to HRRC line	Planning	\$26,937	\$35,813
N/A	Various	Various	Various	N/A	N/A	Rehabilitate or reconstruct various roads	N/A	\$45,336	\$81,149

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C. TRANSIT PROGRAM REVENUES

MassDOT provided estimates of available transit revenues. The figures shown for FFY 2012 through 2015 reflect continuances of the SAFETEA-LU authorization because it is not likely that a new transportation will be enacted by 2012. A 3% annual inflation factor is applied beyond the 2010 project estimated costs.

Table VII-6 Massachusetts Transit Program Funding Forecasts (in \$1,000's)

	Program	Note	2012-2015	2016-2020	2021-2025	2026-2030	2031-2035	TOTAL	
FEDERAL	§ 5307	Urbanized Area Formula		\$6,256	\$7,419	\$8,446	\$9,680	\$11,222	\$43,393
	§ 5310	Elderly and Disabled	A	\$260	\$290	\$315	\$346	\$395	\$1,606
	§ 5311	Non-Urbanized Area Formula		\$1,211	\$1,396	\$1,605	\$1,848	\$2,131	\$8,191
	§ 5316	JARC-Small Urban	B	\$1,569	\$1,811	\$2,086	\$2,406	\$2,777	\$10,649
		JARC-Rural	B	\$650	\$745	\$848	\$970	\$1,110	\$4,323
	§ 5317	New Freedom- Small Urban	B	\$1,133	\$1,306	\$1,503	\$1,731	\$1,991	\$7,664
		New Freedom- Rural	B	\$570	\$650	\$740	\$843	\$965	\$3,768
COMMONWEALTH	SCA	State Contract Assistance		\$9,446	\$10,885	\$12,610	\$14,607	\$16,920	\$64,468
	RTACAP	RTA Capital Assistance Program		\$576	\$738	\$812	\$893	\$982	\$4,000
	ITCCAP	RTA Intermodal Assistance Program	C	\$32	\$0	\$0	\$0	\$0	\$32
	MAP	Mobility Assistance Program		\$1,136	\$1,185	\$1,205	\$1,230	\$1,255	\$6,011
STATEWIDE	§ 5311(f)	Intercity Bus		\$2,784	\$3,218	\$3,718	\$4,297	\$4,969	\$18,986
	RBFAP	Regional Bus Fleet Acquisition Program (replaces IBCAP)		\$6,500	\$8,250	\$9,075	\$9,983	\$10,981	\$44,788
	RTAP	Rural Transportation Assistance		\$543	\$620	\$701	\$800	\$915	\$3,579
	PNP	Private Non-Profits	A	\$4,802	\$5,560	\$6,435	\$7,445	\$8,617	\$32,859
	COA	Councils On Aging	A	\$1,601	\$1,848	\$2,131	\$2,457	\$2,838	\$10,875
	MassDOT	MassDOT Admin		\$5,558	\$6,417	\$7,389	\$8,512	\$9,821	\$37,697

A- Competitive program with funding allocated based on actual application and award.

B- Competitive program with funding allocated based on actual application and award. Reflects upper annual potential award.

C- ITCCAP program sunsets by 2014 and merges into RTACAP program.

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The State Capital Investment numbers for the years 2011 through 2015 are provided by the Regional Transit Authorities (RTAs). For the 2011 and the years beyond, this represents 25% of the Section 5307 funding. Section 5309 funding is awarded on a competitive basis annually and MassDOT did not provide estimates of potential top award amounts of State Contract Assistance was taken from the RTA Program Preview forms for the years 2011 through 2015, and increased by 3%, consistent with recent legislation. JARC and New Freedom funding is awarded through competitive applications. The table below shows anticipated revenues for the Berkshire Regional Transit Authority. Beginning in 2011, the RTP assumes that both Section 5307 funding and State Capital Assistance will increase annually through 2035. Sections 5316 and 5317 are statewide totals, periodically distributed to MPOs on a competitive basis.

BRTA has various local sources of revenue, including local assessment, fare revenue, and advertising revenue in addition to Federal and State funding.

Projects funded from the Elderly Individuals and Individuals with Disabilities (Section 5310) Job Access and Reverse Commute (JARC) and New Freedom programs are derived from a locally developed, coordinated public transit-human service transportation plan (“coordinated plan”). A coordinated plan should maximize the programs’ collective coverage by minimizing duplication of services. Further, a coordinated plan should be developed through a process that includes representatives of public, private, and non-profit transportation and human services providers, and participation by the public.

An example of BRTA’s application for competitive Section 5309 funds is 2011’s application under the State of Good Repair initiative. BRTA applied for more than \$4 Million dollars. If awarded all the funding requested, BRTA would replace 4 30-passenger hybrid vehicles, replace underground fuel tanks, continue implementation of AVL dispatch, replace fareboxes, improve safety and security, and replace a hybrid bus’ batteries.

JARC and New Freedom funds are competitive. Although BRTA is eligible for these funds in both the small urban and rural categories, it is not reasonable to presume that these funding sources would be granted at maximum possible award amounts.

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D. TRANSIT PROGRAM EXPENDITURES

Transit needs include both operations/maintenance and capital improvements components.

OPERATIONS

The formula of transit needs = transit revenue is equivalent to transit needs = federal/state revenue + local assessment + fare revenue + advertising revenue and MUST be made true. JARC and New Freedom funds are not guaranteed and are competitive, the equation can not include them.

With (1) federal/state revenue fixed, (2) the local assessment capped at 2.5% increase each year and the (3) advertising revenue somewhat nominal in the context of amounts funded by other revenue, the variables of the equation are operating costs and fare box revenue.

