



Photo: Lawrence youth, by Groundwork Lawrence.

## Chapter 10

# Transportation Equity and Accessibility

The MVMPO's transportation planning process, including the development of this RTP, is structured in consideration of the following transportation equity definition:

"Transportation equity is a civil and human rights priority. Access to affordable and reliable transportation widens opportunity and is essential to addressing poverty,

unemployment, and other equal opportunity goals such as access to good schools and health care services. However, current transportation spending programs do not equally benefit all communities and populations. And the negative effects of some transportation decisions — such as the disruption of low-income neighborhoods — are broadly felt and have long-lasting effects. Providing equal access to transportation means providing all individuals living in the United States with an equal opportunity to succeed."<sup>1</sup>

Accordingly, this RTP has been prepared in compliance with applicable statutes and policies, including:

- Title VI of the Civil Rights Act of 1964 (Title VI), which prohibits discrimination based upon race, color, and national origin;
- Federal Executive Order 12898, which mandates incorporation of Environmental Justice (EJ) analyses in policies, programs, and activities, addressing how low-income and minority populations are affected;

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<sup>1</sup> (source: The Leadership Conference on Civil and Human Rights & The Leadership Conference Education Fund. <http://www.civilrights.org/transportation/>)

- Federal Executive Order 13166, which mandates examination of services provided and identification of any need for services to persons with limited English proficiency (LEP), and development/implementation of a system to provide services so LEP persons can have meaningful access to the MVMPO's process and products/services;
- Commonwealth Executive Order 526, which mandates that all programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for by the state shall be conducted without unlawful discrimination based on race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status (including Vietnam-era veterans), or background;
- [USDOT Requirements for MPOs](#) (Source: FHWA)
  - Enhance analytical capabilities to ensure that the long-range transportation plan complies with Title VI;
  - Identify residential, employment, and transportation patterns of low-income

and minority populations so that their needs can be identified and addressed, and the benefits and burdens of transportation investments can be fairly distributed, and

- Evaluate and, where necessary, improve public involvement processes to eliminate participation barriers and engage minority and low-income populations in transportation decision-making.

### **MVMPO Actions to Advance Regional Transportation Equity**

Since the development of the 2012 RTP, the MVMPO has expanded its Transportation Equity activities in specific ways, including:

- More extensive, focused outreach to minority and low income communities;
- Increased attendance/participation in existing meetings in the region – specifically to discuss the RTP and generally to obtain public participation in developing related efforts, i.e. Active Transportation Plan, Coordinated Plan;

- Reconstitution of the MVMPO Merrimack Valley Transportation Committee (MVTC) and creation of a new Nondiscrimination Working Group;
- Creation of a GIS transportation project database and map tool to aid RTP and TIP Title VI and Environmental Justice analyses, and
- Adopting Title VI/Nondiscrimination Program Performance Management goals:
  - More participation (# of persons interacted with)
  - Increased diversity in interaction – meetings, media use
  - More comments received during RTP 2016 development than in RTP 2012

Please refer to Table 10.7 to view a list of organizations that the MVMPO staff engaged during the development of this RTP, and to the Appendix to view an Excel spreadsheet detailing comments collected by the MVMPO staff.

The MVMPO's future Title VI/Nondiscrimination activities will continue to evolve beyond the development of this RTP pending finalization of

two major initiatives:

- Release of federal and Commonwealth transportation performance goals, objectives and measurables, and
- Development of a new transportation project review/prioritization process by the Commonwealth's Project Selection Advisory Council (PSAC) – expected by July 2015.

**Identification and Consideration of transportation impacts in minority and low-income communities.**

The staff updates its contacts database continually and consults it to identify organizations and individuals throughout the region. The staff then uses the database to release several Notices to all contacts – one at the development of the RTP and subsequent notices to advise of RTP development and actions to be taken. The staff also held an MVTC meeting at the outset of the RTP's development to stimulate members' contributions. The GIS staff mapped all of the projects recommended for inclusion in the RTP, and considered project impacts to the general area. Using the MVMPO contacts database, the staff then identified and attended a wide variety of meetings with organizations in the

project communities – including those it has established working relationships with as well as organizations that have not participated in the past. The staff attended meetings (most often regularly scheduled meetings of these groups) to introduce the RTP and stimulate discussion on transportation issues. A summary of discussions, comments, and suggestions recorded by the staff is contained in the Appendix of this RTP.

