Memorandum for the Record Transportation Planning and Programming Committee of the Boston Region Metropolitan Planning Organization (MPO)

March 31, 2011 Meeting

10:00 AM – 12:45 PM, State Transportation Building, MPO Conference Room, Suite 2150, 10 Park Plaza, Boston Clinton Bench, Chair, representing Jeffrey Mullan, Secretary and Chief Executive Officer, Massachusetts Department of Transportation (MassDOT)

Decisions

The Transportation Planning and Programming Committee did not take any votes at this meeting.

Meeting Agenda

1. Public Comments

Judy LaRocca, Chair of the Bruce Freeman Rail Trail Advisory Committee, Town of Concord, asked the MPO to keep the *Bruce Freeman Rail Trail, Phase 2* project in the Long-Range Transportation Plan (LRTP) and to move it to an earlier element of the Transportation Improvement Program (TIP), such as federal fiscal year (FFY) 2015.

She discussed potential usage of the trail and benefits having to do with air quality and connections to public transit. She stated that the trail would provide a connection to the Fitchburg commuter rail line at the West Concord Station. She noted that the trail would run parallel to Route 2A in Acton, where a bottleneck at the rotary results in idling traffic releasing emissions at peak traffic hours, and that the trail would provide an alternate path to transit for drivers. She also noted that that trail would attract off-peak users going to destinations in Acton and Concord, such as to local businesses, schools, and playing fields.

She stated that an MPO staff memorandum (released for this meeting and attached) under-estimates the potential usage of the trail for two reasons: congestion at the rotary during peak hours is an incentive for drivers to seek an alternate route to rail, and there is no bus service in Acton or Concord to meet off-peak demand. (The memorandum was discussed later in this meeting.)

She asked the MPO to consider readiness and the overwhelming municipal and public support for the trail. Phase 1 is complete and has attracted many users, she reported. The 25% design is complete for Phase 2A and 2C, and funding has been allocated to complete the 100% design. The 25% design is underway on Phase 2B. During the public comment period for the last LRTP, 1,300 people signed a petition in support of the project.

2. Chair's Report – Clinton Bench, MassDOT

At the chair's request, Paul Regan, MBTA Advisory Board, reported on the Advisory Board's recommendations regarding the proposed MBTA budget. The MBTA must close a \$127 million budget gap and the agency proposes doing this by selling its North Station garage (for at least \$45 million) and revenue stream from 100 parking facilities (which could generate \$30-35 million per year), as well as by restructuring its debt.

The MBTA Advisory Board is recommending alternative measures to restructuring the debt. One would involve the merger of the MBTA Transit Police with the State Police. Another would transfer future capital needs for ferry services to the Massachusetts Port Authority. And another would create efficiencies by transferring local transit contracts to the Office of the Transit Administrator. The MBTA is required to pass a budget by its next MassDOT Board meeting.

C. Bench then reported that MassDOT's Office of Transportation Planning has posted RFPs for work to be done to complete the Statewide Strategic Transportation Plan, in work which will be conducted over the next 12-18 months. This work began with the youMove Massachusetts campaign. MassDOT has also posted an RFP for work to complete with the Statewide Transit Plan. Both plans are required under MassDOT's enabling legislation.

C. Bench also reported that Frank DePaolo has been appointed as the Acting Administrator of the MassDOT Highway Division following the resignation of Frank Tramontozzi. MassDOT is conducting a nationwide search to fill the position.

In regards to the recent news about a light fixture that fell from the ceiling of the Central Artery Tunnel, C. Bench noted that Secretary Mullan has given assurance that the tunnel was never unsafe for use and that all light fixtures have since been inspected and are safe.

3. Subcommittee Chairs' Report – Eric Bourassa, Metropolitan Area Planning Council (MAPC)

The Clean Air and Mobility Program Subcommittee met last week and will be bringing recommendations for the funding of Clean Air and Mobility projects to the Committee for the meeting of April 14.

4. Regional Transportation Advisory Council Report – Laura Wiener, Regional Transportation Advisory Council

The Advisory Council's subcommittee for the LRTP will meet next week to discuss their recommendations to the MPO. The full Advisory Council will meet on April 13. On the agenda will be presentations on transportation enhancements and possibly positive train control.

5. Director's Report – *Karl Quackenbush, Acting Director, Central Transportation Planning Staff (CTPS)*

K. Quackenbush drew members' attention to the calendar of upcoming MPO meetings and noted that the Unified Planning Work Program (UPWP) subcommittee is currently scheduled to meet on April 21 to discuss potential projects for the next UPWP.

6. Meeting Minutes – *Pam Wolfe, Manager of Certification Activities, MPO Staff* This item was not addressed.

7. Long-Range Transportation Plan Discussion – Anne McGahan, Plan Manager, MPO Staff

Members were provided with tables showing the Universe of Projects for the LRTP and tables depicting investment categories for proposed projects. (See attached.) A. McGahan described the materials in the tables. The Universe of Projects table shows proposed projects that meet needs identified in the LRTP Needs Assessment and indicates whether the projects meet an MPO policy. The investment category tables show program areas evaluated based upon the MPO's visions and policies, and a ranking of programs based on those that support the most vision and policies.

The investment categories in the tables are as follows (listed in order of those that meet the most MPO visions and policies):

- *Modernization Transit*: Upgrades the existing system to current design standards
- Clean Air and Mobility
- *State of Good Repair and Maintenance Transit*: Maintains and repairs the existing system
- *Modernization Roadway*: Upgrades the existing system to current design standards
- *Expansion Transit*: Extends or adds capacity to the existing system
- Expansion Bike/Ped
- *Management and Operations Transit*: Intelligent Transportation (ITS) projects and low-cost capital improvements for system efficiency
- *State of Good Repair and Maintenance Roadway*: Maintains and repairs the existing system
- *Management and Operations Roadway*: ITS projects and low-cost capital improvements for system efficiency
- Expansion Freight
- Expansion Roadway

The investment categories can help the MPO to determine the split of projects among categories. In past plans, the MPO had a split of 70% maintenance projects and 30% expansion projects. Staff is proposing to dedicate a larger portion of the split to maintenance and modernization for the new plan and to allocate funds for programs, not just for specific projects. When members determine what the split will be, staff can rank the projects within the investment categories.

These investment categories coincide with the categories staff used last fall to develop charts that show past TIP programming in terms of funding categories. Those charts were redistributed for members' discussion. (See attached.)

Members discussed the material.

Jim Gillooly, City of Boston, suggested that it would be helpful if staff provided project cost information along with percentages for making decisions about the split.

Members discussed the difficulty of making decisions about the split now given the uncertainty of future federal funding. E. Bourassa and P. Regan remarked upon the challenging fiscal climate given that it appears that Congress is not increasing funding for transportation. P. Regan stated that the next five years could be very challenging for the MPO and the best the MPO may be able to hope for is level funding. The MPO may face funding cuts if the federal transportation legislation is not reauthorized soon, or if federal earmarks are rescinded. The Commonwealth also must continue to pay off Grant Anticipation Notes (GANS) for the Central Artery/Tunnel project and the Accelerated Bridge Program.

Lourenço Dantas, Massachusetts Port Authority raised a question about how the MPO's travel demand model could be used to determine the set of projects that would have the best impact in terms of improving air quality and mobility and other MPO goals. K. Quackenbush stated that staff is prepared to conduct model runs on two sets of transportation projects. He noted, however, that the modeling will only be partially applicable for the MPO's decision-making process because certain factors cannot be modeled, the model runs will not isolate the impacts of specific projects, and some projects do not lend themselves to being modeled. He stated that the model results could be supplemented with other analyses. The MPO may identify thematic packages for consideration using the investment categories.

Members then discussed the financial information for the LRTP which was distributed by MassDOT. (See attached.) The document outlines the total amount of funds expected to be available to the MPO for programming in the LRTP broken down by five year time bands.

C. Bench provided the following information regarding these figures:

- a 3% annual inflation rate is factored into the figures starting at 2016
- Regional Discretionary Funding is reduced by over fifty percent in the 2016-20 time band (relative to the last LRTP) due to GANS payments associated with the Accelerated Bridge Program
- Regional Discretionary Funding increases in the 2021-25 time band due to the end of GANS payments in 2022; still the amount of funding is less relative to the last LRTP
- due to other state needs, there will need to be a collaborative process to determine if the funds currently allocated under the Regional Discretionary Funding

category in the 2021-25 time band should be distributed back to the underfunded Statewide Maintenance category

Mark Guenard, MassDOT, added that these financials are based on figures set in 2007 based on SAFETEA-LU assumptions and that it is possible that there could be a reduction of funds when the transportation legislation is reauthorized. The financials also include \$40 million in redistribution funds, based upon past guidance from the Federal Highway Administration (FHWA) and practice.

A. McGahan cautioned members not to program 100% of funds in the LRTP since some funding would need to be available to program TIP projects, including projects in programs the MPO might support. She suggested that members consider putting proposed projects in investment categories. P. Wolfe added that members may wish to consider which investment categories would help the MPO get closer to achieving its goals.

Members than began to review the projects in the current LRTP. They focused first on projects in the West Corridor. (The members reviewed projects in three other corridors at a previous meeting.)

David Anderson, MassDOT Highway Division, and Arthur Frost, MassDOT Highway District 3, provided an update on the *Framingham – Route 126/Route 135 Grade Separation* project. Beta Group is evaluating three design alternatives for this project. Many people are concerned because these alternatives would drastically alter the character of downtown Framingham. The cost of the alternatives is not yet determined. The no build alternative remains a valid alternative.

J. Gillooly asked staff to add the *Boston – Boylston Street* project to the West Corridor. (The project is included in the Central Corridor.)

D. Anderson provided an update on the *Newton and Needham – Needham Street/Highland Avenue* project. MassDOT has taken over the project design from a developer and is paying a consultant to develop a functional design report. Formerly the project was split between the Towns of Newton and Needham. Now the project is combined and includes a historic bridge connecting the two roadway segments.

Members then discussed a memorandum from Cathy Buckley, MPO Staff, regarding estimated ridership on proposed multi-use trials, and a map depicting the location of multi-use trails in the MPO region. (See attached.) These materials were prepared at members' request.

K. Quackenbush discussed the method staff used to estimate usage on proposed trails. Staff conducts counts of riders on existing trails in the region. For this memorandum, staff developed relationships between those counts and population and employment demographics for the areas within two miles of the trails.. Those relationships were then applied to the demographic characteristics of the proposed trail areas to estimate what the usage might be on those trails. The estimates, which provide a general order of magnitude of usage, are provided in Table 3 of the attached memorandum from C. Buckley. To develop the estimates, staff used counts from one July morning. It is expected that there would be a higher fraction of utilitarian users (non-recreational) at that peak, weekday travel time than on a weekend day.

P. Regan commented that ridership would likely be lower if the counts were taken at another time of year than summer.

L. Dantas noted that the information staff provided suggests that the Northern Strand Trail would attract much higher usage than the other proposed trails: Border to Boston, Bruce Freeman, and Assabet River. He noted that this information is helpful for prioritizing trail projects.

K. Quackenbush advocated for taking more than one approach when evaluating potential usage of trail projects. If the MPO would like more information, he recommended that staff develop and apply a second method.

David Koses, City of Newton, asked if the figures on Table 3 represent the maximum potential usage on the trails. K. Quackenbush clarified that that is not necessarily the case. In collecting the base data used in this analysis, staff counted at points along trails, but it is not known if those were peak travel points.

P. Regan recommended comparing trail usage to usage on other modes. He stated that the trail ridership figures are extremely low considering the investment required for trail projects. He also stated that funding trail projects would not be the way for the MPO to maximize the impact of its available funds.

J. LaRocca made several points in response to members' comments. In regard to the idea that commuter use of trails would drop off in the winter, she noted that plowing the trails is an option, as is done on the Minuteman Bikeway. Regarding the Northern Strand appearing as the best trail, she noted that it would not rank highest if one considered the percentage of the area population that would use it. And regarding the idea that the potential trail ridership figures presented by staff represent maximum trail usage, she stated that consideration would have to be given to a trail's location to other transportation modes and areas of congestion (such as the Concord Rotary). C. Bench asked staff to take those comments into consideration when developing other methods for evaluating trail usage.

E. Bourassa asked why staff used counts from a hot July day, and noted that trail usage is probably higher in the spring and the fall. K. Quackenbush replied that staff does counts in the spring and fall as well. Sean Pfalzer, MPO staff, added that the particular day was chosen because staff had counts for each trail facility for that day, thus a comparison could be made.

D. Koses noted that a lack of lighting on trails could be a deterrent for people using the facilities for commuting.

Christine Stickney, Town of Braintree, noted that cost estimates for trails would be necessary for evaluating the projects; only two trails under consideration have cost estimates. Staff reported that cost estimates are not available for all trail projects.

K. Quackenbush provided more information about the map of trails in the MPO region. He noted that the map includes all existing linear trails and the locations of some shared use trails managed by the Department of Conservation and Recreation. The four trails contained in the current LRTP are shown in red. Other proposed facilities are not depicted on the map.

J. Gillooly requested that staff provide a close-up of the central urban area.

Members then moved on to discuss projects in the North and Southwest Corridors.

D. Anderson provided an update on the *Reading, Stoneham, and Woburn* – I-93/I-95 *Interchange* project. It has a notice to proceed on the 25% design.

He also provided an update on the *Canton* – I-95/I-93 Interchange project. MassDOT has submitted an interchange justification report and design exception report to FHWA. Federal approvals are coming in. MassDOT is funding the design of the interchange and is contemplating taking over the design of the University Avenue off-ramp, which is no longer being done by a developer.

A. McGahan asked if there are other projects in the environmental review process that are not in the LRTP. D. Anderson and District staff offered to provide more information about the status of those projects. P. Wolfe stated that staff will be in contact with MassDOT staff to prepare the updates for the MPO.

Pamela Haznar, MassDOT District 5, pointed out that the *Weymouth and Duxbury* – *Route 3 Add-a-Lane* project is a priority for District 5. She reported that the breakdown lane is being used as a travel lane at peak hours.

A. Frost spoke of another project, the *Natick – Route 9/Route 27* project, which has a cost estimate of \$16 million.

E. Bourassa asked about the process for evaluating the global warming impacts of the projects. A. McGahan replied that staff will model carbon dioxide reductions from projects for the build and no-build scenarios of the LRTP. Staff is working with MassDOT to determine how the regional data on reductions will be incorporated so that MassDOT can meet its statewide reduction targets. (MPOs do not have individual reduction targets.)

E. Bourassa expressed concern that the methods used would not capture impacts from secondary land use. For example, it would not take into account projects that would make it easier for people to live farther from the urban core.

8. Members Items

P. Wolfe noted that staff will try to have additional material to support an LRTP discussion at the April 17 Committee meeting, but may need more time and may ask to hold that discussion on April 21 instead.

R. Reed distributed an article regarding the state and federal gas tax.

9. Adjourn

Transportation Planning and Programming Committee Meeting Attendance Thursday, March 31, 2011, 10:00 AM

Member Agencies

MassDOT MassDOT Highway

City of Boston

City of Newton City of Somerville MAPC

MassPort MBTA MBTA Advisory Board Regional Transportation Advisory Council Town of Bedford Town of Braintree Town of Framingham Town of Hopkinton

Representatives and Alternates Clinton Bench David Anderson John Romano Jim Gillooly Tom Kadzis David Koses Tom Bent Eric Bourassa Eric Halvorsen Lourenço Dantas Ron Morgan Paul Regan Laura Wiener Steve Olanoff **Richard Reed** Christine Stickney Ginger Esty Mary Pratt

MPO Staff/CTPS

Michael Callahan Maureen Kelly Robin Mannion Anne McGahan Hayes Morrison Sean Pfalzer Karl Quackenbush Alicia Wilson Pam Wolfe

Other Attendees

Arthur Frost Mark Guenard Pamela Hazner Erin Kinahan Timothy Kochan Judy LaRocca

Mary Ann Murray

Joe Onorato Karen Pearson MassDOT District 3 MassDOT MassDOT District 5 MassDOT District 6 MassDOT District 5 Bruce Freeman Rail Trail Advisory Committee Access Advisory Committee to the MBTA MassDOT District 4 MassDOT Office of Transportation Planning

SOUTHWEST CORRIDOR HIGHWAY UNIVERSE	CTPS Corridor Study and/or Recommendation	Highway Project with PRC Approval	Project Under MassDOT Environmental Review	Major Highway Project Pending, On Hold or Inactive	Project Programmed in the MPO's Current LRTP	Construction Funds In FFYs 2011-14 TIP	Public Comment	MassDOT CIP High Priority Path	Meets Plan Identified Need	Cost
Former Long Range Transportation Plan F	Projects c	urrentl	y progra	mmed an	d/or unde	er constru	ction			
Route 128 Additional Lanes (Randolph to Wellesley)		Х			х	х				
Pulaski Blvd (Bellingham)		Х			х					\$9.5
Former Long Range T	ransporta	ation Pl	an Unive	erse of Ro	adway Pr	ojects				
I-95/I-93 Interchange (Canton)	х	х	х		х		Х		Х	\$216.0
I-95 Northbound/Dedham St. Ramp/Dedham St. Corridor	х	х			х		Х		Х	\$9.0
Route 126 (Corridorwide) (meets need in Bellingham)							Х		Х	
Route 27 (Corridorwide) (meets need in Sharon)							Х		Х	
Route 1 Intersection Signalization (Corridorwide)	х						Х		Х	
Route 138 (Canton, Milton, Stoughton)	х								Х	
Route 1 South (Dedham, Norwood, Westwood, West Roxbury)	x								х	
I-95 Capacity Improvements (Canton to Foxborough)	х								х	
I-495 Capacity Improvements (Littleton to Wrentham)	х						х			
Route 24/I-93 Interchange (Randolph)	х						х		х	
Veteran's Memorial Drive Extension/Route 16 Bypass							x		х	\$5.0
(Milford)							^		^	μ .υ
East-West Connector Road (Canton)							х			\$8.0
Former Long Range Transpo	rtation P	lan Uni	verse of	Bicycle a	nd Pedest	rian Proje	cts			
Bicycle and Pedestrian Improvements in the vicinity of	x									
Forest Hills Station (Jamaica Plain)	^									
Bicycle and Pedestrian Improvements in the vicinity of	х									
Norfolk Commuter Rail (Norfolk)	^									
Bicycle and Pedestrian Improvements in downtown Franklin (Franklin)	x									

Maintenance, Mod Efficien	Livability and Economic Benefit	Mobility	Environment and Climate Change	Transportation Equity	Safety and Security
urrently pr	ogramme	d and/or	under co	nstruction	
Plan Unive	rse of Roa	dway Pro	jects	1	
х	Х	Х			Х
	х	х			
х	х	х			
х		х			
х		х			
х	х	х			
x	х	x			
		х			
х		х			х
		х			
niverse of E	Bicycle and	d Pedestr	ian Projec	cts	
	Plan Univer	urrently programme Plan Universe of Roa X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X	urrently programmed and/or Plan Universe of Roadway Pro X X	urrently programmed and/or under constraints Plan Universe of Roadway Projects X X	urrently programmed and/or under construction Plan Universe of Roadway Projects x x

The projects included in this table are those from this corridor's Highway Universe that meet a Plan identified need. An initial evaluation was performed using criteria derived from the MPO's visions and policies.

Projects that are indicated in **bold**, are projects that were included in the JOURNEY to 2030 Plan.