If operations costs are held to the 2% annual increase anticipated by BRTA, and the fare box revenue annual percent increases is held constant at the 2% annual increase anticipated by BRTA, there is a \$39,775,748 projected surplus over the 25 years.

Transit Need:

The FY10 operations costs are \$3,984,911. The total estimated operations costs over the 24 year period, with 2% annual inflation is \$127,637,984.

Transit Revenue:

Local Assessment: The FY10 local assessment is \$761,433 with projected yearly increases of 2.5% (cap); the total estimated community funding over the 24 year period is \$26,008,849.

Advertising Revenue: The FY10 advertising revenue is \$24,966. With a yearly increase of 1%, the total estimated advertising revenue over the 24 year period is \$774,702.

Fare Revenue: The FY10 fare revenue is \$761,433

RTA anticipates typical annual increases of 2%, yielding \$19,748,350 in fare box revenue over the 24 years.

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Table VII-7 Transit Operations and Maintenance

REVENUE		
Funding Source	Description	2011-2035
FEDERAL	5307- Urbanized Area Formula	\$43,392,889
	5310- Elderly and Disabled	\$1,606,228
	5311 & 5340 Non-Urbanized Area Formula	\$8,190,993
STATE	Contract Assistance to Operators	\$64,468,152
LOCAL	Community Assessments	\$25,274,416
	Fare Box	\$19,748,350
	Advertising	\$774,702
TOTAL REVENUE		\$163,428,730
LESS TOTAL COST		\$123,652,983
PROJECTED SURPLUS		\$39,775,748

JARC and New Freedom funds cannot be expected (let alone an allocation every year), but BRTA will be able to procure some amount of the funding to further supplement the projected surplus.

There is a projected surplus over the RTP horizon years that indicates that BRTA may have opportunities to expand service hours, offer Sunday services, and/or decrease headways on routes during peak periods. Current revenue hours average approximately \$70 in net cost. Specifically:

- 7,800 hours to increase service in the mornings and evenings (\$546,000 annually)
- 2,432 hours to add Sunday service on six routes (\$163,940 annually)
- 3,400 hours to reduce headways to 30 minutes on 6 routes (\$238,000 annually)
- 1,816 service hours for wider coverage through deviated fixed routes and restoration of eliminated service (\$127,120 annually)

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CAPITAL IMPROVEMENTS

Table VIII-8, demonstrates that through the use of the State Capital Investment fund – BRTA’s projected capital costs over the 25 year period will be met:

Table VII-8 Transit Capital Improvements (in \$1,000’s)

REVENUE		
Funding Source	Description	2011–2035
State Capital Investment	20% match to Federal Capital Funds	\$4,000
Federal Funds	5309 Discretionary	\$16,000
CAPITAL EXPENDITURES		
BRTA PROJECTED CAPITAL EXPENDITURES	Capital and Facility Updates	\$3,138
	Support Vehicles	\$282
	Revenue Vehicles	\$6,670
	Capitalized Maintenance	\$1,125
	Fixed Route Fleet Purchases	\$2,474
	Paratransit Purchases	\$927
	Miscellaneous Revenue Vehicle Replacement	\$5,384
TOTAL REVENUE		\$20,000
LESS TOTAL COSTS		\$20,000
BALANCE		\$0

Transit capital investment needs are met by transit capital investment revenue.

Capital and facility updates include repairs to BRPC facilities, upgraded fare collection systems, additional maintenance bays and replacing fuel tanks and urea systems for diesel buses. Support vehicles include supervisors’ vehicles and service trucks. Revenue vehicles are heavy-duty transit buses that last 12 years or 500,000 miles or lighter duty mini-buses and vans have life expectancies of five to seven years and 100,000 to 150,000 miles. Council on Aging vehicles are replaced from different funding sources with BRTA assistance. Capital funds, historically are 80% appropriated discretionary Section 5309 funds and 20% state transportation bond funds.

BRTA will replace buses as needed during the term of this plan with the remaining revenue vehicle replacement funds and with assistance from state and Federal discretionary or competitive programs like Section 5309.

Unfunded capital improvements include establishing satellite facilities in North and South County and conversions to CNG vehicles and facilities.

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E. REGIONAL PERSPECTIVE

Regional funding of transportation is dependent on gasoline, sales, and excise taxes through the Federal Highway Trust Fund (HTF) and the Commonwealth. The combination of static Vehicle Miles Traveled, increased fuel efficiency, and dynamic fuel prices reduces the revenue the HTF garnishes because the Federal tax is a flat rate of 18.4 cents per gallon. Congress raised the gasoline tax to 18.4 cents per gallon and the diesel tax to 24.4 cents per gallon in 1993. The Commonwealth gas tax is 19 cents per gallon. Neither fuel tax is indexed to inflation. Although there is continued discussion about replacing the per gallon taxes, there is little indication the Federal or state governments will change them. Massachusetts does not have options for local sales taxes although each community receives excises taxes for each vehicle or trailer registered within its boundaries, based on depreciated vehicle values.

Massachusetts provides an allotment of funds through Chapter 90 for maintenance of locally owned and operated roads, some of which are also Federal-Aid eligible. The Public Works Commission established the road improvement reimbursement program in 1973. The current statewide funding distributes \$200 million dollars to the 351 Commonwealth cities and towns. Berkshire communities receive approximately \$6 million dollars when the Chapter 90 program is funded at this level. Communities are reimbursed for capital expenditures related to infrastructure and equipment purchases, but cannot use funding for maintenance expenses like snowplowing or street sweeping.

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