Most often, public dialogue in these communities pertains to transit service – chiefly to ask questions about existing services, i.e. how the flag system works, or if specific locations are accessible - and to recommend increased service. These concerns were particularly important to seniors. Jobs access is also a key concern. Little, if any dialogue between staff and residents in these communities pertains to highways and bridges. Improved bicycling and walking conditions are gaining some traction in the region’s public discussions on transportation - as the general public’s awareness and advocacy for bicycling and walking has increased. Staff also consulted with organization staffs working with minority- and low-income stakeholders on an effort equal to direct contact with minority and low-income persons to obtain their input. Transit and pedestrian access

to jobs, schools, and essential services are the most frequently cited needs.

### **MVMPO RTP Goals, Objectives, and Measurements Supporting Transportation Accessibility and Equity**

Based on feedback received from the public in developing this RTP, the MVMPO is prioritizing State of Good Repair, Mobility and Safety/Security as core goals relevant to Transportation Accessibility and Equity, for which it has developed the following strategies and performance measures:

- Objective 1: Prioritize transportation investments that eliminate barriers for EJ communities.
  - Performance Measure 6.1.1: Percentage of transportation funding spent in Title VI/EJ communities, and
  - Performance Measure 6.1.2: Number of transportation projects in Title VI/EJ communities in active development/design/construction.
- Objective 2: Remove barriers to participation in the MVMPO process.
  - Performance Measure 6.2: Number and quality of outreach opportunities for

MVMPO region Title VI/EJ communities

### **Minority Populations**

The MVMPO staff, using the decennial U.S. Census and the five-year American Communities Survey produced by the U.S. Census Bureau, has historically defined minority communities as municipalities with minority populations greater than the regional average minority population.

The MVMPO follows the FTA Title VI guidelines that define minority persons to include the following:

- 1) American Indian and Alaskan Native;
- 2) Asian;
- 3) Black or African-American;
- 4) Native Hawaiian and Other Pacific Islander, and
- 5) Persons of Hispanic or Latino Origin.

### **Minority Populations in the MVMPO Region**

Using data from the 2006-2012 American Community Survey, the region's total minority population in 2010 was estimated at 94,364 and the proportion of minorities residing in the Valley was 28.66%. At that time, there were 25 Census tracts in the MVMPO region with minority populations above 28.66%; these tracts were

located in Haverhill, Lawrence, Methuen, and North Andover.

Using data from the 2009-2013 ACS, the region's estimated minority population was 29.5%.

Tables 10.1-10.3 show the MVMPO communities' population distribution by race and Hispanic/Latino Origin from the 2010 Census, the 2009-2013 American Community Survey (ACS), and a comparison of distribution by community between 2010 and the 2009-2013 ACS.



Photo: Two people riding a bike on the Spicket River Greenway in Lawrence, MA, by Groundwork Lawrence.



**Table 10.1: MVMPO Communities’ Total Populations, Populations by Race, and Populations by and Hispanic/Latino Origin, 2010 (U.S. Census) (number and percentage)**