SOUTHWEST CORRIDOR TRANSIT UNIVERSE	PMT Transit Enhancement Proioct	PMT Transit Expansion	PMT Transit SGR Project	In MBTA's Draft FY 2012- 2016 CIP SGR List	In MBTA's Draft FY 2012- 2016 CIP Enhancement	In MBTA's Draft FY 2012- 2016 CIP Expansion Project	Transit Project Recommended from MPO's	Transit Project in the Current LRTP	Public Comment	Meets Plan Identified Need	Cost (in millions)	SOUTHWEST CORRIDOR TRANSIT NEI
	Ac	cessibil	ity	•				1.				
DDT D D D D D D D	1	ancem	ents	1	1	T	1	1	1	1		
BRT on Bus Routes 23, 28, 31, 32, 39		<u> </u>			Х					Х		BRT on Bus Routes 23, 28, 31, 32, 39
	E	(pansic	on I		1	1	1	1	1	T	1	
Extend Fairmount Commuter Rail Line to Route 128		X										Extend Franklin Commuter Rail Line to Mil
Extend Franklin Commuter Rail Line to Milford		х								Х		Operate Weekday Commuter Rail Service
Onereste Maakdey Commuter Deil Comise to Feyhore		x								x		Replace 3 Insufficient Freight Bridges on N
Operate Weekday Commuter Rail Service to Foxboro		_										River Freight Line
Replace 3 Insufficient Freight Bridges on New Bedford/Fall		x				x				x	¢10.0	South Coast Dail Design and Engineering
River Freight Line South Coast Rail Design and Engineering											\$19.6	South Coast Rail Design and Engineering
		X				X				Х		Commuter Dail Deadville Facility Demodiat
Orange Line Extension from Forest Hills to Needham Commuter Rail Line fom Needham Junction to Millis		_							X			Commuter Rail Readville Facility Remediat
	Mainter			Į	ļ		ļ	I	х		<u> </u>	Parking Capacity Increases at 15 Commute
Commuter Rail Readville Facility Remediation	wanter			1	1	1	1	1	1		\$4.8	Parking Capacity Increases at 15 Commute Parking Capacity Increases at 2 Orange Lin
		Parking		х						х	Ş4.0	Parking Capacity increases at 2 Orange Lin
Parking Capacity Increases at 15 Commuter Rail Stations	x									x		Add Northbound Commuter Rail Platform
Parking Capacity Increases at 2 Orange Line Stations	×									x		Back Bay Station Lobby Ventilation
raiking capacity increases at 2 orange line stations		tation									<u> </u>	Back Bay Station Roofing Project
Add Northbound Commuter Rail Platform at Ruggles Station			, 		1	1				x		
Back Bay Station Lobby Ventilation	^		x	х						x	\$1.4	Orange Line AC & DC Breaker Upgrade
Dudley Square Station Improvements	x		^	~	x					~	\$0.3	Orange Line Power Improvements
Back Bay Station Roofing Project	~		x	х	~					x	φ 0 .5	Rehabilitate 2 Neponset River Bridges
	Support	Infrast					ļ	1		~	<u> </u>	Shoreline Bridge Rehabilitation (Providence
Orange Line AC & DC Breaker Upgrade		Τ	x	х	<u> </u>	T		1		x	\$40.2	
5 10												Add Second Track to Single-Track Commut
Orange Line Power Improvements			х	х						x	\$6.5	Franklin and Stoughton Lines
Rehabilitate 2 Neponset River Bridges			x	х						x	\$17.5	Timber Tie Replacement at Interlocking or
Shoreline Bridge Rehabilitation (Providence Line)			x	х						x	\$1.0	
	Track	and Si	gnals	<u>.</u>				<u>.</u>		<u> </u>	<u> </u>	New Orange Car Design and Engineering
Add Second Track to Single-Track Commuter Rail Segments c	n									1		
	х									x		New Orange Line Car Procurement
Franklin and Stoughton Lines		-										
Franklin and Stoughton Lines Timber Tie Replacement at Interlocking on the Attleboro Line	e			х						х	\$0.6	
	_	/ehicle	5	x						X	\$0.6	The projects included in this table are thos
	_	/ehicle	5 X	x						× ×	\$0.6 \$13.7	The projects included in this table are thos identified need. An initial evaluation was p

NEEDS EVALUATION	Maintenance, Modernization and Efficiency	Livability and Economic Benefit	Mobility	Environment and Climate Change	Transportation Equity	Safety and Security
Accessibility						
•						
Enhancements						
	х	х	х		х	
Expansion						
Milford			х			
ice to Foxboro		х	х			
n New Bedford/Fall	x		х			x
g						
Maintenance Facilitie	s					
diation	Х					
Parking						
uter Rail Stations		х	х	х		
Line Stations		Х	х	х		
Stations						
rm at Ruggles Station	Х		Х		Х	
	Х					х
	х					
Support Infrastructur	е					
	Х					
	х					
	х					х
ence Line)	х					х
Track and Signals						
nuter Rail Segments on	x		x		х	
g on the Attleboro Line	х					х
Vehicles						
Ig						
	x					

ble are those from this corridor's Transit Universe that meet a Plan uation was performed using criteria derived from the MPO's visions and

SOUTHEAST CORRIDOR HIGHWAY UNIVERSE	CTPS Corridor Study and/or Recommendation	Highway Project with PRC Approval	Project Under MassDOT Environmental Review	Major Highway Project Pending, On Hold or Inactive	Project Programmed in the MPO's Current LRTP	Construction Funds In FFVs 2011-14 TIP	Public Comment	MassDOT CIP High Priority Path	Meets Plan Identified Need	Cost (in millions)
Former Long Range Transportation Pl	an Projec			rammed a	1	1	ruction			¢26.4
Route 18 (Weymouth) Route 139 (Marshfield)		X	X		X	x				\$26.1 \$5.7
East-West Connector Road (Weymouth)		x x	x		x x	x x				\$5.7 \$15.0
Fore River Bridge (Quincy and Braintree)		x	x		x	x				\$255.0
Former Long Range Tra	nsportat			of Roady			ļ			Ş233.0
Route 3 Add-A-Lane (Weymouth to Duxbury)				x	x*		x		x	\$227.8
I-93/Route 3 Interchange (Braintree Split)	х				х		х		х	\$36.0
Route 53 Final Phase (Hanover)		х			х		х		х	\$1.0
Completion of the S. Weymouth Naval Air Station - Widening										
Reservoir Park Drive and Hingham Street (Rockland)	х								Х	
I-93/Route 24 Interchange (Randolph)	х						х		х	
Route 3/Union St. (Rockland)							х		х	
Route 24 Capacity Improvements (Raynham to Randolph)	x								х	
I-93 Capacity Improvements (Boston to Braintree)	х								х	
Route 138 Corridor (Canton, Milton, Stoughton)	х								х	
Route 53 (Quincy, Braintree, Weymouth, Hingham, Norwell, Hanover, Pembroke, Duxbury, Kingston)	x								х	
South Boston Roadway Improvements (State Freight Plan)	х								х	\$40.0
Conley Rail Service (South Boston) (Massport Study)	х								х	
T Under D (South Boston) (Massport Study)	х								х	
Clivendon Extension Bridge (Quincy)							х			
Track 61 Rail Improvement (Boston) (State Freight Plan)							х		х	\$9.5
Port of Boston Improvement Dredging Project (Boston, Everett, Chelsea) (State Freight Plan)									х	\$308.0
Former Long Range Transport	ation Pla	n Unive	erse of Bic	ycle and F	Pedestrian	Projects				
Bicycle and Pedestrian Improvements in Duxbury Village (Duxbury)	x									
Bicycle and Pedestrian Improvements in Holbrook Town Center (Holbrook)	x									
Bicycle and Pedestrian Improvements in Jackson Square	x	ļ								
				ļ		ļ				I

SOUTHEAST CORRIDOR HIGHWAY NEEDS EVALUATION	Maintenance, Modernization and Efficiency	Livability and Economic Benefit	Mobility	Environment and Climate Change	Transportation Equity	Safety and Security
Former Long Range Transportation Plan Projects curre	ently pro	grammo	ed and/or	under co	nstruction	1
		a of Do		aiaata		
Former Long Range Transportation Plan	1	еотко	-	ojects		
Route 3 Add-A-Lane (Weymouth to Duxbury)* I-93/Route 3 Interchange (Braintree Split)	x x		x			Y
Route 53 Final Phase (Hanover)	x		x x			х
Completion of the S. Weymouth Naval Air Station - Widening	^		^			
Reservoir Park Drive and Hingham Street (Rockland)		х	х			
I-93/Route 24 Interchange (Braintree)	x		x			x
Route 3/Union St. (Rockland)	x		~			x
Route 24 Capacity Improvements (Raynham to Randolph)	~		x			~
I-93 Capacity Improvements (Boston to Braintree)			х			
Route 138 Corridor (Canton, Milton, Stoughton)	х	х	х			
Route 53 (Quincy, Braintree, Weymouth, Hingham, Norwell, Hanover, Pembroke, Duxbury, Kingston)	x		х			
South Boston Roadway Improvements (State Freight Plan)		х	x			
Conley Rail Service (South Boston) (Massport Study)		x	x			
T Under D (South Boston) (Massport Study)	x	x	x	x		
Track 61 Rail Improvement (Boston)		х	x			
Port of Boston Improvement Dredging Project	х	х	x			
Former Long Range Transportation Plan Unive	rse of Bi	cycle an	nd Pedesti	rian Proje	cts	

I-93 Capacity Improvement
Route 138 Corridor (Cante
Route 53 (Quincy, Braint
Hanover, Pembroke, Dux
South Boston Roadway In
Conley Rail Service (South
T Under D (South Boston)

Track 61 Rail Im	nproveme
Port of Boston	Improvem
	Former

* Included as an Illustrative Project

The projects included in this table are those from this corridor's Highway Universe that meet a Plan identified need. An initial evaluation was performed using criteria derived from the MPO's visions and policies.

Projects that are indicated in **bold**, are projects that were included in the JOURNEY to 2030 Plan.

SOUTHEAST CORRIDOR TRANSIT UNIVERSE	PMT Transit Enhancement Project	PMT Transit Expansion Project	PMT Transit SGR Project	In MBTA's Draft FY 2012-2016 CIP SGR List	In MBTA's Draft FY 2012-2016 CIP Enhancement Project List	In MBTA's Draft FY 2012-2016 CIP Expansion Project List	Transit Project Recommended from MPO's CMP	Transit Project in the Current LRTP	Public Comment	Meets Plan Identified Need	Cost (in millions)
Wollaston Accessibility	x	A			x					x	\$0.75
Wondston / lecessionity	<u></u>	Communi	cations/Teo	hnology	^		<u>[</u>	<u> </u>		~	<i>\$0.75</i>
		En	hancement	:S							•
BRT on Bus Routes 23 and 28	х				х					х	
Fairmount Line Improvements Phase II	х				х					х	\$45.2
		. I	Expansion	-				-			
Extend Commuter Rail from Middleborough to Wareham	х								х	х	
		x				x				x	
South Coast Rail Design and Engineering											
Replace 3 Insufficient Freight Bridges on New Bedford/Fall		х				х				Х	\$19.6
Improved Ferry Service from South Shore Communities to Boston									x		
Red Line Extension to Weymouth									х		
		Mainte	enance Faci	lities	1	-	1	1			-
			Parking								
Parking Capacity Increase at Hingham Ferry Terminal	v		Parking								
raiking capacity increase at thingham terry terminal	X										
Parking Capacity Increases at 4 Red Line Stations	х									х	
Parking Capacity Increases at 5 Commuter Rail Stations	x									х	
Red Line South Shore Parking Garage Rehabilitation at 3			х	х						х	\$28.1
			Stations								
Ashmont Station Upgrade Phase II					х						\$13.8
		Suppo	rt Infrastru	cture	1	-	1	-			
MBTA Ferry System Dock Improvements			х	х						Х	\$1.3
Red Line DC Cable Upgrade Phase I Andrew-Kendall			х	х						Х	\$25.1
Red Line Traction Power Upgrade			x	x						х	\$16.4
		Trac	k and Signa	als							
Add Second Track to Single-Track Commuter Rail Segments on	х									х	
Columbia Junction Upgrades			х	х						х	\$57.9
Old Colony Line Tie Replacement Project			х	х						х	\$57.3
Red Line Signal Cable Replacement			x	х						Х	\$12.4
Catamaran fan Ouin au Uark ar		I	Vehicles								64.2
Catamaran for Quincy Harbor			X	x						X	\$4.2
Ferry Boat Improvements New Red Line Cars Design and Engineering			X	x						X	\$1.3 \$13.7
New Red Line Cars Design and Engineering	x		x x	x						x x	،.دىږ
	^		x	x						X	\$6.9
Red Line No. 1 Car Reinvest.			~							~	

SOUTHEAST CORRIDOR TRANSIT NEEDS EVALUATION	Maintenance, Modernization and Efficiency	Livability and Economic Benefit	Mobility	Environment and Climate Change	Transportation Equity	Safety and Security
Accessibility			1	1	[]	
Wollaston Accessibility	х	х				х
Communications/Tec	chnology	/				
Enhancement	1					
BRT on Bus Routes 23 and 28	х	Х	Х		Х	
Fairmount Line Improvements Phase II		х	х	х	х	
Expansion					[
Extend Commuter Rail from Middleborough to Wareham			x			
South Coast Pail Decign and Engineering						
South Coast Rail Design and Engineering Replace 3 Insufficient Freight Bridges on New Bedford/Fall	х		v			v
Replace 5 insufficient reight bridges of New Dediord/rai	^		X			x
Maintenance Faci	lities					
Parking						
Parking Capacity Increases at 4 Red Line Stations		х	х	х		
Parking Capacity Increases at 5 Commuter Rail Stations		х	х	х		
Red Line South Shore Parking Garage Rehabilitation at 3	х					
Stations						
Support Infrastru	cture					
MBTA Ferry System Dock Improvements	х					
Red Line DC Cable Upgrade Phase I Andrew-Kendall	х					
Red Line Traction Power Upgrade	x					
Track and Sign	1					
Add Second Track to Single-Track Commuter Rail Segments on	х		Х			
Columbia Junction Ungrados	x					x
Columbia Junction Upgrades						
Old Colony Line Tie Penlacement Project	v					v
	*					
	x					
	~					
	x					
Red Line No. 1 Car Reinvest.	x					
Red Line No. 2 Car Overhaul						
Old Colony Line Tie Replacement Project Red Line Signal Cable Replacement Vehicles Catamaran for Quincy Harbor Ferry Boat Improvements New Red Line Cars Design and Engineering New Red Line Car Procurement	x x x x x x					x x

The projects included in this table are those from this corridor's Transit Universe that meet a Plan identified need. An initial evaluation was performed using criteria derived from the MPO's visions and policies.

NORTHWEST CORRIDOR HIGHWAY UNIVERSE	CTPS Corridor Study and/or Recommendation	Highway Project with PRC Approval	Project Under MassDOT Environmental Review	Major Highway Project Pending, On Hold or Inactive	Project Programmed in the MPO's Current LRTP	Construction Funds In FFYs 2011-14 TIP	Public Comment	MassDOT CIP High Priority Path	Meets Plan Identified Need	Cost (in millions)		
Former Long Range Transportation Pla	n Project		T	ammed a	T			on	1			
Crosby's Corner (Concord and Lincoln)		х	х		х	х	Х			\$73.0		
Assembly Square Roadway Improvments (Somerville)		х			Х	х	Х			\$15.4		
Former Long Range Transportation Plan Universe of Roadway Projects												
Middlesex Turnpike Phase III (Bedford, Billerica, Burlington)		х	х		х		х		х	\$20.8		
Trapelo Road (Belmont)		х			х		х			\$11.5		
McGrath Highway-Gilman Street Bridge (Somerville)	х						х					
Route 20 (Boston, Watertown, Waltham)	х								х			
Route 128 HOV (Wellesley to Woburn)	х								х			
Concord Rotary/Route 2 (Concord)	х	х		х	x*		х		х	\$43.3		
Route 2 Interchange (Littleton)							х		х			
Route 2/Route 16 Interchange (Arlington and Cambridge)	x						x		x			
Route 2 Capacity Improvements (Acton to Lexington)	х								х			
Wiggins Avenue Extension (Bedford)							х					
Depress I-93 (Somerville)							х					
I-93/Mystic Avenue Interchange (Somerville)	x								х	\$138.6		
Longfellow Bridge (Boston, Cambridge)	х		х		х				х	\$310.0		
Extend I-93 High-Occupancy Vehicle Lane into the City												
(Somerville)							х		x			
I-495 Capacity Improvements (Littleton to Wrentham)	х						х					
Former Long Range Transporta	tion Plar	n Univers	se of Bicy	cle and I	Pedestria	n Projec	ts					
Bruce Freeman Rail Trail		х			х		х	х	х	\$18.7		
Assabet River Rail Trail		х			х		х		х	\$18.1		

* Included as an Illustrative Project.

NORTHWEST CORRIDOR HIGHWAY NEEDS EVALUATION	Maintenance, Modernization and Efficiency	Livability and Economic Benefit	Mobility	Environment and Climate Change	Transportation Equity	Safety and Security
Former Long Range Transportation Plan Projects currer	ntly prog	rammed	and/or u	inder cor	nstructio	n
Former Long Range Transportation Plan	Universe	of Road	way Proj	ects		
Middlesex Turnpike Phase III (Bedford, Billerica, Burlington)	x	х	x			x
Route 20 (Boston, Watertown, Waltham)	х		х			х
Route 128 HOV (Wellesley to Woburn)			х	х		
Concord Rotary/Route 2 (Concord)*	х		х			х
Route 2 Interchange (Littleton)			х			
Route 2/Route 16 Interchange (Arlington and Cambridge)	х		х			х
Route 2 Capacity Improvements (Acton to Lexington)			х			
I-93/Mystic Avenue Interchange (Somerville)	х	х	х		х	
Extend I-93 High-Occupancy Vehicle Lane into the City						
(Somerville)			х	x		
Longfellow Bridge (Boston, Cambridge)	х					х
Trapelo Road (Belmont)	x	x		x		x
Former Long Range Transportation Plan Univer	se of Bicy	cle and	Pedestria	an Projec	ts	
Bruce Freeman Rail Trail		х		х		
Assabet River Rail Trail		х		х		

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Projects that are indicated in **bold**, are projects that were included in the JOURNEY to 2030 Plan.

Projects that are indicated in *italics*, are projects that were included in the JOURNEY to 2030 Plan but did not address a need identified in the Needs Assessment.

NORTHWEST CORRIDOR TRANSIT UNIVERSE	PMT Transit Enhancement Project	PMT Transit Expansion Project	PMT Transit SGR Project	In MBTA's Draft FY 2012-2016 CIP SGR List	In MBTA's Draft FY 2012-2016 CIP Enhancement Project List	In MBTA's Draft FY 2012-2016 CIP Expansion Project List	Transit Project Recommended from MPO's CMP	Transit Project in the Current LRTP	Public Comment	Meets Plan Identified Need	Cost (in millions)	NORTHMEST COLUCIAN AND AND AND AND AND AND AND AND AND A
	-	Acc	cessibilit	y	-							Accessibility
Science Park Station Accessibility	х				х					х	\$10.5	Science Park Station Accessibility x x x x
	Cor	nmunica	tions/Te	chnology								Communications/Technology
	-	Enha	ancemen	ts	T					1		Enhancements
Fitchburg Line Improvements	х				х						\$90.1	BRT on Routes 1,71,73,77 x x x
BRT on Routes 1,71,73,77										х		Expansion
		Ex	pansion									Green Line Extension to Medford Hillside/Union Square
Green Line Extension to Medford Hillside/Union Square		х	Ī		1	х		х		х	\$949.8	New Orange Line Station at Assembly Square x x x x
New Orange Line Station at Assembly Square	х							х		х	\$53.0	Maintenance Facilities
Red Line Extension to Arlington/Lexington		х										
Fitchburg Line Extension to Gardner		х							х			Parking
Build New Busways to Alewife Station (Cambridge)		1							х			Alewife Garage Improvements x
Connect Fitchburg Commuter Rail with Red Line at Alewife									х			Lechmere Parking Improvements x Image: Comparison of the second
Extend Trackless Trolley #71 from Watertown to Newton Corner									х			Parking Expansion at 11 Commuter Rail Stations
	•	Mainten	ance Fa	cilities	•							Stations
			Parking									Support Infrastructure
Alewife Garage Improvements	x	r			v					x	\$16.4	Red Line Traction Power Upgrade x
Lechmere Parking Improvements	x				^					^ X		Red Line DC Cable Upgrade Phase I, Andrew-Kendall x
Parking Improvements at 11 Commuter Rail Stations	x									x		Trackless Trolley Overhead Replacement x x
	^	S	tations							~		Trackless Trolley Catenary Improvements x x
												Fitchburg Line Main Street Bridge Repair in Concord x x
		Support	Infrastru	ucture								Fitchburg Line Red Bridge Replacement x x
Red Line Traction Power Upgrade			×	x						x	\$16.4	Fitchburg Line Layover Facility Upgrades x
Red Line DC Cable Upgrade Phase I, Andrew-Kendall	1	1	x	x	1					x	\$25.1	Track and Signals
Trackless Trolley Overhead Replacement		1	x	х	1					х	\$35.4	Red Line Signal Cable Replacement x
Trackless Trolley Catenary Improvements			x	х						х	\$1.2	Red Line Track and Switch Upgrades x x
Fitchburg Line Main Street Bridge Repair in Concord		1	x	х						х	\$6.2	Green Line Lechmere Signals x x
Fitchburg Line Red Bridge Replacement			х	х						х	\$10.0	Fitchburg Line Double Tracking x x x
Fitchburg Line Layover Facility Upgrades		1	x							х		Red Line Floating Slab Work x x
		Track	and Sigr	nals								Vehicles
Red Line Signal Cable Replacement			x	х						х	\$12.4	Red Line No. 1 Car Reinvestment x
Red Line Track and Switch Upgrades			х							х	·	Red Line No. 2 Car Overhaul x
Green Line Lechmere Signals			х	х						х	\$3.7	New Red Line Car Design and Engineering
Fitchburg Line Interlocking Project	х				х						\$2.3	New Red Line Car Procurement x
Fitchburg Line Double Tracking		х			х					х	\$15.9	
Red Line Floating Slab Work			х	х						х	\$27.5	
		V	ehicles									The projects included in this table are those from this corridor's Transit Universe that meet a Plan identified
Red Line No. 1 Car Reinvestment			х	х						х	\$6.9	need. An initial evaluation was performed using criteria derived from the MPO's visions and policies.
Red Line No. 2 Car Overhaul			x	х						х	\$10.6	
New Red Line Car Design and Engineering			х	х						х	\$13.7	Projects that are indicated in bold , are projects that were included in the JOURNEY to 2030 Plan.
New Red Line Car Procurement			х							х		

WEST CORRIDOR HIGHWAY UNIVERSE	CTPS Corridor Study and/or Recommendation	Highway Project with PRC Approval	Project Under MassDOT Environmental Review	Major Highway Project Pending, On Hold or Inactive	Project Programmed in the MPO's Current LRTP	Construction Funds In FFYs 2011-14 TIP	Public Comment	MassDOT CIP High Priority Path	Meets Plan Identified Need	Cost (in millions)
Former Long Range Transportation	Plan Proj		ently prog	grammed	1		struction	1	1	
Route 128 Additional Lanes (Randolph to Wellesley)		х			X	x				<u> </u>
Route 85 (Washington Street) Upgrade (Hudson)		х			х	х	х			\$10.7
Resurfacing and related work on Route 9 (Framingham and Natick)		х			x					\$12.0
Former Long Range	Fransnorta	tion Play	l I Iniversi	e of Road	way Proi	ects			ļ	
Route 126/Route 135 Grade Separation (Framingham)			x		x		x		x	\$58.5
Needham Street/Highland Avenue (Newton)		x	^		x		x		x	\$18.4
Route 126 (Bellingham to Framingham)	x	~			~		~		x	φ10. I
Route 9/Route 126 Interchange (Framingham)	~						x		x	
I-495/I-290/Route 85 Interchange (Marlborough, Hudson)		х		x	x*		x		x	\$37.4
Boundary St./Goddard St. (Marlborough, Northborough)		x					x			\$3.5
Route 128 HOV (Wellesley to Woburn)	х								х	
Route 135 Grade Separation (Ashland)									х	
Route 9/Temple St. (Framingham)									х	
I-495/South Street New Interchange (Hopkinton)							х			
New Route 128 Ramp to Riverside Station (Newton)							х			
Route 16/27 (Sherborn)		х					х			
Route 9/I-495 Interchange (Westborough)							х			
I-495 Capacity Improvements (Littleton to Wrentham)	х						х			
I-90/Interchange 17 (Newton)	х									
I-95/Kendrick Street Interchange (Needham)										
Route 30/I-90 Interchange (Weston)							х			
Route 9 Capacity Improvements (Brookline, Newton)	х						х		х	
Fenway Park Improvements (Boston)							х			\$35.1
Former Long Range Transpo	ortation Pl	an Unive	erse of Bio	cycle and	Pedestria	an Projec	ts			
Assabet River Rail Trail (Hudson to Acton)		х			х		х		x	\$18.1
Cordaville Road/Route 85 Rehabilitation (Southborough)										

* Included as an Illustrative Project

WEST CORRIDOR HIGHWAY NEEDS EVALUATION	Maintenance, Modernization and Efficiency	Livability and Economic Benefit	Mobility	Environment and Climate Change	Transportation Equity	Safety and Security
Former Long Range Transportation Plan Projects current	ly progr	ammed	and/or u	inder co	nstructio	n

Former Long Range Transportation Plan Universe of Roadway Projects											
Route 126/Route 135 Grade Separation (Framingham)	x	x	х	х	x	х					
Needham Street/Highland Avenue (Newton)	х	х	х								
Route 126 (Bellingham to Framingham)	х	х	х								
Route 9/Route 126 Interchange (Framingham)	х		х								
I-495/I-290/Route 85 Interchange (Marlborough, Hudson)*	х		х			х					
Route 128 HOV (Wellesley to Woburn)			х	х							
Route 135 Grade Separations (Ashland)	х		х								
Route 9/Temple Street (Framingham)	x		x								
Route 9 Capacity Improvements (Brookline, Newton)	х	х	х								
Former Long Range Transportation Plan Univers	e of Bicy	cle and	Pedestri	an Proje	cts	-					
Assabet River Rail Trail (Hudson to Acton) x x											

* Included as an Illustrative Project

The projects included in this table are those from this corridor's Highway Universe that meet a Plan identified need. An initial evaluation was performed using criteria derived from the MPO's visions and policies.

Projects that are indicated in **bold**, are projects that were included in the JOURNEY to 2030 Plan.

WEST CORRIDOR TRANSIT UNIVERSE	PMT Transit Enhancement Project	PMT Transit Expansion Project	PMT Transit SGR Project	In MBTA's Draft FY 2012-2016 CIP SGR List	In MBTA's Draft FY 2012-2016 CIP Enhancement Project List	In MBTA's Draft FY 2012-2016 CIP Expansion Project List	Transit Project Recommended from MPO's CMP	Transit Project in the Current LRTP	Public Comment	Meets Plan Identified Need	Cost (in millions)
		Acces	sibility	•		-			-		
Light Rail Accessibility Program - Boston College Station					х					х	\$3.0
Light Rail Accessibility Program - Phase II - Surface											
Stations	х				x					x	\$5.0
		Enhand	ements	;							
Green Line Improvements (use of 3-car trains)	х									x	
BRT on Route 57	х									x	
Worcester Commuter Rail Improvements	х									x	
		Ехра	nsion		l	ļ			Ι		
Green Line D Branch Extension to Needham Junction											
Commuter Rail Station		х							x		
									~		
New Worcester Line Commuter Rail Station in Allston	х								x	x	
Silver Line West Extension to Allston and Longwood	~								^	^	
Medical Area (Boston)									x		
Commuter Rail Station on I-495 in MetroWest Area									^		
(Westborough)									x		
Commuter Rail from Framingham to Leominster											
Orange Line Extension from Forest Hills to Needham									X	v	
									Х	Х	
Operate High Frequency Service from Riverside to South Station and JFK Station											
									Х		
	IVIa	intenar	ice Facil	r							64.2
Riverside Car House Improvements		 		х						X	\$4.3
		Par I	king								
Parking improvements at 13 Commuter Rail Stations	х									X	
Parking improvements at 3 Green Line Stations	х									X	L
		Sta	tions	1	1	1			1		<u> </u>
Yawkey Station Enhancements	X				х	ļ			ļ		\$9.4
	Suj	<mark>pport In</mark>	r	ture							
Green Line Catenary Replacement			х							X	41.0
Green Line Power Study				x						X	\$1.9
		Track ar		r							A =
Green Line Frog Replacement Program			х	х						X	\$5.0
Green Line Grade Crossing Upgrades			х							x	
Green Line Positive Train Control	х				х						\$1.1
Green Line Signal Replacement			х							х	I
Green Line Tie Replacement		ļ	х							х]
Worcester Commuter Rail Signal Improvements	х									x	
		Veh	icles								
Green Line No. 7 Car Overhaul			х	х						х	\$92.2
Green Line No. 8 Car Upgrades			х	х						х	\$11.8

WEST CORRIDOR TR

Light Rail Accessibility Program
Light Rail Accessibility Program
Stations
Green Line Improvements (use
BRT on Route 57
Worcester Commuter Rail Impr
New Worcester Line Commuter
Orange Line Extension from For
Riverside Car House Improveme
Parking improvements at 13 Co
Parking improvements at 3 Gre
Green Line Catenary Replaceme
Green Line Power Study
Green Line Frog Replacement P
Green Line Grade Crossing Upg
Green Line Signal Replacement
Green Line Tie Replacement
Worcester Commuter Rail Signa
Green Line No. 7 Car Overhaul
Green Line No. 8 Car Upgrades
The projects included in this tak identified need. An initial evalua

RANSIT NEEDS	Maintenance, Modernization and Efficiency	Livability and Economic Benefit	Mobility	Environment and Climate Change	Transportation Equity	Safety and Security
Accessibilit	y					
- Boston College Station	х	х				х
- Phase II - Surface	х	х				x
Enhanceme	nts					
of 3-car trains)	Х		Х			
	х	х	х		х	
ovements	х		х	х		
Expansior	1		-			
r Rail Station in Allston		х	х		х	
rest Hills to Needham			х			
Maintenance Fa	cilities					
ents	x					
Parking						
ommuter Rail Stations	х		х			
en Line Stations	х		х			
Stations	1					
Support Infrastr	ucture					
ent	х					x
Turalismul et						
Track and Sig	1					
Program rades	X					X
ומעכא	X					X
	x x					x x
al Improvements	x					x
Vehicles						~
	x					
	x					

able are those from this corridor's Transit Universe that meet a Plan uation was performed using criteria derived from the MPO's visions and

NORTHEAST CORRIDOR HIGHWAY UNIVERSE	CTPS Corridor Study and/or Recommendation	Highway Project with PRC Approval	Project Under MassDOT Environmental Review	Major Highway Project Pending, On Hold or Inactive	Project Programmed in the MPO's Current LRTP	Construction Funds In FFYs 2011-14 TIP	Public Comment	MassDOT CIP High Priority Path	Meets Plan Identified Need	Cost (in millions)		
Long Range Transportation Plan	Projects o	currently	program	ned and/o	or under c	onstructi	on		1 1			
Route 128/Route 35 and Route 62 (Danvers)		х			х	х				\$27.1		
Consolidated Rental Car Facility Logan Airport (Boston)		х			х					\$337.0		
Route 16/Revere Beach Parkway Bridges (Everett, Medford, and Revere)		x			x	x				\$41.3		
Long Range Transportation Plan Universe of Roadway Projects Route 1 add-a-lane (Malden, Saugus, Revere) x x x x x \$150.0												
Route 1 Capacity Improvements (Lynnfield, Peabody, Saugus)	x	~	~		~		Λ		x	<i>\</i>		
Route 1/Route 114 Corridor (Danvers, Peabody)	~						х		x	\$110.9		
Route 1/Route 16 Interchange (Revere)	x						Λ		x	\$7.4		
Route 1A/Route 16 (Revere)	x								x	\$109.7		
Route 1A/Chelsea Street Bridge Connection (Boston)	x								X	,		
Route 1A/Boardman Street Grade Separation (Boston)	x			x					x	\$16.0		
Gloucester Rotary (Gloucester)							х					
Route 128 Capacity Improvements (Beverly to Peabody)	х								х			
Route 16/Revere Beach Parkway Roadway Improvements							х		х	\$109.5		
Mahoney Circle Grade Separation (Revere)				х					х	\$35.6		
East Boston Haul Road (Boston)	х			х	х				х	\$19.5		
Commercial St./Tremont St. (Salem)							Х			\$0.8		
Essex St. Conversion (Salem, Beverly)							х			\$2.3		
Route 128/Brimbal Ave. Interchange (Beverly)		х		х			х			\$26.0		
Route 114/I-95 Improvements (Danvers)				х					х	\$68.2		
Bridge Street (Salem)	х	х	х		х					\$10.8		
Long Range Transportation Plan Universe of Bicycle and Pedestrian Projects												
Northern Strand (Revere, Saugus, Lynn, Everett, Malden)	х							х	х			
Border to Boston Trail (Newburyport to Boston)	х							х	х			

NORTHEAST CORRIDOR HIGHWAY NEEDS EVALUATION	Maintenance, Modernization and Efficiency	Livability and Economic Benefit	Mobility	Environment and Climate Change	Transportation Equity	Safety and Security
Long Range Transportation Plan Projects current	y program	med and/	or under c	onstructio	n	
Long Range Transportation Plan U	niverse of F	Roadway P	rojects			
Route 1 Add-a-Lane (Malden, Saugus, and Revere)	x	x	х		x	x
Route 1 Capacity Improvements (Lynnfield, Peabody, Saugus)			х			
Route 1/Route 114 Corridor (Danvers, Peabody)	х		х		х	х
Route 1/Route 16 Interchange (Revere)	х		х		х	
Route 1A/Route 16 (Revere)	х		х		х	
Route 1A/Chelsea Street Bridge Connection (Boston)	х		х			
Route 1A/Boardman Street Grade Separation (Boston)	х		х			
Route 128 Capacity Improvements (Beverly to Peabody)			х			х
Route 16/Revere Beach Parkway Roadway Improvements (Everett,	х		х		х	х
Medford, and Revere)						
Mahoney Circle Grade Separation (Revere)	х		х		х	х
East Boston Haul Road*	х	х	х		х	
Route 114/I-95 (128) Improvements (Peabody)			х		х	х
Bridge Street (Salem)		x	x			
Long Range Transportation Plan Universe	of Bicycle	and Pedes	trian Proj	ects		
Northern Strand (Revere, Saugus, Lynn, Everett, Malden)		х		х		
Border to Boston Trail (Newburyport to Boston)		х		х		

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* East Boston Haul Road will be funded by the Massachusetts Port Authority.

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NORTHEAST CORRIDOR TRANSIT UNIVERSE	PMT Transit Enhancement Project	PMT Transit Expansion Project	PMT Transit SGR Project	In MBTA's Draft FY 2012-2016 CIP SGR List	In MBTA's Draft FY 2012-2016 CIP Enhancement Project List	In MBTA's Draft FY 2012-2016 CIP Expansion Project List	Transit Project Recommended from MPO's CMP	Transit Project in the Current LRTP	Public Comment	Meets Plan Identified Need	Cost (in millions)
	A	cess	ibilit	у							
Co	mmunic	atior	ns/Te	chnolog	<u>sy</u>	-		1	1	, ,	
	<u> </u>										
DDT an Dauta 111	1	hance	emer	its	I			1	1	.	
BRT on Route 111	X	Vnor	ciar							х	
Extend Blue Line to Lynn	E	xpar	ISION					x*		x	\$782.5
Extend Blue Line from Lynn to Salem	}	х						X	v	×	2،201ڊ
Commuter Rail Line from Salem to Danvers									X	┥	
New Station at South Salem on Rockport/Newburyport									Х	$\left \right $	
Line									х		
Restore East Boston Ferry									v		
Wonderland Connector (Revere)									X X	$\left \right $	
	Mainte	nanc	E Fa	rilitios					^		
Newburyport Layover Facility Ventilation Fans			x				[x	
Orient Heights Maintenance Facility Renovation Phase			~							~	
				х						х	\$7.5
		Park	ing		1						<i><i><i>q</i> i i c</i></i>
Beverly Parking Garage Improvements	x		0		х						\$16.0
Parking Capacity Increases at 4 Commuter Rail Stations	x									x	
Parking Capacity Increases at 2 Blue Line Stations	x									x	
Salem Parking Garage Improvements	х				х						\$28.0
Wonderland TOD Parking Garage	х				х			х		х	\$52.0
		Stati	ons								
Blue Line Platform Rehabilitation				х							\$3.6
Blue Line Government Center Station Modernization					х						\$44.0
Blue Line Orient Heights Station Modernization					х						\$23.0
Blue Line Station Infrastructure Improvements					х						\$3.5
Rockport Station Improvements	х				х						\$0.5
Wonderland Transit Plaza					х					х	\$13.0
	Suppor	t Infi	rastr	ucture						,	
Beverly Draw Bridge Rehabilitation			Х	Х						х	\$6.6
	Trac	k and	d Sigr	nals							
Newburyport/Rockport Line Signal Upgrades		<u> </u>	Х							┟╴╽	4.
Orient Heights Track Work			x	х						х	\$10.8
	1	Vehi	cles	1	1					<u>г г</u>	
* Included as an Illustrative Project	<u> </u>										

NORTHEAST CORRIDOR **NEEDS EVALUATIO**

Comr
BRT on Route 111
Extend Blue Line to Lynn*
N
Newburyport Layover Facility Ventilation
Orient Heights Maintenance Facility Rei
=
Parking Capacity Increases at 4 Commu
Parking Capacity Increases at 2 Blue Lin
Wonderland TOD Parking Garage
Wonderland Transit Plaza
Si
Beverly Draw Bridge Rehabilitation
Orient Heights Track Work

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and policies.

* Included as an Illustrative Project

TRANSIT ON	Maintenance, Modernization and Efficiency	Livability and Economic Benefit	Mobility	Environment and Climate Change	Transportation Equity	Safety and Security
Accessibility						
nunications/Tech	nnology					
Enhancements						
	х	х	х		х	
Expansion						
		х	х	х	х	
laintenance Facil	ities					
n Fans	х					
novation Phase	х					
Parking						
iter Rail Stations		х	х	х		
e Stations		х	х	х	х	
		х	х	х	х	
Stations						
		х			х	
upport Infrastruc	ture					
	х		Х			х
Track and Signal	ls					
	х					х
Vehicles						

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NORTH CORRIDOR HIGHWAY UNIVERSE	CTPS Corridor Study and/or Recommendation, or Other Study	Highway Project with PRC Approval	Project Under MassDOT Environmental Review	Major Highway Project Pending, On Hold or Inactive	Project Programmed in the MPO's Current LRTP	Construction Funds In FFYs 2011-14 TIP	Public Comment	MassDOT CIP High Priority Path	Meets Plan Identified Need	Cost (in millions)
Long Range Transportation	on Plan Pro	jects curre	ntly program	med and/or	under const	ruction	T	-		
Route 16/Revere Beach Parkway Bridges (Everett, Medford, and Revere)		x			x	x				\$41.3
Long Ran	ge Transpo	rtation Plai	n Universe R	badway Proje	ects					
I-93/I-95 Interchange (Woburn, Reading, Stoneham, and		х	х		х		х		х	\$233.6
Route 1 Add-a-Lane (Malden, Saugus, and Revere)		х	х		х		х		х	\$150.0
Middlesex Turnpike Phase III (Bedford, Burlington, Billerica)		х	х		х		х		х	\$20.8
I-93/Route 129 Interchange Improvements (Wilmington and				v						
Reading)				х						\$20.5
Interstate 93 Capacity Improvements (Somerville to Woburn)	x								х	
Route 16/Revere Beach Parkway Roadway Improvements (Everett,										
Medford, and Revere)							х		х	\$109.5
I-93/Route 125/Ballardvale Road (Wilmington)		х		х						
Tri Town I-93/Lowell Junction Interchange (Andover, Tewksbury,		v	Y				v			
and Wilmington)		х	х				х			
New Boston Street Bridge (Woburn)		х			х		х			\$4.9
Montvale Avenue (Woburn)		х			х		х			\$3.7
Telecom City Boulevard (Everett, Malden, and Medford)							х			\$17.8
Route 128 Capacity Improvements (Lynnfield to Reading)	х								х	
Route 128 HOV (Wellesley to Woburn)	х								х	
Route 16/I-93 Connection (Medford)							х			\$20.8
Cambridge Street Improvements (Burlington, Woburn, Winchester)	х						х		х	\$4.3
Sullivan Square (Boston)	х	х			х		х		х	\$43.3
Rutherford Avenue (Boston)	х	х			х		х			\$49.2
Charlestown Haul Road (Boston)	х						х		х	
Route 60 Improvements (Malden, Medford)	X								х	
Long Range Trans	sportation F	Plan Univer	se of Bicycle	and Pedestri	an Projects		1			
Northern Strand (Revere, Saugus, Lynn, Everett, Malden)	х							Х	х	

NORTH CORRIDOR HIGHWAY NEEDS EVALUATION	Maintenance, Modernization and Efficiency	Livability and Economic Benefit	Mobility	Environment and Climate Change	Transportation Equity	Safety and Security
Long Range Transportation Plan Projects	currently pr	ogrammed ar	nd/or under c	onstruction		
Long Range Transportation	n Plan Univer	se of Roadwa	ay Projects			
I-93/I-95 Interchange (Woburn, Reading, Stoneham, and	Х		х			х
Route 1 Add-a-Lane (Malden, Saugus, and Revere)	Х	х	х		Х	х
Middlesex Turnpike Phase III (Bedford, Burlington, Billerica)	Х	х	х			х
Interstate 93 Capacity Improvements (Somerville to Woburn)			х			x
Route 16/Revere Beach Parkway Roadway Improvements (Everett, Medford, and Revere)	х		х		х	х
Route 128 Capacity Improvements (Lynnfield to Reading)			х			x
Route 128 HOV (Wellesley to Woburn)			х	х		
Cambridge Street Improvements (Burlington, Woburn, Winchester)			х			
Sullivan Square (Boston)	х	х	х		х	х
Route 60 Improvements (Malden, Medford)	Х		х			
Charlestown Haul Road (Boston)	Х	х	х		Х	
New Boston Street Bridge (Woburn)			x			
Montvale Avenue (Woburn)			х			
Rutherford Avenue (Boston)		X				X
Long Range Transportation Plan	Universe of B	icycle and Pe	destrian Proj	ects	-	
Northern Strand (Revere, Saugus, Lynn, Everett, Malden)		Х		х		

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NORTH CORRIDOR TRANSIT UNIVERSE	PMT Transit Enhancement Project	PMT Transit Expansion Project	PMT Transit SGR Project	In MBTA's Draft FY 2012-2016 CIP SGR List	In MBTA's Draft FY 2012-2016 CIP Enhancement Project List	Draft FV nsion PI	Transit Project Recommended from MPO's CMP	Transit Project in the Current LRTP	Public Comment	Meets Plan Identified Need	Cost (in millions)	NORTH CORRI EVA
	-	sibility	1		1	1	T	1	1	1	6110.4	
Station Elevator/Escalator Replacement and Modernization Program					Х					Х	\$118.4	Station Elevator/Escalator Re
Wedgemere Station access	unicatio		hnolog		х					Х	\$1.3	Wedgemere Station access
Automated Fair Collection, Phase II (CharlieCards on commuter rail)	unicatio	ons/rec	nnoiog	sy T	x	Γ	1				\$10.0	
	Enhand	ement	<u>ــــــــــــــــــــــــــــــــــــ</u>		×						\$10.0	
Improved Bus Amenities and System Identity for Bus Routes	x		, 							x		Improved Bus Amenities and S
		nsion								A		
Green Line Extension College Ave to Route 16		x				x		x		x	\$136.6	Green Line Extension College
Lowell Commuter Rail Line Extension (Nashua/Manchester)		х								x		Lowell Commuter Rail Line Ex
Urban Ring, Phase 2		х						x*	х	х	\$2,920.3	Urban Ring, Phase 2*
Extend Blue Line from Bowdoin to West Medford									х			
Orange Line North Extension from Oak Grove to Reading/Route 128									х			Move Bradford Layover Facili
Ma	intenan	ice Faci	lities									Wellington Maintenance Faci
Move Bradford Layover Facility on Haverhill Line with Plaistow		х								х		
Wellington Maintenance Facility Improvements				х						х		
	Par	king	•		1	1	-	1	1	1		
												Rapid transit station midlife r
	Stat	tions	1	1	-	1	1	1	1	1		Winchester Station Renovatio
Rapid transit station midlife rehab upgrades				Х						x	\$12.1	
Winchester Station Renovation	L		<u> </u>	Х						X		Merrimack River Bridge Reha
•	port In	frastruc	ture		r –		1	1	1	1		Orange Line Power Improvem
Haverhill Line (Andover Station) - Bike Signage and Shelter Haverhill Line (Bradford Station) - Bike Signage							X					Rehab of Three Shawsheen Ri
Lowell Line (Lowell Station) - Bike Racks and Shelter							X					Haverhill Line Double Tracking
Lowell Line (Winchester Center Station) - Bike Racks							X					Additional Haverhill Line Double
Merrimack River Bridge Rehab				x			X			x	\$8.6	Orange Line North Signal Syst
Orange Line (Oak Grove Station) - Bike Shelter Improvements				^			x			^		
Orange Line Power Improvements					x		~			х	\$6.5	Orange Line Car Procurement
Rehab of Three Shawsheen River Bridges				х	~					x	\$13.1	
	Frack ar	d Signa	ls	· ·				1			,	Projects that are indicated in
Haverhill Line Double Tracking	х									х	\$17.0	* Included as an Illustrative Pr
Additional Haverhill Line Double Tracking					х		[1		х	\$9.7	
Orange Line North Signal System Upgrade					х					х		The projects included in this t
	Veh	icles										evaluation was performed usi
Orange Line Car Procurement			х							х		

* Included as an Illustrative Project

NORTH CORRIDOR TRANSIT NEEDS EVALUATION	Maintenance, Modernization and Efficiency	Livability and Economic Benefit	Mobility	Environment and Climate Change	Transportation Equity	Safety and Security
Accessib	ility					
on Elevator/Escalator Replacement and Modernization Program						х
gemere Station access	x	х				х
Communications	/Technolog	у		-		
Enhancen	nents					
oved Bus Amenities and System Identity for Bus Routes	х	х			х	
Expansi	on		-			
en Line Extension College Ave to Route 16		х	х	х	х	
ell Commuter Rail Line Extension (Nashua/Manchester)			х	х		
an Ring, Phase 2*		х	х	х	х	
Maintenance	Facilities		-			
e Bradford Layover Facility on Haverhill Line with Plaistow	х					
ington Maintenance Facility Improvements	х					
Parkin	g		1			
Station	ıs		1			
d transit station midlife rehab upgrades	х					х
chester Station Renovation	x					
Support Infra	structure					
rimack River Bridge Rehab	х					х
nge Line Power Improvements	х					
ab of Three Shawsheen River Bridges	X					Х
Track and S	<u>г</u> п					
erhill Line Double Tracking tional Haverhill Line Double Tracking	X		X	X		
tional Havernill Line Double Tracking nge Line North Signal System Upgrade	X		X	X		
ige Line North Signal System Opgrade Vehicle	X					X
nge Line Car Procurement	1					v
	Х					Х