<b>Community</b>	<b>All</b>	<b>White</b>	<b>Black/ African American</b>	<b>Asian</b>	<b>Native Hawaiian or Pac. Isl.</b>	<b>American Indian/ Alaskan Native</b>	<b>Other Race</b>	<b>Hispanic or Latino Origin</b>
Amesbury	16,283	15,688 (96.3)	120 (0.7)	106 (0.7)	7 (0.0)	37 (0.2)	92 (0.6)	310 (1.9)
Andover	33,201	28,360 (85.4)	391 (1.2)	3,438 (10.4)	11 (0.0)	24 (0.1)	417 (1.3)	1,196 (3.6)
Boxford	7,965	7,681 (96.4)	41 (0.5)	123 (1.5)	0 (0)	5 (0.1)	21 (0.3)	145 (1.8)
Georgetown	8,183	7,924 (96.9)	38 (0.5)	77 (0.9)	0 (0)	14 (0.2)	28 (0.3)	143 (1.7)
Groveland	6,459	6,290 (97.4)	31(0.5)	59 (0.9)	2 (0.0)	5 (0.1)	17 (0.3)	85 (1.3)
Haverhill	60,879	52,381 (86.0)	2,042 (4.5)	1,298 (1.1)	17 (0.0)	176 (0.3)	3,687 (6.1)	8,831(14.5)
Lawrence	76,377	32,704 (42.8)	5,988 (7.6)	1,895 (2.5)	57 (0.1)	957 (1.3)	30,018 (39.30)	56,363 (73.8)
Merrimac	6,338	6,149 (97.0)	40 (0.6)	41 (0.6)	0 (0)	10 (0.2)	21 (0.3)	115 (1.8)
Methuen	47,255	38,762 (82.0)	1,476 (3.1)	1,767 (3.7)	10 (0.0)	160 (0.3)	3,908 (8.3)	8,531(18.1)
Newbury	6,666	6,523 (97.9)	17 (0.3)	44 (0.7)	0 (0)	10 (0.2)	14 (0.2)	67 (1.0)
Newburyport	17,416	16,788 (96.4)	98 (0.6)	195 (1.1)	1 (0.0)	24 (0.1)	93 (0.5)	291 (1.7)
North Andover	28,352	25,144 (88.7)	506 (1.8)	1,787 (6.3)	4 (0.0)	99 (0.3)	560 (2.0)	1,398 (4.9)
Rowley	5,856	5,705 (97.4)	17 (0.3)	60 (1.0)	4 (0.1)	1 (0.0)	30 (0.5)	59 (1.0)
Salisbury	8,283	7,978 (96.3)	76 (0.9)	98 (1.2)	7 (0.1)	61 (0.7)	47 (0.6)	128 (1.5)
West Newbury	4,235	4,127 (97.4)	6 (0.1)	44 (1.00)	0 (0)	4 (0.1)	6 (0.1)	66 (1.6)
<b>Totals</b>	<b>333,748</b>	<b>273,685 (82.0)</b>	<b>10,649 (3.2)</b>	<b>10,722 (3.2)</b>	<b>1,576 (0.4)</b>	<b>1,474 (0.4)</b>	<b>38,832 (11.6)</b>	<b>77,728 (23.3)</b>

**Table 10.2: MVMPO Communities' Total Populations, Populations by Race, and Populations by and Hispanic/Latino Origin, 2009-2013 American Community Survey (number and percentage)**