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		_	tal	_		<u>₽</u>					
CENTRAL AREA HIGHWAY UNIVERSE	CTPS Corridor Study and/or Recommendation, or Other Study	Highway Project with PRC Approval	Project Under MassDOT Environmental Review	Major Highway Project Pending, On Hold or Inactive	Project Programmed in the MPO's Current LRTP	Construction Funds In FFYs 2011-14 TIP	Corridor(s)	Public Comment	MassDOT CIP High Priority Path	Meets Plan Identified Need	Cost (in millions)
Long Range Transpor	tation Plan	Projects cu	irrently prog	rammed and	/or under c	onstruction	1	l.	T		
Consolidated Rental Car Facility Logan Airport (Boston)		х			х		NE				\$337.0
Route 16/Revere Beach Parkway Bridges (Everett, Medford, and Revere)		x			x	x	NE/N				\$41.3
Assembly Square Roadway Improvments (Somerville)		x			x	x	NW	х			\$15.4
	Range Tran	sportation	Plan Univers	e Roadway P	Projects		1				
Route 1 Add-a-Lane (Malden, Saugus, and Revere)		х	х		х		NE/N	х		х	\$150.0
Interstate 93 Capacity Improvements (Somerville to Woburn)	х						N			х	
Route 1/Route 16 Interchange (Revere)	х						NE			х	\$7.4
Route 1A/Route 16 (Revere)	х						NE			х	\$109.7
Route 1A/Chelsea Street Bridge Connection (Boston)	х						NE			х	
Route 1A/Boardman Street Grade Separation (Boston)	х			х			NE			х	\$16.0
Mahoney Circle Grade Separation (Revere)				х			NE			х	\$35.6
East Boston Haul Road (Boston)	х			х	х		NE			х	\$19.5
Route 16/Revere Beach Parkway Roadway Improvements (Everett,							NE/N	х		х	\$109.5
Telecom City Boulevard (Everett, Malden, and Medford)							Ν	х			\$17.8
Route 16/I-93 Connection (Medford)							N	х			\$20.8
Sullivan Square (Boston)	х	х			х		N	х		х	\$43.3
Rutherford Avenue (Boston)	х	х			х		N	х			\$49.2
Charlestown Haul Road (Boston)	х						N	х		х	
Route 60 Improvements (Malden, Medford)	х						N			х	
McGrath Highway-Gilman Street Bridge (Somerville)	х						NW	х			
Route 9 Capacity Improvements (Brookline, Newton)	х						W	х		х	
Route 20 (Boston, Watertown, Waltham)	х						NW			х	
Route 2/Route 16 Interchange (Arlington and Cambridge)	х						NW	х		х	
Depress I-93 (Somerville)							NW	х			
I-93/Mystic Avenue Interchange (Somerville)	х						NW			х	\$138.6
Longfellow Bridge (Boston, Cambridge)	х		х		х		NW			х	\$310.0
Extend I-93 High-Occupancy Vehicle Lane into the City (Somerville)							NW	х		х	
I-93 Capacity Improvements (Boston to Braintree)	х						SE			х	
Conley Rail Service (South Boston) (Massport Study)	х						SE			х	
South Boston Roadway Improvements (State Freight Plan)	х						SE			х	\$40.0
T Under D (South Boston) (Massport Study)	х						SE			х	
Track 61 Rail Improvement (Boston) (State Freight Plan)	х						SE	х		х	\$9.5
Port of Boston Improvement Dredging Project (Boston, Chelsea)	Y						SE			v	
(State Freight Plan)	х						3E			Х	\$308.0
Fenway Park Improvements (Boston)							W	х			\$35.1
Improvements to Commonwealth Ave (Boston)		х					W	Х			\$23.0
Reconstruction of Causeway St. (Boston)		х					BP	Х			\$10.4
Boylston Street (Boston)							BP	Х			\$15.0
Northern Avenue Roadways (Boston)							BP	Х			
Long Range T	ransportati	on Plan Un	iverse of Bic	ycle and Pede	estrian Proj	ects	1				
Northern Strand (Revere, Saugus, Lynn, Everett, Malden)	х						NE/N		х	х	
Bicycle and Pedestrian Improvements in the vicinity of Forest Hills	x										
Station (Jamaica Plain)					ļ		BP				
Border to Boston Trail (Newburyport to Boston)	х						NE		х	Х	

CENTRAL AREA HIGHWAY NEEDS EVALUATION	Maintenance, Modernization and Efficiency	pp Livability and Economic Benefit pp	Vopility Vor under o	Environment and Climate Change	Transportation Equity	Safety and Security
Long Range Transportation Plan Route 1 Add-a-Lane (Malden, Saugus, and Revere)	Universe o	of Roadway	Projects			
Note 1 Adu-a-Lane (Malden, Saugus, and Nevere)	x	x	х		х	x
Interstate 93 Capacity Improvements (Somerville to Woburn)			x			x
Route 16/Revere Beach Parkway Roadway Improvements (Everett,	х		х		х	х
Sullivan Square (Boston)	х	х	х		х	х
Route 60 Improvements (Malden, Medford)	х		х			
Charlestown Haul Road (Boston)	х	х	х		х	
Rutherford Avenue (Boston)		x				x
Route 1/Route 16 Interchange (Revere)	х		х		х	
Route 1A/Route 16 (Revere)	х		х		х	
Route 1A/Chelsea Street Bridge Connection (Boston)	х		х			
Route 1A/Boardman Street Grade Separation (Boston)	х		х			
Mahoney Circle Grade Separation (Revere)	x		x		x	x
East Boston Haul Road*	x	х	х		х	
Route 9 Capacity Improvements (Brookline, Newton)	x	x	x			
Route 20 (Boston, Watertown, Waltham)	х		х			х
Route 2/Route 16 Interchange (Arlington and Cambridge)	X		X			х
I-93/Mystic Avenue Interchange (Somerville)	X	X	x		X	
Extend I-93 High-Occupancy Vehicle Lane into the City (Somerville) Longfellow Bridge (Boston, Cambridge)	x		X	Х		x
I-93 Capacity Improvements (Boston to Braintree)	^		x			^
South Boston Roadway Improvements (State Freight Plan)		x	x			
Conley Rail Service (South Boston) (Massport Study)		x	x			
T Under D (South Boston) (Massport Study)	x	x	x	x		
Track 61 Rail Improvement (Boston)		x	x			
Port of Boston Improvement Dredging Project	x	x	x			
Long Range Transportation Plan Unive				ects		
Northern Strand (Revere, Saugus, Lynn, Everett, Malden)		x		x		
Border to Boston Trail (Newburyport to Boston)		x		х		

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												_
CENTRAL AREA TRANSIT UNIVERSE	PMT Transit Enhancement Project	PMT Transit Expansion Project	PMT Transit SGR Project	In MBTA's Draft FY 2012- 2016 CIP SGR List	In MBTA's Draft FY 2012- 2016 CIP Enhancement Project List	In MBTA's Draft FY 2012- 2016 CIP Expansion Project List	Transit Project Recommended from MPO's CMP	Transit Project in the Current LRTP	Corridor(s)	Public Comment	Meets Plan Identified Need	
			Acc	essibility	1 -	<u> </u>			<u>I</u>			-
					x						x	Γ
Light Rail Accessibility Program - Boston College Station					^				W/C		^	L
Light Dail Accessibility Drogram Dhase II. Surface Stations	x				x						x	
Light Rail Accessibility Program - Phase II - Surface Stations Science Park Station Accessibility	x				x				W/C NW/C		x	┝
	^	Co	ommunicat	ions/Tech					11170		~	L
												Γ
	-		Enha	ncements					-			
BRT on Bus Route 23, 28, 31, 32, 39	х				x				SW/SE/C		x	L
Fairmount Line Improvements Phase II	X				x				SE/C W/C		X	╞
Green Line Improvements (use of 3-car trains)	X		Fxr	Dansion		 			w/C		X	L
												Г
Green Line Extension to Medford Hiilside/Union Square		х				x		х	NW/C		x	
Urban Ring, Phase 2*		х						x*	All	х	х	Γ
South Station Track Expansion*								x*	С		х	Ĺ
	1	1	Maintena	ance Facilit	ies	1					1	_
Orient Heights Maintenance Facility Renovation Phase III				x arking					NE/C		x	L
Alewife Garage Improvements	x		P: 	arking	x	1			NW/C		x	Г
Lechmere Parking Improvements	x				^				NW/C		x	┢
Parking Capacity Increases at 2 Orange Line Stations	x								SW/C		x	F
Parking Capacity Increases at 2 Blue Line Stations	х								NE/C		х	F
Wonderland TOD Parking Garage	х				х				NE/C		х	
			St	ations								
	x								w/c	x	x	
New Worcester Line Commuter Rail Station in Allston												┢
Add Northbound Commuter Rail Platform at Ruggles Station	x								SW/C SE/C		x	┝
Ashmont Station Upgrade Phase II Back Bay Station Lobby Ventilation			×	~	х				SW/C		×	┢
Back Bay Station Roofing Project			X X	X X					SW/C		x x	┢
Blue Line Platform Rehabilitation			~	x					NE/C		x	┢
Blue Line Government Center Station Modernization					x				NE/C			F
Blue Line Orient Heights Station Modernization					х				NE/C			F
Blue Line Station Infrastructure Improvements					х				NE/C			
Dudley Square Station Improvements	х				х				SW/C			L
Wonderland Transit Plaza					х				NE/C		x	
Yawkey Station Enhancements	X		Common and I		X				W/C			L
Green Line Catenary Replacement				Infrastruct	ure	1			W/C		v	Г
Green Line Power Study			X	x					W/C		x x	┢
Orange Line AC and DC Breaker Upgrade			x	x					SW/C		x	┢
Orange Line Power Improvements			х	х					SW/C		х	F
Red Line DC Cable Upgrade Phase I Andrew-Kendall			х	х					NW/SE/C		х	
Red Line Traction Power Upgrade			х	х					NW/SE/C		х	L
Trackless Trolley Catenary improvements			х	х					NW/C		х	L
Trackless Trolley Overhead Replacement				X		<u> </u>			NW/C	<u> </u>	х	L
Columbia Junction Upgrades			1	and Signals	5 				SE/C			Г
Green Line Frog Replacement Program			X X	X X					W/C		x x	┢
Green Line Grade Crossing Upgrades			x	^					W/C		x	┢
Green Line Lechmere Signals			x	x					NW/C		x	┢
Green Line Positive Train Control	х				х				W/C			Γ
Green Line Signal Replacement			х						W/C		х	
Green Line Tie Replacement			х						W/C		х	Ĺ
Orient Heights Track Work		ļ	x	х	ļ				NE/C		x	┞
Red Line Floating Slab Work	<u> </u>		x	x					NW/C		x	┡
Red Line Signal Cable Replacement			X	x					NW/SE/C		X	┡
Red Line Track and Switch Upgrades		L	X	ehicles	L	l			NW/C	l	x	L
			V								x	
Green Line No. 7 Overhaul			X	X						1		
Green Line No. 7 Overhaul Green Line No. 8 Car Upgrades			x x	X X					W/C		x	┢
									W/C E/C			
Green Line No. 8 Car Upgrades New Orange and Red Line Car Design and Engineering New Red and Orange Line Car Procurements			х	х							x	
Green Line No. 8 Car Upgrades New Orange and Red Line Car Design and Engineering			x x	х					E/C		x x	

CENTRAL AREA TRANSIT NEEDS EVALUATION	Maintenance, Modernization and Efficiency	Livability and Economic Benefit	Mobility	Environment and Climate Change	Transportation Equity	Safety and Security
Ac	ccessibility			1		
Light Rail Accessibility Program - Boston College Station	x	x				x
Light Rail Accessibility Program - Phase II - Surface Stations	x	x				x
Science Park Station Accessibility	x	x				x
Communic	ations/Techn	ology				
	nancements	-		1		
BRT on Bus Route 23, 28, 31, 32, 39	х	х	х		Х	
Fairmount Line Improvements Phase II		X	х	X	Х	
Green Line Improvements (use of 3-car trains)	X		х			
E	xpansion					
Green Line Extension to Medford Hiilside/Union Square		,	v	x	x	
Urban Ring, Phase 2*		x x	X X	x	x	
South Station Track Expansion*		×	×	x	^	
	nance Faciliti		~	^		
Orient Heights Maintenance Facility Renovation Phase III	x					
	Parking					
Alewife Garage Improvements	×					
Lechmere Parking Improvements	x					
Parking Capacity Increases at 2 Orange Line Stations		х	х	х		
Parking Capacity Increases at 2 Blue Line Stations		х	х	x	х	
Wonderland TOD Parking Garage		х	х	х	х	
	Stations					-
		v	v		v	
New Worcester Line Commuter Rail Station in Allston		х	х		х	
Add Northbound Commuter Rail Platform at Ruggles Statio	n x		х		х	
Back Bay Station Lobby Ventilation	x					х
Back Bay Station Roofing Project	x					
Blue Line Platform Rehabilitation	x					
Wonderland Transit Plaza		х			х	
	t Infrastructu	re		-		
Green Line Catenary Replacement	x					r
Green Line Power Study						x
Orange Line AC and DC Breaker Upgrade						X
	х					X
Orange Line Power Improvements	х					X
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall	x x					X
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade	x x x					
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements	x x x x x					
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement	x x x x x x x					
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Track	x x x x x x x k and Signals					x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Track	x x x x x x k and Signals x					x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Trac Columbia Junction Upgrades Green Line Frog Replacement Program	x x x x x x k and Signals x x x					x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Trac Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades	x x x x x x x x k and Signals x x x x x x					x x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Trac Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades Green Line Lechmere Signals	x x x x x x x k and Signals x x x x x x x x x x					x x x x x x x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Trac Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades Green Line Lechmere Signals Green Line Signal Replacement	x x x x x x x x x x x x x x x x x x x					x x x x x x x x x x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Track Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades Green Line Lechmere Signals Green Line Signal Replacement Green Line Tie Replacement	x x x x x x x k and Signals x x x x x x x x x x					x x x x x x x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Trac Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades Green Line Lechmere Signals Green Line Signal Replacement	x x x x x x x x x x x x x x x x x x x					x x x x x x x x x x x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Trac Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades Green Line Lechmere Signals Green Line Signal Replacement Green Line Tie Replacement Orient Heights Track Work	x x x x x x x x x x x x x x x x x x x					x x x x x x x x x x x x x x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Tracl Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades Green Line Lechmere Signals Green Line Signal Replacement Green Line Tie Replacement Orient Heights Track Work Red Line Floating Slab Work Red Line Signal Cable Replacement	x x x x x x x x x x x x x x x x x x x					x x x x x x x x x x x x x x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Tracl Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades Green Line Signal Replacement Green Line Signal Replacement Orient Heights Track Work Red Line Floating Slab Work Red Line Signal Cable Replacement Red Line Track and Switch Upgrades	x x x x x x x x x x x x x x x x x x x					x x x x x x x x x x x x x x x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Trac Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades Green Line Grade Crossing Upgrades Green Line Signal Replacement Green Line Signal Replacement Orient Heights Track Work Red Line Floating Slab Work Red Line Signal Cable Replacement Red Line Track and Switch Upgrades	x x x x x x x x x x x x x x x x x x x					x x x x x x x x x x x x x x x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Trac Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades Green Line Lechmere Signals Green Line Signal Replacement Green Line Tie Replacement Orient Heights Track Work Red Line Floating Slab Work Red Line Signal Cable Replacement Red Line Track and Switch Upgrades Green Line No. 7 Overhaul Green Line No. 8 Car Upgrades	x x					x x x x x x x x x x x x x x x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Track Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades Green Line Grade Crossing Upgrades Green Line Signal Replacement Green Line Signal Replacement Orient Heights Track Work Red Line Floating Slab Work Red Line Floating Slab Work Red Line Signal Cable Replacement Red Line Track and Switch Upgrades Green Line No. 7 Overhaul Green Line No. 8 Car Upgrades New Orange and Red Line Car Design and Engineering	x x					x x x x x x x x x x x x x x x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Trac Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades Green Line Grade Crossing Upgrades Green Line Signal Replacement Green Line Signal Replacement Orient Heights Track Work Red Line Floating Slab Work Red Line Floating Slab Work Red Line Signal Cable Replacement Red Line Track and Switch Upgrades Green Line No. 7 Overhaul Green Line No. 8 Car Upgrades New Orange and Red Line Car Design and Engineering New Red and Orange Line Car Procurements	x x					x x x x x x x x x x x x x x x x x x
Orange Line Power Improvements Red Line DC Cable Upgrade Phase I Andrew-Kendall Red Line Traction Power Upgrade Trackless Trolley Catenary improvements Trackless Trolley Overhead Replacement Track Columbia Junction Upgrades Green Line Frog Replacement Program Green Line Grade Crossing Upgrades Green Line Grade Crossing Upgrades Green Line Signal Replacement Green Line Signal Replacement Orient Heights Track Work Red Line Floating Slab Work Red Line Floating Slab Work Red Line Signal Cable Replacement Red Line Track and Switch Upgrades Green Line No. 7 Overhaul Green Line No. 8 Car Upgrades New Orange and Red Line Car Design and Engineering	x x					x x x x x x x x x x x x x x x x x x

* Included as an Illustrative Project

The projects included in this table are those from this corridor's Transit Universe that meet a Plan identified need. An initial evaluation was performed using criteria derived from the MPO's visions and policies.

Projects that are indicated in **bold**, are projects that were included in the JOURNEY to 2030 Plan.

Cost (in millions)

\$3.0 \$5.0 \$10.5 \$10.5 \$10.5 \$10.7 \$45.2 \$45.2 \$949.8 \$2,920.3 \$150.0 \$57.5 \$16.4 \$16.4 \$16.4 \$16.4 \$16.4 \$13.8 \$13.8 \$13.8 \$13.8 \$13.8 \$13.8 \$13.4 \$3.6 \$44.0 \$3.5 \$0.3 \$13.0 \$3.5 \$0.3 \$13.0 \$9.4 \$13.8 \$1.4

SYSTEMWIDE TRANSIT UNIVERSE	PMT Transit Enhancement Project	PMT Transit Expansion Project	PMT Transit SGR Project	In MBTA's Draft FY 2012-2016 CIP SGR List	In MBTA's Draft FY 2012-2016 CIP Enhancement Project List	In MBTA's Draft FY 2012-2016 CIP Expansion Project List	Transit Project Recommended from MPO's CMP	Transit Project in the Current LRTP	Meets Plan Identified Need	SASTEMMIDE LEVANSIL NEEDS EATOLUTION Maintenance, Modernization and Efficiency Reficiency Baintenance, Modernization and Efficiency Invironment and Climate Change Accessipiliti	Transportation Equity Safety and Security
Accessibility Program		essibility	1	1	x	1			x	Accessibility Program x x	
Elevator Program	x				x				x	Elevator Program x x	x x
Escalator Program	X				x				x	Escalator Program x x	x
Wayfinding Program	X				×				^	Communications/Technology	
	Communicat	ions/Techr	nology		^		<u> </u>		1		
Automated Bus Passenger Counters		x		T	x					Enhancements	
Bid/Dispatch - Advanced Scheduling System	x			1	x				1	Key Bus Routes Project - bus stop amenitites and customer service x x	
Computer Technology Upgrades	x			1	x				1	Expansion	
Train & Bus Arrival Announcements	x			1	x				1		
		ncements	1		<u> </u>	1	<u> </u>		1	Maintenance Facilities	
Daily Operations Resource Management System		X			x					Bus Facilities Upgrade and Rehabilitation x	
Homeland Security	x	~			x					Bus Facility Needs Assessment x	+
Key Bus Routes Project	x				x				x	Carwash Upgrades Systemwide x	+
	- Fxr	ansion	1			1	<u> </u>		1 4	Commuter Rail Maintenance Facilities Upgrades x	+
										Maintenance Facilities Upgrades x	1 1
	Maintena	ance Facilit	ies		I	1	· I			MBTA Bus Facility Rehab & Improvements x	+
Bus Facilities Upgrade			x	x					x	Subway Facility Improvements x	+
Bus Facility Analysis					x				x	Parking	
Carwash Upgrades Systemwide			x	x	~				x	Enhanced Bicycle Parking Facililties x x x	
Commuter Rail Maintenance Facilities Upgrades			x	x					x	Stations	
Maintenance Facilities Upgrades			x	x					x	Commuter Rail Stations Upgrades and Renovation x x x	
MBTA Bus Facility Rehab & Improvements			x	x					x	Emergency Station Lighting Program x	x
Subway Facility Improvements			x	x					x	Subway Station Platform Improvement Program x	
	Pa	arking		1			<u> </u>		1 ^	Subway Station Rehabilitation x x	
Enhanced Bicycle Parking Facililties	X				x				x	Support Infrastructure	
Parking Upgrades	X				x				~	Bridge Program x	x
	St	ations	I	I	<u> </u>		11		1	Commuter Rail - Bridge Projects x	X
Commuter Rail - Various Stations Projects	X				x					Groundwater Remediation x	
Commuter Rail Stations Upgrades			x	х					x	MBTA Systemwide Fencing x	Х
Emergency Station Lighting Program			x	x					x	Power Program x	
Station Management Project - Phase II	х				x					Rectifier Transformer Replacement x	
Subway Station Platform Improvement Program			х	х					x	Rehab Traction Power Substations x	
Subway Station Rehabilitation			х	х					x	Substation Control Battery Set Replacement Program x	
	Support I	nfrastructu	ure	-		1	<u> </u>			Systemwide Fire Suppression Systems x	x
Bridge Program			x	x					x	Systemwide Tunnel Lighting x	x
Commuter Rail - Bridge Projects			х	х					x	Tunnel Dewatering Pump Station Rehabilitation Program x	x
Environmental Compliance Management	х				х					Tunnel Rehabilitation x	х
Groundwater Remediation			x	х					х	Unit Substation Upgrades x	
MBTA Systemwide Fencing			x	х					х	Track and Signals	
MBTA Tunnel Signage Project	х				x					Systemwide Signal Maintenance x	х
Power Program			х	х					х	Systemwide Track Maintenance x	Х
Rectifier Transformer Replacement			х	х					х	Yard Switch Replacement and Track Reconstruction x	
Rehab Traction Power Substations			х	х					х	Vehicles	
Renewable Wind Energy Project					х					Bus Fleet Rehabilitation (2004/2005 fleet) x	x
Substation Control Battery Set Replacement Program			х	х					х	Commuter Rail Coach Procurement x x	
Systemwide Fire Suppression Systems			х	х					х	Commuter Rail Locomotive Procurement x x	
Systemwide Tunnel Lighting			х	х					х	Commuter Rail Locomotive Top Deck Overhaul x	
Tunnel Dewatering Pump Station Rehabilitation Program			х	х					х	Kawasaki Commuter Rail Coach Overhaul x x	
Tunnel Rehabilitation			х	х					х	Procurement of 480 Buses x	
Unit Substation Upgrades			х	х					х	RIDE Vehicle Program x x	
	Track a	and Signals	5							Snow Fighting Equipment x	
Systemwide Signal Maintenance			х	х					x	Systemwide Non-Revenue Vehicle Program x	
Systemwide Track Maintenance			х	х					x		
Yard Switch Replacement and Track Reconstruction			х	х					х		
	Ve	ehicles									
Bus Fleet Rehabilitation (2004/2005 fleet)			х	х					х		
Commuter Rail Coach Procurement			х	х					х		
Commuter Rail Locomotive Procurement			х	х					х	The projects included in this table are those from this corridor's Highway Universe that meet a Plan identified need. An	nitial evaluation was
Commuter Rail Locomotive Top Deck Overhaul			х	х					х	performed using criteria derived from the MPO's visions and policies.	
Commuter Rail Positive Train Control Efforts	х				х						
Kawasaki Commuter Rail Coach Overhaul			х	х					х		
Procurement of 480 Buses			х	х					х		
RIDE Vehicle Program			х	х					х		
Snow Fighting Equipment			х	х					х		
Systemwide Non-Revenue Vehicle Program			х	х					х		

Corridor Municipality Projects and Programs	Mod		nance, ation ar ency	nd	Liva		and E enefit	conomic	Mob	oility		Environment	Cli	mate C	hange		nsporta Equity			Safety	and Se	curity		Comments
	Use low-cost strategies	Linderloy unough to and made		Strengthen connections; close gaps	Support MetroFuture development plans	Promote healthy transportation, complete streets	Promote context-sensitive design	Support state-of-practice parking Support economic vitality	Improve transit service	ind transit	Address constraints and bottlenecks	Promote fleet modernization Support high-occupancy vehicle travel and non-motorized modes Protect resources and health; avoid air and water impacts; reduce emissions, including brownfields Promote energy conservation and alternative sources Support meeting GHG emission reduction targets	Reduce VMT	Increase transit/bike/ped options and TDM	Protect critical infrastructure Reduce energy use	Address equity needs; minimize burdens (air safetv communitv)	nsit 100	Improve heavily used networks before expanding	ent all-hazards planr	Reduce safety and security deficiencies	Support ITS Protect critical infrastructure address vulnerabilities		Reduce crash severity	
Modernization - Transit			- 15																					
Clean Air and Mobility					andre de Reference																			
State of Good Repair & Maintenance - Transit		1.	-																·					
Modernization - Roadway																						2 1. · · ·	Sec.	2 2
Expansion - Transit											1									Ì				
Expansion - Bike/Ped		L									1											4		
Management & Operations - Transit				Γ		а. "							- je u							4				
State of Good Repair & Maintenance - Roadway	-			Ļ																			Ĺ	an Proc
Management & Operations - Roadway																								
Expansion - Freight		Ι																		·				рания При мала При мала
Expansion - Roadway																								i e e

Management & Operations: ITS and low-cost capital improvements for system efficiencies State of Good Repair & Maintenance: Repair and maintenance of the existing system Modernization: Upgrades to the existing system to meet contemporary standards Expansion: Extending or adding capacity to the existing system

Dark-shaded box: Indicates that primary goal of investment category supports policy Light-shaded box: Indicates that secondary goal of investment category supports policy

Corridor	Municipality	Projects and Programs		Mainte derniz Effic	ation	and	L	ivabili		id Econon iefit	nic	P	Aobilit	Ÿ		Environ	ment		Clima	te Ch	ange		nsport Equit			Safe	ty and	d Secu	rity	(Comments
			Use low-cost strategies		Invest in technology before expansion	Achieve SGR Streamthen connections: close dans	Strengtrieri connections, close gaps Sumort MetroEntrine develonment plans	Support MetroFuture development, plains Dromote healthy transportation complete streets		Promote context-sensitive design Support state-of-practice parking	Support economic vitality	Improve access to transit	Improve transit service Evnand transit	Address constraints and bottlenecks	Promote fleet modernization	Support high-occupancy vehicle travel and non-motorized modes Protect resources and health; avoid air and water imposer reduce amissions including brownfields	nd alternativ	Support meeting GHG emission reduction targets	Reduce VMT			equity	Reduce transit trip times; increase capacity	Improve heavily used networks before expanding	Implement all-hazards planning	Reduce safety and security deficiencies	Support ITS	Protect critical infrastructure; address vulnerabilities	Bike/	Reduce crash severity	
Manager	nent & Opera	tions: ITS and low-cost capital improvements for system efficiencies																													
	Management	& Operations - Transit			n.																										
	MBTA	Communications/Technology																										\downarrow			
	MBTA	Green Line Power Study																							L						
L														and the second			1 1					-	T	Cost in Co						I	
	Management	& Operations - Roadway													-						_						-	4			
NE, N		Route 1 Intersection Signalization (Corridorwide)																					-	-	1	-		1			
W	Brookline, Newton	Route 9 Capacity Improvements • This project would involve several improvements to signals, sidewalks, and pedestrian crossings along Route 9. It would also involve some minor widening at the Woodward St. intersection and striping a third lane from that intersection to the east along Route 9.																													
NW	Arlington and Cambridge	Route 2/Route 16 Interchange This project implements access and traffic operation improvement recommendations outlined in the MPO's UPWP Alewife Traffic Operations and Access Study, Phase II.																													
	Management	& Operations - Freight																		the second s					The state of the s			1			
		d Operations - reight					Т																							-	
				_					\square																						
1																									E						
	Management	& Operations - Additional Projects for Consideration																													
	Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network																													
	Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS																													
	Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS Interface MassDOT-MSP communication for real-time information																													
	Regionwide Regionwide Regionwide Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS Interface MassDOT-MSP communication for real-time information Interconnect Existing Operations Centers																													
	Regionwide Regionwide Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS Interface MassDOT-MSP communication for real-time information Interconnect Existing Operations Centers Expand Traffic Sensor Network																													
	Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS Interface MassDOT-MSP communication for real-time information Interconnect Existing Operations Centers Expand Traffic Sensor Network Upgrade Traffic Signal Equipment (demand responsive systems)																													· · · · · · · · · · · · · · · · · · ·
	Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS Interface MassDOT-MSP communication for real-time information Interconnect Existing Operations Centers Expand Traffic Sensor Network Upgrade Traffic Signal Equipment (demand responsive systems) Implement TSP for MBTA Bus Routes																													
	Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS Interface MassDOT-MSP communication for real-time information Interconnect Existing Operations Centers Expand Traffic Sensor Network Upgrade Traffic Signal Equipment (demand responsive systems) Implement TSP for MBTA Bus Routes Integrated Corridor Management																													
	Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS Interface MassDOT-MSP communication for real-time information Interconnect Existing Operations Centers Expand Traffic Sensor Network Upgrade Traffic Signal Equipment (demand responsive systems) Implement TSP for MBTA Bus Routes Integrated Corridor Management Arterial Traffic Monitoring																													
	Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS Interface MassDOT-MSP communication for real-time information Interconnect Existing Operations Centers Expand Traffic Sensor Network Upgrade Traffic Signal Equipment (demand responsive systems) Implement TSP for MBTA Bus Routes Integrated Corridor Management Arterial Traffic Monitoring Traffic Management at Special Events																													
	Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS Interface MassDOT-MSP communication for real-time information Interconnect Existing Operations Centers Expand Traffic Sensor Network Upgrade Traffic Signal Equipment (demand responsive systems) Implement TSP for MBTA Bus Routes Integrated Corridor Management Arterial Traffic Monitoring Traffic Management at Special Events Enhanced Emergency Response System (ERS)																													
	Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS Interface MassDOT-MSP communication for real-time information Interconnect Existing Operations Centers Expand Traffic Sensor Network Upgrade Traffic Signal Equipment (demand responsive systems) Implement TSP for MBTA Bus Routes Integrated Corridor Management Arterial Traffic Monitoring Traffic Management at Special Events Enhanced Emergency Response System (ERS) Enhance Mass 511 system																													
	Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS Interface MassDOT-MSP communication for real-time information Interconnect Existing Operations Centers Expand Traffic Sensor Network Upgrade Traffic Signal Equipment (demand responsive systems) Implement TSP for MBTA Bus Routes Integrated Corridor Management Arterial Traffic Monitoring Traffic Monitoring Traffic Management at Special Events Enhanced Emergency Response System (ERS) Enhance Mass 511 system Deploy and manage Dynamic Message Signs																													
	Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide Regionwide	& Operations - Additional Projects for Consideration Expand METFON fiberoptic network Expand MIVIS Interface MassDOT-MSP communication for real-time information Interconnect Existing Operations Centers Expand Traffic Sensor Network Upgrade Traffic Signal Equipment (demand responsive systems) Implement TSP for MBTA Bus Routes Integrated Corridor Management Arterial Traffic Monitoring Traffic Management at Special Events Enhanced Emergency Response System (ERS) Enhance Mass 511 system																													

Corridor	Municipality	Projects and Programs	9	oderni	enance, zation and ciency	Liv		y and I Benefi		mic	M	Iobility		Environment	C	limate	e Change		portatio quity	n	Safet	y and	Security	7	Comments
			st strategies	and M&O	Invest in technology before expansion Achieve SGR	Strengthen connections; close gaps Support MetroFuture development plans	Promote healthy transportation, complete streets	Promote context-sensitive design	Support state-of-practice parking	Support economic vitality	Improve access to transit	iniprove transit service Expand transit	Address constraints and bottlenecks	Promote fleet modernization Support high-occupancy vehicle travel and non-motorized modes Protect resources and health; avoid air and water impacts; reduce emissions, including brownfields Promote energy conservation and alternative sources Support meeting GHG emission reduction targets		Increase transit/bike/ped options and TDM	Protect critical infrastructure Reduce energy use	Address equity needs; minimize burdens (air, safety, community)	Reduce transit trip times; increase capacity Improve heavily used networks before expanding	t all-hazards planning	Reduce safety and security deficiencies		Protect critical infrastructure; address vulnerabilities Improve Bike/Ped safetv	Reduce crash severity	
State of	Good Repair	& Maintenance: Repair and maintenance of the existing system																							

													 areard increases			 		
	State of Go	ood Repair & Maintenance - Transit																
Accessib	ility																	
	MBTA	Station Elevator/Escalator Replacement Program																
Bridge																		
	MBTA	Bridge Program • Funds design and rehabilitation of selected bridges throughout the system																
	MBTA	Merrimack River Bridge Rehab																
Facilitie	3																	
	MBTA	Systemwide Tunnel Lighting																
	MBTA	Tunnel Rehabilitation																
Mainten	ance										Î					+		
	MBTA	Orient Heights Maintenance Facility Renovation Phase III • Includes HVAC replacement, sprinkler and fire alarm upgrade, a new carhouse roof, and other improvements.												-				
	MBTA	Riverside Car House Improvements																
	МВТА	Wellington Maintenance Facility Improvements																
Power																		
	МВТА	Power Program to fund the overhaul of the jet engines and other critical components at the South Boston power generation plant															T	
	MBTA	Rehab Traction Power Substations																
Signals																		
	MBTA	Green Line Signal Replacement																
	MBTA	Systemwide Signal Maintenance																
	МВТА	Red Line Signal Cable Replacement																
Station																		
Central	MBTA	Back Bay Station, Lobby Ventilation																
	MBTA	Commuter Rail Stations Upgrades and Renovation																
	MBTA	Rapid transit station midlife rehab upgrades																
	MBTA	Subway Station Platform Improvement Program																
Track																		
	MBTA	Old Colony Tie Replacement Project							1									
	MBTA	Subway Systemwide Track Maintenance																
	MBTA	Yard Switch Replacement and Track Reconstruction																

Corridor	Municipality	Projects and Programs		oderni	enance zation ciency		Liva		and E Benefit		nic	I	Mobil	lity		Е	Environr	nent		Clim	ate Cl	nange	Tra	inspor Equi	tation ty		Safet	ty and	Securit	y	Comr	nents
			Use low-cost strategies	ugh ITS and I	Invest in technology before expansion	Strengthen connections; close gaps	port MetroFuture developm	Promote healthy transportation, complete streets	Promote context-sensitive design	Support state-of-practice parking	Support economic vitality	Improve access to transit	Improve transit service		Address constraints and bottlenecks	č Ö	and non-motorized modes Protect resources and health; avoid air and water impacts' reduce emissions, including brownfields	conservation and alternation	Support meeting GHG emission reduction targets	'MT	Increase transit/bike/ped options and TDM	Protect critical infrastructure Reduce energy use	Address equity needs; minimize burdens	(air, satety, community) Reduce transit trip times; increase capacity	Improve heavily used networks before expanding	Implement all-hazards planning	Reduce safety and security deficiencies	Support ITS	Protect critical infrastructure; address vulnerabilities	Improve Bike/Ped safety Reduce crash severity		
Vehicle									1															_						_		
	МВТА	Commuter Rail Locomotive Procurement																			_					-						
	MBTA	Green Line No. 7 Car Overhaul																					_									
	MBTA	Green Line No. 8 Car Upgrades																					_	_		-					-	
	МВТА	Kawasaki Commuter Rail Coach Overhaul • This project involves the overhaul of 75 bi-level Kawasaki coaches.																							_							-
	MBTA	New Red Line Car Procurement • The fleet of 74 Red Line No. 1 cars built in 1969 are nearing the end of their useful life.																														
	МВТА	Orange Line Car Procurement • 146 new Orange Line #14 cars are needed to replace the #12 car fleet.																														
	МВТА	Procurement of 480 Buses • The MBTA will need to purchase 480 new buses by 2030.																						_								
	MBTA	RIDE Vehicle Program																1					_				L	LI				
		Develo 9 Maintenance Beachurgu		1					1						1			1													Т	
		Repair & Maintenance - Roadway							+								_						+									
NE	Beverly	Beverly Draw Bridge Rehabilitation • This project involves the reconstruction of the Beverly Draw Bridge on the Newburyport/Rockport commuter rail line.																														
SE	Quincy and Braintree	Fore River Bridge • This project involves rehabilitating the Fore River Bridge, which carries Route 3A over the Fore River.								5																						
NW, Central	Boston, Cambridge	Longfellow Bridge • This project rehabilitates the multimodal Longfellow Bridge between Boston and Cambridge.																														
Moderniz	zation				-											11	-															

ernization		 	 	 	 						 	
Modernization	- Transit											
ssibility				 		 	-		 	 	 	
МВТА	Accessibility Program • The MBTA has a Key Station Plan to make 80 key subway and commuter rail stations accessible.					 		_	 _	 		
	Science Park Station Accessibility		 						 	 		
	Wedgemere Station access											

Corridor	Municipality	Projects and Programs	М	Main Iodern Eff		on and	4	Liva		y and Bene		nomic		М	lobili	ty			Enviro	onmen	t	(Climat	e Cha	nge		nsport Equit			Safet	ty and	Securi	ity		Comments
			Use low-cost strategies	Efficiency through ITS and M&O	Invest in technology before expansion	Achieve SGR	Strengthen connections; close gaps	Support MetroFuture development plans	Promote healthy transportation, complete streets	Promote context-sensitive design	state-of-practice p	omic vitality	Improve access to transit	trancit cal		ld transit	Address constraints and bottlenecks	Promote fleet modernization	nigh-occupancy vehi motorized modes esources and health:	reduce emissions, including brown energy conservation and alternativ	sources Support meeting GHG emission reduction targets	Reduce VMT	Increase transit/bike/ped options and TDM	Protect critical infrastructure	Reduce energy use	Address equity needs; minimize burdens (air safety community)	sit trip	Improve heavily used networks before expanding	Implement all-hazards planning	Reduce safety and security deficiencies		Protect critical infrastructure; address vulnerabilities	Improve Bike/Ped safety Badura crash severity		
Enhancem	lent							T					T																						
	MBTA	T Under D • This project involves grade separation between D Street and the MBTA's Silver Line. It will remove one of 6 tightly clustered intersections on D Street, and improve T service to the airport on the Silver Line.																																	
	MBTA	Green Line Improvements (use of 3-car trains)								_				-			-							-	-										
	МВТА	Key Bus Routes Project - bus stop amenitites and customer service enhancements							+		_						-					-	-	+	-	+									
Facilities									-		_															+					 				
NW	MBTA	Alewife Garage Improvements							+		_																+		-			-+			
Maintenar										_	_		_		_					-							-	-				-+		-	
	MBTA	Move Bradford Layover Facility on Haverhill Line with Plaistow Extension															-									1-									
Power									-		_																+	-			+				
	MBTA	Orange Line Power Improvements											-									1		-					1						
	MBTA	Unit Substation Upgrades						-		-	-		-		-							1			-	T									
Signals	h mm								+																										
	MBTA	Columbia Junction Upgrades					1	_										l	lis			-			_										
	Modernizatio	- Roadway																										a second							
NW		Concord Rotary/Route 2 • This project seeks to relieve congestion and improve safety by replacing the Concord Rotary with a highway interchange and another westbound lane on Route 2 approaching the interchange. The project also includes a bridge over Route 2 to connect Commonwealth Avenue to the intersection of Route 2A/119. Phase 2B of the Bruce Freeman Rail Trail is part of this project as well.																																	
NW	Concord and Lincoln	Crosby's Corner • The project involves the construction of a bridge for Route 2 over the congested Crosbys Corner area. The current Route 2 will be converted into a frontage road for local homes and businesses.																																	
NE	Revere	Mahoney Circle Grade Separation \cdot This project improves the congested intersection of Routes 1A, 60, and 16 by depressing Route 60 and improving the connectivity between the other routes. A CTPS corridor study identified it as the worst intersection along Route 1A (tied with Boardman St.).																																	
W	Newton	Needham Street/Highland Avenue • This project reconstructs Needham Street (Newton) and Highland Ave (Needham), improves several intersections, and widens the bridge over Route 128. The project improves bicycle and pedestrian accommodations, and will support economic development.																																	

Corridor	Municipality	Projects and Programs	М	Main Ioderni Effi	izatio	on and	1	Liva		and I Benefi		omic		Mol	bility			Enviro	nment		Cli	mate	Chang	e		oortatio Juity	on	S	afety	and Se	curity		Comments
			Use low-cost strategies	Efficiency through ITS and M&O	invest in technology before expansion	Achieve SGR	Strengthen connections; close gaps	Support MetroFuture development plans	Promote healthy transportation, complete streets	Promote context-sensitive design	Support state-of-practice parking	Support economic vitality	Improve access to transit	Improve transit service	Expand transit	Address constraints and bottlenecks	Promote fleet modernization	e travel void air and	reduce emissions, including br energy conservation and alter	sources Support meeting GHG emission reduction targets	Reduce VMT	Increase transit/bike/ped options and TDM	Protect critical infrastructure	Reduce energy use	(air, safety, community)	Reduce transit trip times; increase capacity	Improve heavily used networks before expanding	Implement all-hazards planning Deduce cetaty and security deficiencies	Keduce safety and security deficiencies	Support ITS Protect critical infrastructure: address vulnerabilities	555	Reduce crash severity	
SW	Bellingham	Pulaski Blvd • This project will reconstruct 2.2 miles of Pulaski Boulevard in Bellingham between Moody Street and the Franklin town line. This project will improve several poorly performing intersections and improve pedestrian safety.			-																												
SW	Dedham, Norwood, Westwood, West	Route 1 South • This project implements geometric, signal, and pedestrian improvement recommendations outlined in the MPO's UPWP Route 1 Study.																															
NE	Revere	Route 1/Route 16 Interchange • This project would better connect Routes 1 and 1A via Route 16, which would reduce the need for traffic to use local streets. It would connect Route 1 south to Route 16 east with left turn lanes and a signal, and Route 16 west to Route 1 north with a new ramp.																				2											
W, SW	Bellingham to Framingham and corridorwide	Route 126 • This project implements geometric, signal,bus service, and pedestrian improvement recommendations outlined in the MPO's UPWP Route 126 Study.																															
W	Framingham	Route 126/Route 135 Grade Separation • The project involves construction of an underpass for Route 126 beneath Route 135 and railroad tracks. The project will encourage economic development in downtown Framingham and improve a congested area.																															
W	Ashland	Route 135 Grade Separation • This project would construct grade-separated intersections on Route 135 at Main Street and Homer Ave./Chestnut St.																															
SW, SE	Canton, Milton, Stoughton	Route 138 Corridor • This project implements geometric, bicycle, and pedestrian improvement recommendations outlined in the MPO's UPWP Route 138 Study.				1																											
NE	Boston	Route 1A/Boardman Street Grade Separation • This project involves the construction of an overpass for Route 1A over Boardman St. in East Boston. Boardman St. would be moved 400 feet to the south and new ramps connecting it to Route 1A would be built. This congested location was identified as the worst intersection along 1A (tied with Route 1A/Mahoney Circle) by a CTPS corridor study.																															
NW	Acton to Lexington	Route 2 Capacity Improvements • This project would rebuild Route 2 as a 4-lane, limited-access highway with no traffic signals between I-95 in Lexington and Route 111 in Acton.																															
W, NW	Boston, Watertown,	Route 20 • This project implements recommendations outlined in the MPO's UPWP Route 20 Study.																		-													
SE	Sharon	Route 27 (Corridorwide) (meets need in Sharon) • This project includes geometric and signal improvements on Route 27.																															
N	Malden, Medford	Route 60 Improvements . This project implements pedestrian, transit, and intersection traffic operations and safety improvement recommendations outlined in the MPO's UPWP Route 60 Study.																															

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Corridor	Municipality	Projects and Programs	М	lodern	ntenan nizatio ficieno	on and	1	Lival		and E enefit	conon	nic	1	Mobi	lity			Envi	onmen	t	C	limate	Chan	ge		sporta Equity			Safet	ty and	Securi	ty		Comments
			Use low-cost strategies	Efficiency through ITS and M&O	Invest in technology before expansion	Achieve SGR	Strengthen connections; close gaps	Support MetroFuture development plans	Promote healthy transportation, complete streets	Promote context-sensitive design	Support state-of-practice parking	Support economic vitality	Improve access to transit	Improve transit service	Expand transit	Address constraints and bottlenecks	set modernizat	nigh-occupancy vehicle travel motorized modes	Protect resources and reality avoid all and water impacts; reduce emissions, including brownfields Promote energy conservation and alternative	sources Support meeting GHG emission reduction targets	Reduce VMT	Increase transit/bike/ped options and TDM	Protect critical infrastructure	Reduce energy use	Address equity needs; minimize burdens (air, safety, community)	Reduce transit trip times; increase capacity	Improve heavily used networks before expanding	Implement all-hazards planning	Reduce safety and security deficiencies		Protect critical infrastructure; address vulnerabilities	Improve Bike/Ped safety	Reduce crash severity	
N	Boston	Rutherford Avenue • This project would provide a context sensitive design through the reconstruction of Rutherford Avenue in Charlestown. It would divide the existing Rutherford Avenue into 2 roadways: one for regional traffic that would run along the I-93 viaduct, and a redesigned Rutherford Avenue for local traffic that is better integrated into the Charlestown street network and has improved pedestrian and bicycle facilities. The four-lane bypass road would include underpasses at the Gilmore Bridge and at Cambridge Street at Sullivan Square.																																
N	Boston	Sullivan Square • The project reconstructs Sullivan Square to accommodate the bypass road connection to Route 99 envisioned in the Rutherford Avenue project. It will create green space and parcels for redevelopment.																																
NW	Belmont	Trapelo Road • This project will reconstruct 2.5 miles of Trapelo Road in Belmont from the Cambridge city line to Route 60. The project will improve the road for all users through traffic signal, sidewalk, bicycle, and streetscape improvements. It will also alleviate flooding through the construction of a second culvert at Beaver Brook.																																
SE	Randolph	I-93/Route 24 Interchange Improvements																											├ ──┤	┥──┤				
NE	Revere	Route 1A/Route 16 • This project involves replacing the current intersection of Routes 1A and 16 with a three-fourths cloverleaf interchange. The project is in the northwest corner of Suffolk Downs and would support development there. The realigned Route 16 will open up space for a linear park.																																
SE	Rockland	Route 3/Union St. • This project would construct safety improvements at this intersection.																													_	_	_	
W	Framingham	Route 9/Route 126 Interchange • This project involves improvements to the interchange of Route 9 (Worcester Road) and Route 126 (Concord St.) The Route 126 bridge is rated as structurally deficient.																																
W	Framingham	Route 9/Temple St. • This project involves improvements to the intersection of Route 9 and Temple St. It would include widening at the intersection to provide 3 through lanes and double left-turn lanes in each direction on Route 9, and intersection signalization.								8																								

Corrido	r Municipality	Projects and Programs	Mo		enance, ation a iency		Liv		y and H Benefi	Econon t	nic	I	Mobility			Environment		Clim	ate Cha	ange	Tran I	sporta Equity		5	Safety a	nd Secu	ırity		Comments
Expans			low-cost strategies	ciency through 115 and	crinology before expansion GR	Strengthen connections: close gaps	Support MetroFuture development plans	Promote healthy transportation, complete streets	Promote context-sensitive design	Support state-of-practice parking	Support economic vitality	Improve access to transit	Improve transit service Expand transit	Address constraints and bottlenecks	Promote fleet modernization	iding iding	sources Support meeting GHG emission reduction targets		Increase transit/bike/ped options and TDM Protect critical infrastructure	Reduce energy use	Address equity needs; minimize burdens (air, safety, community)	Reduce transit trip times; increase capacity	Improve heavily used networks before expanding	Implement all-hazards planning	Reduce safety and security deficiencies Support ITS	E.	Improve Bike/Ped safety	Reduce crash severity	

	Expansion	- Transit														
	MBTA	Extend Blue Line to Lynn • This project involves constructing an extension of the Blue Line 4.5 miles from Wonderland Station to Lynn Station. The project would support economic development in Lynn. It would result in improved connectivity from the North Shore to Logan Airport.														
	MBTA	Green Line Extension College Ave to Route 16 • This project involves constructing the College Avenue to Route 16 segment of the Green Line Extension. Phase 1 of the project involves constructing the Green Line from Lechmere to College Ave., with a spur to Union Square in Somerville.														
ĸ	MBTA	Green Line Extension to Medford Hillside/Union Square • This project involves extending the Green Line beyond Lechmere to College Avenue in Medford Hillside (about 4 miles) and Union Square in Somerville (about .5 miles). This project would improve transit access in the Northwest Corridor and support economic development and smart growth.														
	MBTA	Lowell Commuter Rail Line Extension (Nashua/Manchester)								-					-	
	MBTA	New Orange Line Station at Assembly Square • This project involves the construction of a new Orange Line station at Assembly Square in Somerville. The project will support economic development at the Assembly Square site.										5				
	MBTA	New Worcester Line Commuter Rail Station in Allston · This project would involve constructing a new commuter rail station on the Framingham/Worcester commuter rail line in either Allston or Brighton. Commuter rail service in this area was discontinued in 1959.														
	МВТА	Orange Line Extension from Forest Hills to Needham														
	МВТА	Parking Capacity Increases at 2 Blue Line Stations														
	МВТА	Parking Increases at 2 Orange Line Stations														
	MBTA	Parking Capacity Increases at 4 Commuter Rail Stations									_					
	МВТА	Parking Expansion at 11 Commuter Rail Stations														
	Boston	Russia Wharf Ferry Terminal 'This project would consist of implementing a new ferry route in Boston Inner Harbor, from the existing terminal at the Charlestown Navy Yard to a new terminal at Russia Wharf, which is located in Fort Point Channel at Congress Street. The construction at Russia Wharf is a CA/T legal commitment.		 ×												
	MBTA	South Station Track Expansion · South Station is currently at capacity; additional track space is required to expand commuter rail service needed to accommodate future ridership demand. Up to 5 additional tracks are proposed and would be constructed after relocation of the U.S. Postal Service facility.														

Corridor	Municipality	Projects and Programs		Main oderni Effi		and	Ť	Lival		and E Benefi	Econom it	ic	ľ	Mobi	lity			Envi	ronmei	nt	Climat	te Ch	ange	Tra	inspor Equi	tation ty		Safe	ty and	Securi	ity		Comments
			ost strategie:	Efficiency through ITS and M&O	nvest in technology before expansion	Achieve SGR	Strengthen connections; close gaps	Support MetroFuture development plans	Promote healthy transportation, complete streets	Promote context-sensitive design	Support state-of-practice parking	Support economic vitality	mprove access to transit	mprove transit service		Address constraints and bottlenecks	note fleet modernizat	upancy vehicle travel ed modes	Protect resources and health; avoid air and water impacts; reduce emissions, including brownfields Promote energy conservation and alternative		Reduce VMI Increase transit/bike/ped options and TDM	Protect critical infrastructure	Reduce energy use	lress	(air, sarety, continuity) Reduce transit trip times; increase capacity	mprove heavily used networks before expanding	Implement all-hazards planning	Reduce safety and security deficiencies	Support ITS	Protect critical infrastructure; address vulnerabilities	Improve Bike/Ped safety	Reduce crash severity	
		Urban Ring, Phase 2 • This project involves the construction of a bus rapid transit service in a roughly circular corridor connecting major activity centers in Boston, Brookline, Cambridge, Chelsea, Everett, Medford, and Somerville. It would connect the MBTA's rapid transit radial corridors and alleviate crowding in the central subway. It would also encourage infill development along the corridor.			_			05	<u> </u>	Ľ		07	_	_																			
	Expansion - R	oadway								1			T											T	Т						Т	Т	
NE	Beverly to Peabody	Route 128 Capacity Improvements • This project would address safety and congestion problems along the oldest stretch of Route 128 in the Boston region.																						T									
N, NE	Lynnfield to Reading	Route 128 Capacity Improvements • This project would improve capacity along a congested stretch of Route 128 between Route 1 in Lynnfield and Route 28 in Reading.																															
NW	Somerville	Extend I-93 High-Occupancy Vehicle Lane into the City • This project involves the creation of a continuous HOV lane system from Quincy to Somerville on a very congested portion of Interstate 93. It would connect separate HOV systems north and south of Boston.																															
N, NW	Somerville to Woburn	I-93 Capacity Improvements (Corridorwide) • This project involves constructing a reversible High Occupancy Vehicle (HOV) facility from Somerville to Route 128 in Woburn.																															
W, NW, N	Wellesley to Woburn	Route 128 HOV • This project would involve the construction of an HOV lane along Route 128 between Wellesley and Woburn.																															
SE	Braintree	I-93/Route 3 Interchange (Braintree Split) • The project improves the flow of traffic at the Braintree Split (I-93 & Route 3) through improvements to on and off-ramps, additional lanes, reconfiguration of existing lanes, and improved signage.																															
SW	Canton	I-95/I-93 Interchange • This project involves a reconfiguration of the I-93/I-95 interchange. It would improve traffic flow through new ramps and roadway widening at a congested interchange between two Interstate highways. It will also improve connectivity to the Route 128 transit station, and support the Westwood Station project.																															
N	Woburn, Reading, Stoneham, and Wakefield	I-93/I-95 Interchange • This project involves several safety improvements to the interchange including new and reconfigured ramps, and widening along Route 128. It also involves transit improvements to reduce travel demand in the area, such as shuttles to the Anderson Regional Transportation Center, increased MBTA commuter rail and local bus service, and a new Peabody park-and-ride lot and shuttle services. This is a high truck rollover location.																															
NW	Somerville	I-93/Mystic Avenue Interchange • This project involves constructing a new interchange between I-93 and Mystic Avenue. It would allow for a connector road between Mystic Ave. and Middlesex Ave., which would improve access to the Assembly Square development site.																										5					

Corridor	Municipality	Projects and Programs	N	Aoder	ntena nizati Ticien	ion an	d	Liv	abilit	ty and Ben		onomio	c	N	Mobi	lity			Envi	ronme	ent		Clin	nate	Chang	ge .		sport: Equity			Safe	ty and	1 Secu	rity		Comme	its
			Use low-cost strategies	Efficiency through ITS and M&O	Invest in technology before expansion	Achieve SGR	Strengthen connections; close gaps	Support MetroFuture development plans	Promote healthy transportation, complete streets		state-of-practice r	Support scate-or-practice parking		Improve access to transit	mprove transit service	ransit	Address constraints and bottlenecks	rniza.	upancy vehicle travel ed modes	emissions, in	9	Support meeting GHG emission reduction targets	Reduce VMT	ncrease transit/bike/ped options and TDM	Protect critical infrastructure	nse	Address equity needs; minimize burdens (air, safety, community)	Reduce transit trip times; increase capacity	improve heavily used networks before expanding	mplement all-hazards planning	Reduce safety and security deficiencies	Support ITS	Protect critical infrastructure; address vulnerabilities	improve Bike/Ped safety	Reduce crash severity		
SW, SE	Brockton to Quincy	Route 24 Capacity Improvements (Corridorwide) • This project involves the construction of a northbound HOV lane from Route 27 in Brockton to the Interstate 93/Route 128 interchange in Quincy.			_ <u>_</u>	_	<u></u>	<i>w</i>			<u> </u>		2		<u> </u>	Ш	4				Σŏ	S	2	<u>_</u>	<u>C</u>	<u>۳</u>	(a	2	5	<u> </u>	<u></u>	S	<u> </u>	5	<u>۳</u>		
SW	Canton	• I-95 Northbound/Dedham St. Ramp/Dedham St. Corridor This project constructs a new ramp from Interstate 95 northbound to Dedham Street in Canton. The project will improve access to Canton and the planned Westwood Station, and the MBTAs Route 128 Station.	2												8																						
N	Bedford, Billerica, Burlington	Middlesex Turnpike Phase III • The proposed improvements will widen a 1.5 mile segment of the Middlesex Turnpike in Bedford and Billerica that is congested during the peak travel periods. The widening will provide two lanes in each direction, making it a four-lane highway with a median. The project will help improve redevelopment opportunities in the area.					N.																		-												
N	Burlington, Woburn,	Cambridge Street Improvements • This project would widen Route 3A between Route 128 and Bedford Street.																																			
N, NE	Malden, Revere, Saugus	Route 1 add-a-lane • This project will improve a bottleneck by widening Route 1 from four lanes to six between Copeland Circle (Route 60) and Route 99. The Copeland Circle and Route 1 intersection is one of the highest crash locations in the state. It will also improve ramps to and from Route 1.																																			
NE	Lynnfield, Peabody, Saugus	Route 1 Capacity Improvements • This project would remove a bottleneck by widening the Lynnfield tunnel on Route 1 from four to six lanes, and eliminating the jug handle traffic signal on Route 1 north of Route 128.																																		ý.	
NE	Everett, Medford, and Revere	Route 16/Revere Beach Parkway Roadway Improvements • This project involves widening Route 16 to 6 lanes along a congested stretch between Routes 99 and 38, except for a 4-lane segment in the vicinity of Wellington Circle. Route 16 would pass beneth a new interchange at Wellington Circle. The ramps connecting Routes 38 and 16 to Interstate 93 would be realigned, and additional ramps will be constructed. There is a high amount of truck travel in this area.																																		e.	
W	Hudson	Route 85 (Washington Street) Upgrade • This project involves widening and/or reconstructing 1.52 miles Route 85 from the Hudson/Marlborough line to Route 62 (Main St.). Sidewalk upgrades associated with the project will improve connectivity to the Assebet River Rail Trail.																	4																	5	
SE	Weymouth	Route 18 • This project involves widening Route 18 to 2 lanes in each direction and improving several intersections between Highland/Charmada Streets in Weymouth and Route 129 in Abington. The project improves pedestrian facilities and provides access to the S. Weymouth Commuter Rail station and the development planned for the former Air Station.																																			
SE	Напочег	Route 53 • This project in Hanover involves widening a one-mile section of Route 53 between Mill St. and Rawson St. It also would add a sidewalk to the west side of the roadway. Pond St. would be relocated and realigned.														κ.																					

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Corridor	Municipality	Projects and Programs	N			on an	d	Liv		y and Benef		omic		Mo	obility			Er	wironi	nent		Cli	mate	Chang	ge		sporta quity			Safe	ty and	Secur	ity	Τ	Comments
			Use low-cost strategies	Efficiency through ITS and M&O	Invest in technology before expansion	Achieve SGR	Strengthen connections; close gaps	Support MetroFuture development plans	Promote healthy transportation, complete streets	Promote context-sensitive design	state-of-practice p	Support economic vitality	mprove access to transit	mprove transit service	Expand transit	Address constraints and bottlenecks	Promote fleet modernization	Support high-occupancy vehicle travel	Protect resources and health, avoid air and water mpacts; reduce emissions, including brownfields	Promote energy conservation and alternative sources	Support meeting GHG emission reduction targets	Reduce VMT	ncrease transit/bike/ped options and TDM	Protect critical infrastructure	Reduce energy use	Address equity needs; minimize burdens (air, safety, community)	Reduce transit trip times; increase capacity	mprove heavily used networks before expanding	mplement all-hazards planning	Reduce safety and security deficiencies	Support ITS	Protect critical infrastructure; address vulnerabilities	mprove Bike/Ped safety	Reduce crash severity	
SE		Route 139 • This project removes a congested bottleneck on Route 139 between School and Furnace Streets through roadway widening, and adds bicycle and pedestrian accomodations.				_					0,7									LL Ø	0)			<u> </u>	Ľ	₹	<u>I</u>	-	_ <u>_</u>	<u>e</u>	<u></u>		<u>-</u>	~	
N		New Boston Street Bridge • This project involves the reconstruction of a bridge over the Lowell Commuter Rail Line that was destroyed by a fire more than 30 years ago. Reconstruction of the bridge would support industrial development in the area.						-																											÷
N		Montvale Avenue • This project involves widening Montvale Ave. to four lanes between I-93 and Central Street, and adding turning lanes at Washington St.																																	
W		Veterans Memorial Drive Extension/Route 16 Bypass • This project involves extending Veterans Memorial Drive in Milford by almost 1 mile to Depot St. The project would reduce traffic through downtown Milford on Route 16, reduce cut through traffic, and extend the Upper Charles Bike Trail by almost 1 mile, from Route 109 to Central St.																																	
NE		Bridge Street • The project involves widening Bridge Street by 2 lanes in each direction. It would improve access to the Salem train station.																																	
W	Hùdson	I-495/I-290/Route 85 Interchange • This project involves the construction of flyover ramps between I-290 and northbound I-495. It also entails widening the Route 85 Connector from two lanes to four from I-495 to Fitchburg St, and improving intersections along Route 85. This is a high truck rollover location.										ж																						+	
SW	Foxborough	I-95 Capacity Improvements																																_	
NE	Peabody	Route 1/Route 114 Corridor • This project improves the interchange of Route 114 and Route 1. It would widen Route 114 to three lanes in each direction in the vicinity of the Route 1 interchange, reconfigure the interchange, and add on and off ramps between Route 114 and I-95 to complete the interchange between the highways.																																	
SE	Duxbury	Route 3 Add-A-Lane (Corridorwide) • This project involves widening Route 3 from 2 lanes in each direction to 3 between Route 18 in Weymouth and Route 14 in Duxbury. The project also involves improvements at the exit 11, 12, 13, and 15 interchanges and expansions of the park and ride lots at exits 12 and 14.																																	

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Corridor	Municipality	Projects and Programs	М	lodern	tenanc zation ciency	and		Livat		and E Senefit		mic		Mob	ility			Enviro	onmer	it	Clima	te Ch	ange	Tra	inspoi Equi	rtation ity	Safe	ty and	Securi	ty		Comments
			Use low-cost strategies	Efficiency through ITS and M&O	Invest in technology before expansion	neve SGR	Strengthen connections; close gaps	Support MetroFuture development plans	Promote healthy transportation, complete streets	Promote context-sensitive design	Support state-of-practice parking	Support economic vitality	Improve access to transit	Improve transit service	Expand transit	Address constraints and bottlenecks	fleet modernizat	o travel	impacts; reduce emissions, including brownfields Promote energy conservation and alternative	1	Increase transit/hike/hed ontions and TDM	ct critical infrastructure	Reduce energy use	Address equity needs; minimize burdens	(all, salety, communy) Reduce transit trip times; increase capacity	Improve heavily used networks before expanding	Reduce safety and security deficiencies	Support ITS	Protect critical infrastructure; address vulnerabilities	Improve Bike/Ped safety	Keduce crash sevenity	
	Expansion - F	reight			-				-		0,															1-						
		South Boston Roadway Improvements 'This project, outlined in the State Freight Plan, includes the construction of a new Conley Terminal Freight Bypass Road, and upgrades to Cypher Street and E Street. It would reduce truck traffic on neighborhood streets. Port of Boston Improvement Dredging Project																														
		This project involves deepening the navigation channel to Conley Terminal to a depth of 48 feet, and the entrance channel to 50 feet. It also involves dredging Chelsea Creek to 40 feet to improve access for oil tankers.																														
N	Boston	Charlestown Haul Road																														
NE	Boston	East Boston Haul Road • This project reduces truck and airport-related traffic such as shuttles and buses in East Boston by creating a new grade-separated roadway connecting the City of Chelsea and the harbor tunnels/Logan Airport using an abandoned below-grade railroad right-of-way. It would provide a roadway passing beneath Neptune Road, Bennington Street, and Saratoga Street, and would connect to Chelsea Street south of the Chelsea Street Bridge, and possibly providea a new direct ramp connection between Chelsea Street and Route 1A southbound.		÷																												
NE	Boston	Route 1A/Chelsea Street Bridge Connection • This project involves the construction of a new Chelsea St. bridge between East Boston and Chelsea. The new vertical lift bridge would provide 175 feet of vertical clearance to allow ships to pass beneath, which supports freight movement on Chelsea Creek.												e.																		
SE	Boston	Track 61 Rail Improvement This project would restore existing, and extend, freight rail lines into the Boston Marine Industrial Park. It would provide on-dock rail access to a planned bulk cargo facility at the North Jetty. The project includes rehabilitation of 2,860 linear feet of railroad track, and construction of 5,910 new linear feet of track. It would support economic development in the marine industrial park area.												*					1							s.						
SE	Boston	Conley Rail Service • This project involves extending rail service into the Conley Terminal in South Boston. Rail service could reduce the number of trucks using South Boston roads to access the marine terminal and encourage more ships to use the port.																					2									

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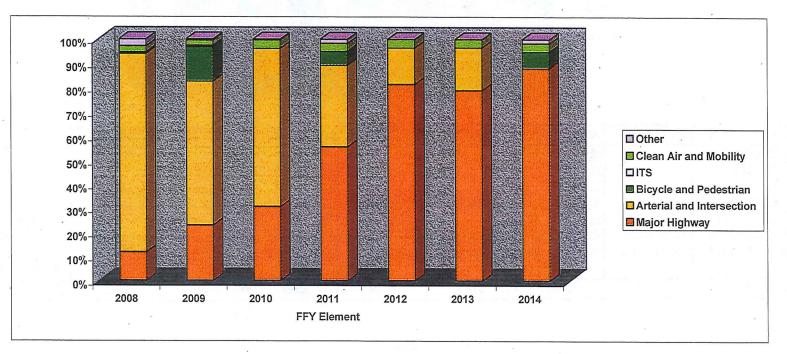
PATHS TO A SUSTAINABLE REGION - Projects and Programs by Investment Category

Corridor	Municipality	Projects and Programs				on and		Lival		and E Benefit		mic		Mob	ility			Enviro	nment		C	imate	Chang	ge		sportat quity	ion	Safety	and S	Securit	y	Comments
			low-cost strategie	Efficiency through ITS and M&O	Invest in technology before expansion	Achieve SGR	Strengthen connections; close gaps	Support MetroFuture development plans	Promote healthy transportation, complete streets	Promote context-sensitive design	Support state-of-practice parking	Support economic vitality	Improve access to transit	Improve transit service	Expand transit	Address constraints and bottlenecks	note fleet modernizat	upancy venicle trav ed modes s and health; avoid	cluding browr and alternativ	Support meeting GHG emission reduction targets	Reduce VMT	Increase transit/bike/ped options and TDM	Protect critical infrastructure	rgy use	Address equity needs; minimize burdens (air, safety, community)	Reduce transit trip times; increase capacity	Improve heavily used networks before expanding	Reduce safety and security deficiencies	:	Protect critical infrastructure; address vulnerabilities	Reduce crash severity	
	Expansion - Bi																															
NW	Acton	Assabet River Rail Trail • The project includes the construction of a trail from Acton, through Maynard and Stow, to Hudson - a distance of 6.6 miles. It will connect town centers, the Assabet River Wildlife Refuge, and the South Acton Commuter Rail station. Required to complete the project will be two new bikeway bridges, replacement of an existing pedestrian bridge, rehabilitation or replacement of a railroad bridge, and a 1,100-foot boardwalk through a wetland area.																														
NE	Danvers	Border to Boston Trail • This project involves the construction of a shared use rail trail. The Northern Section would about 28 miles from Salisbury on the New Hampshire border to Danvers along a former rail corridor, connecting town centers, schools, and parks.																8														
NW	Concord	Bruce Freeman Rail Trail • The project will extend the Bruce Freeman Rail Trail 4.9 miles through Acton and Concord. The shared use trail will be between 10 and 12 feet wide and its construction will involve adding a bridge over Route 2A and 119 and the rehabilitation of six railroad bridges. Once completed, the trail will be about 17 miles in length connecting downtowns, schools, and transit stations.																										2				
		Northern Strand • This project involves the construction of a shared use trail connecting five municipalities north of Boston. The proposed rail trail connects several schools and activity centers in a densely developed environment.																														
																																ž
Clean Ai	r and Mobility	·														Т																
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Transpo	rtation Equity							T	1											1				Т				 	1			1

Clean Air and Mobility													
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TARGET PROJECTS BY PROJECT TYPE FFYs 2008-14 TIP Funding

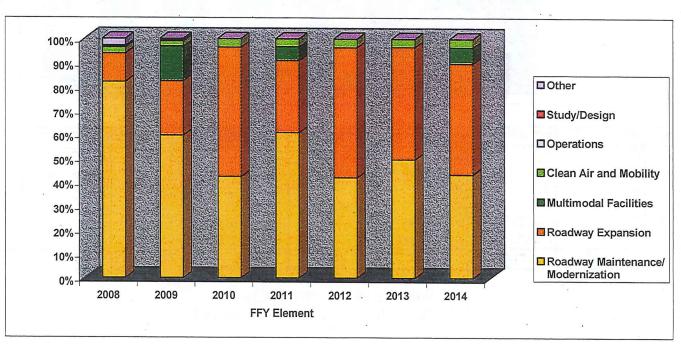
Project Type	2008	2009	2010	2011	2012	2013	2014	Total	%
Major Highway	\$7,630,000	\$14,959,389	\$17,000,000	\$33,336,197	\$44,796,710	\$45,296,710	\$49,914,368	\$212,933,374	51.34%
Arterial and Intersection	\$53,417,219	\$38,862,412	\$36,160,630	\$19,997,140	\$8,248,404	\$10,139,690	\$0	\$166,825,495	40.22%
Bicycle and Pedestrian	\$0	\$9,300,000	\$0	\$3,487,611	\$0	\$0	\$3,850,000	\$16,637,611	4.01%
ITS	\$405,000	\$405,000	· \$0	\$0	\$0	. \$0	\$0	\$810,000	0.20%
Clean Air and Mobility	\$1,657,255	\$1,426,503	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$13,083,758	3.15%
Other	\$1,920,000	\$271,800	\$180,000	\$1,076,235	\$0	\$0	\$1,000,000	\$4,448,035	- 1.07%
Total	\$65,029,474	\$65,225,104	\$55,340,630	\$59,897,183	\$55,045,114	\$57,436,400	\$56,764,368	\$414,738,273	100.00%



MassDOT OTP

TARGET PROJECTS BY PROJECT PURPOSE FFYs 2008-14 TIP Funding

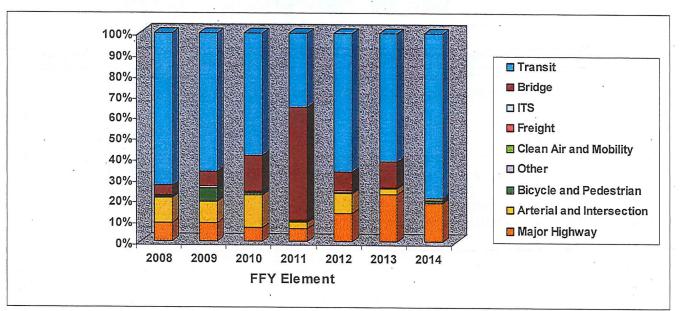
Project Purpose	2008	2009	2010	2011	2012	2013	2014	Total	%
Roadway Maintenance/		A 2 7 7 7							
Modernization	\$53,417,219	\$38,862,412	\$23,340,630	\$36,409,572	\$23,045,114	\$28,436,400	\$24,514,368	\$228,025,715	54.98%
Roadway Expansion	\$7,630,000	\$14,959,389	\$30,000,000	\$18,000,000	\$30,000,000	\$27,000,000	\$26,400,000	\$153,989,389	37.13%
Multimodal Facilities	\$0	\$9,300,000	. \$0	\$3,487,611	\$0	\$0	\$3,850,000	\$16,637,611	4.01%
Clean Air and Mobility	\$1,657,255	\$1,426,503	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$13,083,758	3.15%
Operations	\$405,000	\$405,000	\$0	\$0	\$0	\$0	\$0	\$810,000	0.20%
Study/Design	\$0	\$271,800	\$0	\$0	\$0	\$0	\$0	\$271,800	0.07%
Other	\$1,920,000	.\$0	\$0	\$0	\$0	\$0	\$0	\$1,920,000	0.46%
Total	\$65,029,474	\$65,225,104	\$55,340,630	\$59,897,183	\$55,045,114	\$57,436,400	\$56,764,368	\$414,738,273	100.00%



MassDOT OTP

TOTAL TIP PROJECTS BY PROJECT TYPE FFYs 2008-14 TIP Funding

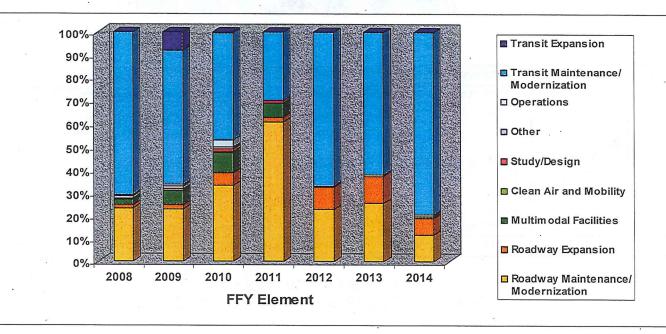
Project Type	2008	2009	2010	2011	2012	2013	2014	Total	%
Major Highway	\$46,043,143	\$74,836,088	\$59,522,700	\$69,286,947	\$57,860,470	\$105,091,240	\$66,869,808	\$479,510,396	10.43%
Arterial and Intersection	\$60,988,737	\$82,464,044	\$141,047,527	\$33,941,427	\$42,277,243	\$12,720,000	\$0	\$373,438,978	8.12%
Bicycle and Pedestrian	\$0	\$52,127,456	\$5,286,413	\$6,671,000	\$0	\$0	\$3,850,000	\$67,934,869	1.48%
Other	\$2,638,000	\$1,489,800	\$6,599,330	\$2,374,935	\$0	\$0	\$2,124,874	\$15,226,939	0.33%
Clean Air and Mobility	\$1,657,255	\$1,426,503	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$13,083,758	0.28%
Freight	\$0	\$0	\$0	\$0	\$3,124,213	\$0	\$0	\$3,124,213	0.07%
ITS	\$2,370,933	\$7,405,000	\$1,700,000	\$0	\$0	\$0	\$0	\$11,475,933	0.25%
Bridge	\$23,552,564	\$57,421,965	\$153,712,669	\$593,037,841	\$38,000,000	\$56,843,990	\$0	\$922,569,029	20.06%
Transit	\$379,459,041	\$553,770,538	\$528,122,754	\$389,072,695	\$287,434,306	\$287,434,306	\$287,434,306	\$2,712,727,945	58.98%
Total	\$516,709,673.	\$830,941,394	\$897,991,393	\$1,096,384,845	\$430,696,232	\$464,089,536		\$4,599,092,060	100.00%



MassDOT OTP

TOTAL TIP PROJECTS BY PROJECT PURPOSE FFYs 2008-14 TIP Funding

Project Purpose	2008	[.] 2009	2010	2011	2012	2013	2014	Total	%
Roadway Maintenance/		1.141				1			
Modernization	\$121,967,811	\$193,283,903	\$301,613,621	\$666,400,527	\$99,261,926	\$119,655,230	\$42,594,682	\$1,544,777,699	33.59%
Roadway Expansion	\$7,630,000	\$14,959,389	\$47,500,000	\$22,500,000	\$42,000,000	\$55,000,000	\$26,400,000	\$215,989,389	4.70%
Multimodal Facilities	\$11,167,192	\$50,893,394	\$78,673,969	\$65,553,628	\$0	\$0	\$3,850,000	\$210,138,183	4.57%
Clean Air and Mobility	\$1,657,255	\$1,426,503	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$13,083,758	0.28%
Study/Design	\$1,704 <u>,</u> 633	\$4,349,177	\$9,870,487	\$9,740,623	\$0	\$0	\$0	\$25,664,920	0.56%
Other ·	\$5,229,439	\$9,893,520	\$7,239,709	\$0	\$0	\$0	\$0	\$22,362,668	0.49%
Operations	\$2,370,933	\$7,405,000	\$28,374,353	\$0	\$0	\$0	\$0	\$38,150,286	0.83%
Transit Maintenance/	e								
Modernization	\$364,982,410	\$481,324,860	\$420,219,254	\$330,190,067	\$287,434,306	\$287,434,306	\$287,434,306	\$2,459,019,509	53.47%
Transit Expansion	\$0	\$67,405,648	\$2,500,000	\$0	\$0	\$0	\$0	\$69,905,648	1.52%
Total	\$516,709,673	\$830,941,394	\$897,991,393	\$1,096,384,845	\$430,696,232	\$464,089,536	\$362,278,988	\$4,599,092,060	100.00%



TOTAL TIP FUNDING FFYs 2008-14

Funding Category	2008	2009	2010	2011	2012	2013	2014	Total	%
CMAQ	\$16,240,946	\$17,670,623	\$42,083,300	\$18,987,611	\$2,000,000	\$2,000,000	\$5,850,000	\$104,832,480	2.28%
NHS	\$7,630,000	\$14,959,389	\$32,500,000	\$18,000,000	\$30,000,000	\$27,000,000	\$26,400,000	\$156,489,389	3.40%
STP	\$40,359,123	\$28,026,582	\$30,530,620	\$17,536,627	\$15,200,000	\$24,139,690	\$19,217,658	\$175,010,300	3.81%
HSIP	\$0	\$4,296,710	\$4,296,710	\$4,296,710	\$4,296,710	\$4,296,710	\$4,296,710	\$25,780,260	0.56%
Enhancement	\$799,405	\$271,800	\$930,000	\$1,076,235	\$3,548,404	\$0	\$1,000,000	\$7,625,844	0.17%
Earmark	\$15,632,748	\$42,534,656	\$78,611,686	\$21,606,125	\$37,153,052	\$2,580,310	\$1,124,874	\$199,243,449	4.33%
Bridge	\$23,552,564	\$53,256,965	\$127,972,544	\$588,726,341	\$38,000,000	\$56,843,990	\$0	\$888,352,404	19.32%
IM	\$33,726,346	\$25,844,040	\$26,573,950	\$35,502,000	\$8,393,600	\$56,866,530	\$15,393,840	\$202,300,306	4.40%
NHSPP	\$4,506,000	\$13,261,943	\$0	\$0	\$4,670,160	\$2,928,000	\$1,561,600	\$26,927,703	0.59%
Highway ARRA	\$0	\$89,994,648	\$147,618,746	\$0	\$0	\$0	\$0	\$237,613,394	5.17%
Section 5307	\$183,521,216	\$188,752,405	\$169,934,306	\$169,934,306	\$169,934,306	\$169,934,306	\$169,934,306	\$1,221,945,151	26.57%
Section 5309	\$187,431,886	\$169,163,559	\$130,171,000	\$218,547,890	\$117,500,000	\$117,500,000	\$117,500,000	\$1,057,814,335	23.00%
Transit ARRA	\$0	\$179,414,256	\$80,784,353	\$0	\$0	\$0	\$0	\$260,198,609	5.66%
Other	\$3,309,439	\$3,493,819	\$25,984,178	\$2,171,000	\$0	\$0	\$0	\$34,958,436	0.76%
Total	\$516,709,673	\$830,941,394	\$897,991,393	\$1,096,384,845	\$430,696,232	\$464,089,536	\$362,278,988	\$4,599,092,060	100.00%

Project Type	2008	2009	2010	2011	2012	2013	2014	Total	%
Major Highway	\$46,043,143	\$74,836,088	\$59,522,700	\$69,286,947	\$57,860,470	\$105,091,240	\$66,869,808	\$479,510,396	10.43%
Arterial and Intersection	\$60,988,737	\$82,464,044	\$141,047,527	\$33,941,427	\$42,277,243	\$12,720,000	\$0	\$373,438,978	8.12%
Bicycle and Pedestrian	\$0	\$52,127,456	\$5,286,413	\$6,671,000	\$0	\$0	\$3,850,000	\$67,934,869	1.48%
Other	\$2,638,000	\$1,489,800	\$6,599,330	\$2,374,935	\$0	\$0	\$2,124,874	\$15,226,939	0.33%
Clean Air and Mobility	\$1,657,255	\$1,426,503	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$13,083,758	0.28%
Freight	\$0	\$0	\$0	\$0	\$3,124,213	\$0	\$0	\$3,124,213	0.07%
ITS	\$2,370,933	\$7,405,000	\$1,700,000	\$0	\$0	\$0	\$0	\$11,475,933	0.25%
Bridge	\$23,552,564	\$57,421,965	\$153,712,669	\$593,037,841	\$38,000,000	\$56,843,990	\$0	\$922,569,029	20.06%
Transit .	\$379,459,041	\$553,770,538	\$528,122,754	\$389,072,695	\$287,434,306	\$287,434,306	\$287,434,306	\$2,712,727,945	58.98%
Total	\$516,709,673	\$830,941,394	\$897,991,393	\$1,096,384,845	\$430,696,232	\$464,089,536	\$362,278,988	\$4,599,092,060	100.00%

Project Purpose	2008	2009	2010	2011	2012	2013	2014	Total	%
Roadway Maintenance/			-		•				
Modernization	\$121,967,811	\$193,283,903	\$301,613,621	\$666,400,527	\$99,261,926	\$119,655,230	\$42,594,682	\$1,544,777,699	33.59%
Roadway Expansion	\$7,630,000	\$14,959,389	\$47,500,000	\$22,500,000	\$42,000,000	\$55,000,000	\$26,400,000	\$215,989,389	4.70%
Multimodal Facilities	\$11,167,192	\$50,893,394	\$78,673,969	\$65,553,628	\$0	\$0	\$3,850,000	\$210,138,183	4.57%
Clean Air and Mobility	\$1,657,255	\$1,426,503	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$13,083,758	0.28%
Study/Design	\$1,704,633	\$4,349,177	\$9,870,487	\$9,740,623	\$0	\$0	\$0	\$25,664,920	0.56%
Other	\$5,229,439	\$9,893,520	\$7,239,709	\$0	\$0	\$0	\$0	\$22,362,668	0.49%
Operations	\$2,370,933	\$7,405,000	\$28,374,353	\$0	\$0	\$0	\$0	\$38,150,286	0.83%
Transit Maintenance/									
Modernization	\$364,982,410	\$481,324,860	\$420,219,254	\$330,190,067	\$287,434,306	\$287,434,306	\$287,434,306	\$2,459,019,509	53.47%
Transit Expansion	\$0	\$67,405,648	\$2,500,000	\$0	• \$0	\$0	\$0	\$69,905,648	1.52%
Total	\$516,709,673	\$830,941,394	\$897,991,393	\$1,096,384,845	\$430,696,232	\$464,089,536	\$362,278,988	\$4,599,092,060	100.00%

Hello:

Attached are two tables that we hope you find useful as you prepare the financial components of the 2011 - 2035 Regional Transportation Plans.

The first table provides estimated total availability of highway funding for the state for each year grouped by five-year increments. The estimates in this table are based on the following assumptions:

- Federal funding (OA and redistribution) and state match for the period of 2011 2014 reflect current STIP allocations and funding for FFY 2015 is assumed to be equal to estimates for FFY 2014.
- Beginning in 2016 and each year thereafter federal funding is assumed to grow at a rate of 3% per year.
- Deductions for statewide items that cannot be allocated individually to the MPOs Central Artery and ABP GANs repayments, Planning, and Extra Work Orders/Cost Adjustments are taken from total available funding, leaving an amount of available federal funding to be allocated in the regional plans.
- Assumed funding for Major Infrastructure Projects, the NHS/IM Programs, the Federal Aid Bridge Program, and Infrastructure Maintenance mirrors the assumptions made for federal funding 2011-2015 reflect STIP amounts, and thereafter programs are adjusted by a rate of 3% per year.
- The Balance Available for the Statewide Road and Bridge Program is a function of the other assumptions made in the financial plan and represents federal funding after deducting statewide line items and GANS repayments. For 2011-2015, this amount reflects the regional targets provided in the STIP; from 2016 to 2021 it fluctuates based upon the assumed 3% growth in revenue and programs costs, as well as the repayment schedule of the ABP GANs; in 2022, the amount balloons to reflect the end of GANs repayments and thereafter it grows at a rate of 3% per year.
- The Non-Federal Aid Program is based upon the existing program and held constant at current amounts for 2011 2015. Beginning in 2016 and thereafter, NFA funding is adjusted at a rate of 3% per year..

The second table collapses and totals the funding by category into five-year increments. The bottom section of this table shows a regional allocation of estimated funding availability for the specific MPO. These funds have been allocated among the regions based upon the following assumptions:

3/14/11 DRAFT

FFY 2011 - 2035 Regional Transportation Plan Funding (thousands)

																	*									
ESTIMATED FEDERAL FUNDING											•								2							
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	τοτα
Core Program Federal Funds Available (1) Assumed Redistribution (1)	\$560,000 \$0	\$560,000 \$40,000	\$560,000 \$40,000	\$560,000 <u>\$40,000</u>	\$560,000 <u>\$40,000</u>	\$576,800 \$41,200			\$630,285	\$649,193	\$668,669	\$688,729	\$709,391	\$730,673	\$752,593	\$775,171	\$798,426	\$822,379	\$847,050	\$872,462	\$898,636	\$925,595	\$953,363	\$981,963	\$1,011,422	\$18,298,83
Total Federal Funds Available	\$560,000		\$600,000		\$600,000	\$618,000	<u>\$42,436</u> \$636,540		<u>\$45,020</u> \$675,305	<u>\$46,371</u> \$695,564	<u>\$47,762</u> \$716,431	<u>\$49,195</u> \$737,924	\$50,671 \$760,062	<u>\$52,191</u> \$782,864	<u>\$53,757</u> \$806,350	<u>\$55,369</u> \$830,540	\$57,030 \$855,457	<u>\$58,741</u> \$881,120	\$60,504 \$907,554	<u>\$62,319</u> \$934,780	<u>\$64,188</u> \$962,824	<u>\$66,114</u> \$991,709	<u>\$68,097</u> \$1,021,460	<u>\$70,140</u> \$1,052,104		\$1,267,05 \$19,565,89
Less GANS Payments	\$159,365	\$165,960	\$176,555	\$183,795	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$208,000	\$0	- \$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0.	\$0	\$0	\$0	\$0	\$1,793,67
Federal Funds Available for SWRB Total Funds Available Including State Match	\$400,635		\$423,445		\$450,000	\$468,000			\$525,305	\$545,564	\$508,431	\$737,924	\$760,062	\$782,864	\$806,350		\$855,457		\$907,554	\$934,780	\$962,824	\$991,709	\$1,021,460	\$1,052,104	\$1,083,667	\$17,772,216
Total Funds Available including state match	\$489,043	\$524,862	\$511,056	\$504,066	\$546,310	\$574,806	\$597,675	\$621,230	\$645,492	\$670,482	\$623,721	\$910,233	\$937,540	\$965,666	\$994,636	\$1,024,475	\$1,055,210	\$1,086,866	\$1,119,472	\$1,153,056	\$1,187,648	\$1,223,277	\$1,259,975	\$1,297,775	\$1,336,708	\$21,861,280
Less Major Infrastructure Project	\$2,750	\$40,000	\$40,000	\$40,000	\$40,000	\$41,200	\$42,436	\$43,709	\$45,020	\$46,371	\$47,762	\$49,195	\$50,671	\$52,191	\$53,757	\$55,369	\$57,030	\$58,741	\$60,504	\$62,319	\$64,188	\$66,114	\$68,097	\$70,140	\$72,244	\$1,269,809
Less Major Infrastructure Project Needs - HPP Less NHS/Interstate Maintenance Program	\$0 \$84,500	\$0 \$82,000	\$0 \$79,179	\$0 \$79,179	\$0 \$79,178	\$0 \$81,553	\$0 \$84.000	\$0 \$86,520	\$0 \$89,116	\$0 \$91,789	\$0 \$94,543	\$0 \$97,379	\$0 \$100,300	\$0 \$103,309	\$0 \$106,409	\$0 \$109,601	\$0 \$112,889	\$0 \$116.276	\$0 \$119,764	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Less Federal Aid Bridge Needs	\$127,733		\$127,733			\$131,565			\$143,765	\$148,078	\$152,520			\$166,663	\$171,662	\$176,812				\$123,357 \$199,004	\$127,057 \$204,974	\$130,869 \$211,123	\$134,795 \$217,457	\$138,839 \$223,981	\$143,004 \$230,700	\$2,595,405 \$4,169,178
Less Statewide Items:																									1	
Planning Extra Work Orders	\$23,000 \$41,350	\$23,000 \$43,750	\$23,000 \$43,750	\$23,000 \$45,000	\$23,000 \$45,000		\$24,401 \$47,741	\$25,133 \$49,173	\$25,887 \$50,648	\$26,663 \$52,167	\$27,463 \$53,732	\$28,287 \$55,344	\$29,136 \$57.005	\$30,010 \$58,715	\$30,910 \$60,476	\$31,837 \$62,291	\$32,793	\$33,776	\$34,790	\$35,833	\$36,908	\$38,015	\$39,156	\$40,331	\$41,541	\$751,559
Infrastructure Maintenance	\$70,308	\$84,158	\$63,783	\$55,533	\$55,533	\$56,959	\$58,428	\$56,741	\$53,499	\$55,104	\$56,757	\$58,460	\$60,213	\$62,020	\$60,478 <u>\$63,880</u>	\$62,291	\$64,159 \$67,771	\$66,084 \$69,804	\$68,067 \$71,898	\$70,109 <u>\$74,055</u>	\$72,212 \$76,277	\$74,378 \$78,565	\$76,609 \$80,922	\$78,908 <u>\$83,349</u>	\$81,275 <u>\$85,850</u>	\$1,464,292 \$1,665,661
Total Statewide Items	\$134,658	\$150,908	\$130,533	\$123,533	\$123,533	\$126,999	\$130,569	\$131,046	\$130,033	\$133,934	\$137,952	\$142,091	\$146,354	\$150,744	\$155,267		\$164,722	\$169,664		\$179,997		\$190,958		\$202,588	\$208,665	\$3,881,512
BALANCE AVAILABLE FOR SWRE	\$139,402	\$128,909	\$133.611	\$133 621	\$175 866	\$193,489	\$205 158	\$220 378	\$237 558	\$250 310	\$190,944	\$ACA 472	6479 407	6402 750	6507 540	. \$522,768	4500 (54)	APP (44 P)								ž R
es.			-		1		1200,100	4220,010	4207,000	\$200,010	\$150,544	\$404,475	\$478,407	\$452,155	\$507,542	\$522,768	\$538,451	\$554,605	\$571,243	\$588,380	\$606,031	\$624,212	\$642,939	\$662,227	\$682,094	\$9,945,376
			- 24.2																*					-		
ESTIMATED NON-FEDERAL FUNDING																										
ESTIMATED NON-FEDERAL FUNDING																										
TOTAL ESTIMATED NFA FUNDS AVAILABLE	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$154,500	\$159,135	\$163,909	\$168,826	\$173,891	\$179,108	\$184,481	\$190,016	\$195,716	\$201,587	\$207,635	\$213,864	\$220,280	\$226,888	\$233.695	\$240,706	\$247,927	\$255.365	\$263,026	\$270,917	\$4,901,473
Roads	\$82,400	\$84,872	\$87,418	\$90,041	\$92,742	\$95,524	\$98,390	\$101.342	\$104,382	\$107,513	\$110,739	\$114.061	\$117,483	\$121.007	\$124,637	\$128,377										
Bridges	\$67,600	\$65,128	\$62,582	\$59,959	\$57,258	\$58,976			\$64,444	\$66,378	\$68,369	\$70,420	\$72,533	\$74,709	\$76,950	\$79,259	\$81,636	\$84,085	\$140,280 \$86,608	\$144,489 \$89,206	\$148,824 \$91,882	\$153,288 \$94,639	\$157,887 \$97,478	\$162,624 \$100,402	\$167,502 \$103,414	\$3,004,243 \$1,897,229
																	•			L						
TOTAL AVAILABLE FOR ALLOCATING IN THE RTP	\$574,693	\$608,112	\$594,306	\$586,066	\$628,310	\$659,266	\$684,669	\$710,834	\$737,784	\$765,542	\$721,634 \$	1,011,083 \$	1,041,415 \$	\$1,072,658 \$	51,104,837	\$1,137,982 \$	1,172,122 \$	1,207,286	\$1,243,504 \$	1,280,809	\$1,319,234	51,358,811	\$1,399,575	51,441,562	\$1,484,809	\$24,546,902
					1			5				(

Notes: (1) Core Program Federal Funds Avail and Assumed Redistribution assumes a 3% per year increase after 2015 (2) The above figures do not include Local Aid (Chapter 90, PWED & STRAP)

3/14/11 DRAFT

FFY 2011 - 2035 Regional Transportation Plan Funding (thousands)

ESTIMATED FEDERAL FUNDING					ы	
	2011 - 2015	<u> 2016 - 2020</u>	2021 - 2025	<u> 2026 - 2030</u>	2031-2035	<u>TOTAL</u>
Core Program Federal Funds Available (1) Assumed Redistribution Total Federal Funds Available	\$2,800,000 \$160,000 \$2,960,000	\$3,062,310 \$218,736 \$3,281,046	\$3,550,056 \$253,575 \$3,803,631	\$4,115,488 \$293,963 \$4,409,451	\$4,770,978 \$340,784 \$5,111,763	\$18,298,832 \$1,267,059 \$19,565,891
Less GANS Payments	\$835,675	\$750,000	\$208,000	\$0	\$0	\$1,793,675
Federal Funds Available for SWRB Total Funds Available Including State Match	\$2,124,325 \$2,575,3 37	\$2,531,046 \$3,109,685	\$3,595,631 \$4,431,797	\$4,409,451 \$5,439,078	\$5,111,763 \$6,305,383	\$17,772,216 \$21,861,280
Less Major Infrastructure Project Less Major Infrastructure Project Needs - HPP Less NHS/Interstate Maintenance Program Less Federal Aid Bridge Needs	\$162,750 \$0 \$404,036 \$633,977	\$218,736 \$0 \$432,978 \$698,496	\$253,575 \$0 \$501,940 \$809,749	\$293,963 \$0 \$581,886 \$938,721	\$340,784 \$0 \$674,565 \$1,088,235	\$1,269,809 \$0 \$2,595,405 \$4,169,178
Less Statewide Items: Planning Extra Work Orders Infrastructure Maintenance Total Statewide Items	\$115,000 \$218,850 \$329,315 \$663,165	\$125,773 \$218,736 \$280,730 \$432,978	\$145,806 \$253,575 \$301,330 \$501,940	\$169,029 \$293,963 \$349,324 \$581,886	\$195,951 \$340,784 \$404,962 \$674,5 65	\$751,559 \$1,325,909 \$1,665,661 \$2,854,534
BALANCE AVAILABLE FOR SWRB	\$711,409	\$1,106,893	\$2,134,125	\$2,775,446	\$3,217,503	
2		1				
Fefimated HDD Funding including State Match	1 01	¢o	¢0	¢o	¢0	60
Estimated HPP Funding including State Match	\$0	\$0	\$0	\$0	\$0	\$0
	\$0 \$750,000	\$0 \$820,261	\$0 \$950,908		\$0 \$1,277,941	\$0 \$4,901,473
ESTIMATED NON-FEDERAL FUNDING						
ESTIMATED NON-FEDERAL FUNDING TOTAL ESTIMATED NFA FUNDS AVAILABLE Roads	\$750,000 \$437,473	\$820,261 \$507,151	\$950,908 \$587,927	\$1,102,363 \$681,568	\$1,277,941 \$790,125	\$4,901,473 \$3,004,243
ESTIMATED NON-FEDERAL FUNDING TOTAL ESTIMATED NFA FUNDS AVAILABLE Roads Bridges	\$750,000 \$437,473 \$312,527	\$820,261 \$507,151 \$313,111	\$950,908 \$587,927 \$362,981	\$1,102,363 \$681,568 \$420,794	\$1,277,941 \$790,125 \$487,816	\$4,901,473 \$3,004,243 \$1,897,229
ESTIMATED NON-FEDERAL FUNDING TOTAL ESTIMATED NFA FUNDS AVAILABLE Roads Bridges TOTAL AVAILABLE FOR ALLOCATING IN THE RTP	\$750,000 \$437,473 \$312,527 \$2,991,487 <u>2011 - 2015</u>	\$820,261 \$507,151 \$313,111 \$3,558,095 <u>2016 - 2020</u>	\$950,908 \$587,927 \$362,981 \$4,951,627 <u>2021 - 2025</u>	\$1,102,363 \$681,568 \$420,794 \$6,041,703 <u>2026 - 2030</u>	\$1,277,941 \$790,125 \$487,816 \$7,003,990 <u>2031 - 2035</u>	\$4,901,473 \$3,004,243 \$1,897,229 \$24,546,902 <u>TOTAL</u>
ESTIMATED NON-FEDERAL FUNDING TOTAL ESTIMATED NFA FUNDS AVAILABLE Roads Bridges TOTAL AVAILABLE FOR ALLOCATING IN THE RTP Total Available for Programming in the Boston Region RTP	\$750,000 \$437,473 \$312,527 \$2,991,487 <u>2011 - 2015</u> \$1,178,422	\$820,261 \$507,151 \$313,111 \$3,558,095 <u>2016 - 2020</u> \$1,411,842	\$950,908 \$587,927 \$362,981 \$4,951,627 <u>2021 - 2025</u> \$1,991,972	\$1,102,363 \$681,568 \$420,794 \$6,041,703 <u>2026 - 2030</u> \$2,438,749	\$1,277,941 \$790,125 \$487,816 \$7,003,990 <u>2031 - 2035</u> \$2,827,178	\$4,901,473 \$3,004,243 \$1,897,229 \$24,546,902 <u>TOTAL</u> \$9,848,163
ESTIMATED NON-FEDERAL FUNDING TOTAL ESTIMATED NFA FUNDS AVAILABLE Roads Bridges TOTAL AVAILABLE FOR ALLOCATING IN THE RTP Total Available for Programming in the Boston Region RTP Major Infratructure Projects	\$750,000 \$437,473 \$312,527 \$2,991,487 <u>2011 - 2015</u> \$1,178,422 \$69,929	\$820,261 \$507,151 \$313,111 \$3,558,095 <u>2016 - 2020</u> \$1,411,842 <i>\$93,985</i>	\$950,908 \$587,927 \$362,981 \$4,951,627 <u>2021 - 2025</u> \$1,991,972 <i>\$108,954</i>	\$1,102,363 \$681,568 \$420,794 \$6,041,703 <u>2026 - 2030</u> \$2,438,749 \$ <i>126,308</i>	\$1,277,941 \$790,125 \$487,816 \$7,003,990 <u>2031 - 2035</u> \$2,827,178 <i>\$146,425</i>	\$4,901,473 \$3,004,243 \$1,897,229 \$24,546,902 <u>TOTAL</u> \$9,848,163 <i>\$545,600</i>
ESTIMATED NON-FEDERAL FUNDING TOTAL ESTIMATED NFA FUNDS AVAILABLE Roads Bridges TOTAL AVAILABLE FOR ALLOCATING IN THE RTP Total Available for Programming in the Boston Region RTP Major Infratructure Projects Federal Aid Bridge Projects	\$750,000 \$437,473 \$312,527 \$2,991,487 <u>2011 - 2015</u> \$1,178,422 \$69,929 \$193,566	\$820,261 \$507,151 \$313,111 \$3,558,095 <u>2016 - 2020</u> \$1,411,842 \$93,985 \$213,265	\$950,908 \$587,927 \$362,981 \$4,951,627 <u>2021 - 2025</u> \$1,991,972 \$108,954 \$247,232	\$1,102,363 \$681,568 \$420,794 \$6,041,703 <u>2026 - 2030</u> \$2,438,749 \$126,308 \$286,610	\$1,277,941 \$790,125 \$487,816 \$7,003,990 <u>2031 - 2035</u> \$2,827,178 \$146,425 \$332,260	\$4,901,473 \$3,004,243 \$1,897,229 \$24,546,902 <u>TOTAL</u> \$9,848,163 <i>\$545,600</i> \$1,272,933

\$9,848,163



State Transportation Building Ten Park Plaza, Suite 2150

Federal Transit Administration

(nonvoting)

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

MEMORANDUM

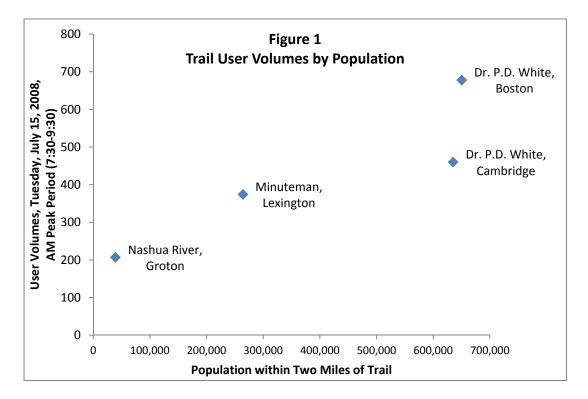
Boston, MA 02116-3968 Tel. (617) 973-7100 Fax (617) 973-8855 TTY (617) 973-7089 www.bostonmpo.org	To: From:	Transportation Planning and Programming Committee Cathy Ann Buckley	March 28, 2011
Jeffrey B. Mullan MassDOT Secretary and CEO and MPO Chairman	Re:	Comparative Estimates of Peak-Period Ridership on Proposed Multi-use Trails	l
Karl H. Quackenbush Acting Director, MPO Staff	Program informat	morandum is in response to a request from the Transportation Planni ming Committee made at its March 10, 2011, meeting. Presented he ion regarding the comparative estimated use of trails being proposed long-range plan.	ere is
The Boston Region MPO, the federally designated	Strand, a trails are <i>Massach</i> were dou of emplo	e four trails proposed for the long-range plan: Border-to-Boston, No and the Bruce Freeman and Assabet River Rail Trails. All of these pre- e components of the state's Bay State Greenway, as identified in the <i>L</i> <i>nusetts Bicycle Transportation Plan</i> . Estimates of usage of these four ne by comparing the population, number of employed residents, and byees located near the proposed trails with the comparable numbers for trails. Comparing the population static proposed trails with the comparable numbers for	oposed 2008 : trails number for
entity responsible for transportation decision-	existing proposed	trails. Counts on the existing trails were used to estimate future usag d trails.	e on the
making for the 101 cities and towns in the MPO region, is composed of:	were col would re	O's bicycle-pedestrian database was perused to find data for several lected simultaneously during a weekday peak period, as that time perflect commuter usage. On Tuesday, July 15, 2008, morning peak-pe	riod eriod
MassDOT Office of Planning and Programming City of Boston		Vere done on the Nashua River Trail, the Minuteman Commuter Bike Paul Dudley White Path in Cambridge and in Boston. The specific lo follows:	-
City of Newton		Vashua River Rail Trail, Groton, Station Avenue,	
City of Somerville		Minuteman Commuter Bikeway, Lexington, the Depot in Lexington	Center,
Town of Bedford		Dr. Paul Dudley White Path, Cambridge, near and west of Massachus	
Town of Braintree		Avenue, and	
Town of Framingham	• I	Dr. Paul Dudley White Path, Boston, near and west of Massachusetts	Avenue.
Town of Hopkinton	The wea	ther that day was sunny, with temperatures around 80°F.	
Metropolitan Area Planning Council			
Massachusetts Bay Transportation Authority Advisory Board	AM). A	indicates morning peak-period volumes of users for each trail (7:30- so included are the following for the area defined by two miles from	the trail,
Massachusetts Bay Transportation Authority		tire length, on either side (four-mile width): population, employed reloyees, those working in the area.	esidents,
MassDOT Highway Division			
Massachusetts Port Authority			
Regional Transportation Advisory Council (nonvoting)			
Federal Highway Administration (nonvoting)			

Transportation Planning and Programming Committee Comparative Estimate of Peak-Period Ridership on Proposed Trails

Figures 1, 2, and 3 indicate the peak-period volumes as a function of each of the three parameters. As can be seen, the user volumes generally correlate with all three variables. The Nashua River Rail Trail has the lowest number of residents, employed residents, and employees within two miles, and also the lowest user volumes. The Dr. Paul Dudley White Path, Boston, has the highest volumes as well as the highest number of people living and working near the facility.

Table 1 Trail User Volumes (7:30–9:30 AM), and Population, Number of Employed Residents, and Number of Employees, within Two Miles of Facility

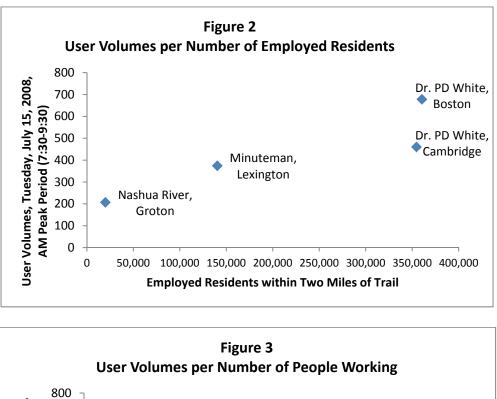
Trail	Peak Period Users	Population	Employed Residents	Employees
Nashua River				
Groton	207	39,100	19,900	13,800
Minuteman				
Lexington	374	264,100	140,300	136,700
Dr. PD White				
Cambridge	460	635,200	354,700	658,800
Dr. PD White				
Boston	678	650,400	360,600	671,300



The relationship is not linear. The population, the number of employed residents, and the number of employees along the Minuteman for example, are about an order of magnitude higher than along the Nashua River Trail, while the usage is not quite double. Likewise, the population and

Transportation Planning and Programming Committee Comparative Estimate of Peak-Period Ridership on Proposed Trails

number of employed residents along the Dr. Paul Dudley White Path are over twice those numbers for the Minuteman, and the number of employees along the Dr. Paul Dudley White Path is almost five times that number along the Minuteman. Compared to the volumes on the Minuteman, volumes on the Cambridge side of the Dr. Paul Dudley White are 25 percent higher and those on the Boston side almost twice as high.



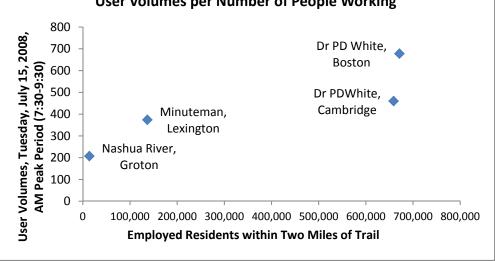


Table 2 shows the population, employed residents, and employees for the four proposed trails, for the area defined by two miles from the facility on the either side (four-mile width).

Transportation Planning and Programming Committee Comparative Estimate of Peak-Period Ridership on Proposed Trails

Usage on these proposed trails can be estimated by comparing the values above with the comparable values on the existing trails and interpolating trail usage volumes. Table 3 indicates estimates of the four trails by interpolating by population, by employed residents and by those employed within the trail's area.

and Number of Employees, within Two Miles of Facility							
Proposed Facility	Population	Employed Residents	Employees				
Border to Boston	129,200	67,100	63,000				
Northern Strand	470,600	244,100	156,100				
Bruce Freeman	57,700	26,700	27,400				
Assabet River	73,100	37,600	26,100				

Table 2
Population, Number of Employed Residents,
and Number of Employees, within Two Miles of Facility

 Table 3

 Trail Usage Estimates, AM Peak Period, Based on Population, Number of Employed

 Residents, and Number of Employees, within Two Miles of Facility

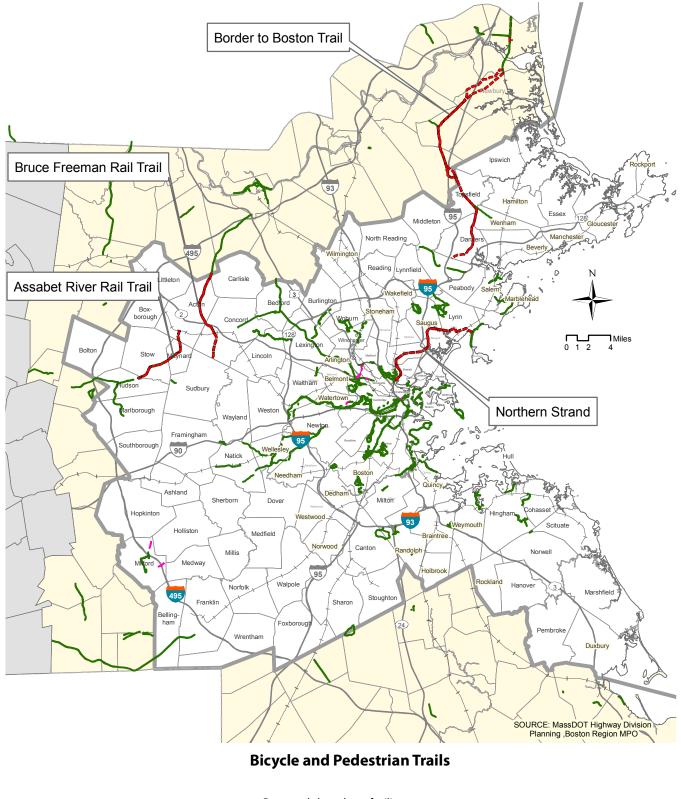
Proposed	By Employed			
Facility	By Population	Residents	By Employees	Average
Border to Boston	280	290	290	290
Northern Strand	510	500	400	470
Bruce Freeman	230	200	210	210
Assabet River	240	220	200	220

The estimates using population, employed residents, and employees yield close results for three of the trails. Only the Northern Strand estimate based on number of employees is lower than those using the other two methods. The average of the three methods for each trail is also shown in the table: 210 peak-period users for the Bruce Freeman Rail Trail, 220 for the Assabet River Rail Trail, 290 for the Border to Boston, and 470 for the Northern Strand.

These estimates ought to be viewed as very rough ones, for several reasons. First, data from only one day were used. Second, counts done at one point on a given trail were used, and volumes vary along the length of a trail. Third, these are estimates of present usage. Given an increasing awareness of such issues as health and climate change, non-motorized mode shares in the future might increase significantly.

CAB/cab

MPO Trails



- Proposed shared-use facility
- Existing shared-use
- Under construction, or construction funded