<b>Community</b>	<b>All</b>	<b>White</b>	<b>Black/African American</b>	<b>Asian</b>	<b>Native Hawaiian / Pac. Isl.</b>	<b>American Indian/ Alaskan Native</b>	<b>Other Race</b>	<b>Hispanic or Latino</b>
Amesbury	16,429	16,125 (98.1)	125 (0.8)	291 (1.8)	0 (0)	36 (0.2)	101 (0.6)	223 (1.4)
Andover	33,746	29,230 (86.6)	642 (1.9)	3,692 (10.7)	39 (0.1)	62 (0.2)	373 (1.1)	1,367 (4.1)
Boxford	8,040	7,715 (96.0)	0 (0)	353 (4.4)	0 (0)	13 (0.2)	31 (.4)	115 (1.4)
Georgetown	8,295	8,218 (99.1)	55 (0.7)	174 (2.1)	6	17 (0.2)	186 (2.2)	89 (1.1)
Groveland	6,675	6,496 (97.3)	8 (0.1)	171 (2.6)	0	0 (0)	0 (0)	100 (1.5)
Haverhill	61,335	52,640 (85.8)	2,367 (3.9)	938 (1.5)	65 (0.1)	389 (0.6)	6,214 (10.1)	10,413 (17.0)
Lawrence	76,820	30,477 (39.7)	6,775 (8.8)	2,629 (3.4)	48 (0.1)	589 (0.8)	37,651 (49.0)	57,380 (74.7)
Merrimac	6,440	6,421 (99.7)	35 (0.5)	0 (0)	0 (0)	0 (0)	0 (0)	67 (1.0)
Methuen	47,690	38,488 (80.7)	1,783 (3.7)	2,109 (4.7)	49 (0.1)	133 (0.3)	5,493 (11.5)	8,323 (17.5)
Newbury	6,732	6,631 (98.5)	61 (0.9)	30 (0.4)	0 (0)	40 (0.6)	10 (0.1)	41 (0.6)
Newburyport	17,569	17,132 (97.5)	128 (0.7)	205 (1.2)	0 (0)	20 (0.1)	241 (1.4)	704 (4.0)
North Andover	28,677	25,439 (88.7)	641 (2.2)	1,956 (6.8)	0 (0)	107 (0.4)	873 (3.0)	1,479 (5.2)
Rowley	5,914	5,804 (98.1)	84 (1.4)	26 (0.4)	0	0	0 (0)	75 (1.3)
Salisbury	8,396	8,183 (97.5)	58 (0.7)	141 (1.7)	0 (0)	74 (0.9)	25 (0.3)	70 (0.8)
West Newbury	4,305	4,303 (99.9)	2 (0.1)	0	0	0	0 (0)	169 (3.9)
<b>Totals</b>	<b>337,063 (100.0)</b>	<b>263,302 (78.1)</b>	<b>12,764 (3.8)</b>	<b>12,715 (3.8)</b>	<b>207 (.06)</b>	<b>1,480 (0.4)</b>	<b>51,198 (15.2)</b>	<b>80,615 (23.9)</b>

**Table 10.3: Number Change of MVMPO Communities’ Total Populations, Populations by Race, and Populations by and Hispanic/Latino Origin between 2010 Census and 2009-2013 American Community Survey (ACS)**

<b>Community</b>	<b>All</b>	<b>White</b>	<b>Black/African American</b>	<b>Asian</b>	<b>Native Hawaiian or Pac. Isl.</b>	<b>American Indian/Alaskan Native</b>	<b>Other Race</b>	<b>Hispanic/Latino</b>
Amesbury	146	437	5	185	-42	-1	9	-209
Andover	545	870	251	254	4	38	-44	-823
Boxford	75	34	41	730	-5	8	10	-114
Georgetown	112	294	17	97	-8	3	158	43
Groveland	216	206	23	112	-7	-5	-17	-85
Haverhill	456	259	325	-50	-128	213	2,527	5,383
Lawrence	443	-2227	787	734	-956	368	7,633	-18,712
Merrimac	102	272	-5	-41	-10	-10	-21	-115
Methuen	435	-274	307	342	-121	-27	1,585	-3,038
Newbury	66	108	44	-14	-10	30	-4	-57
Newburyport	153	344	30	10	-25	-4	148	-50
North Andover	325	295	135	169	-32	8	415	-525
Rowley	58	99	67	34	-5	-1	-22	-59
Salisbury	113	205	20	43	-20	13	-5	-103
West Newbury	70	176	-4	-44	-4	-4	-6	-66

The MVRTA conducts periodic rider surveys to best understand the needs of its customers. As of 2012, the MVRTA found that:

#### Transportation Facts

- Almost 50% of MVRTA riders self-identified as Hispanic or Latino.
- Approximately 56% of MVRTA riders had annual incomes that were less than \$22,000.
- 56% of the MVRTA's fixed route bus services passed through low-income areas
- 36% of the MVRTA's fixed-route bus services passed through minority areas.

As of 2015,

- 38% of the MVRTA's bus operators and administrative staff speak both English and Spanish.

#### **Languages Spoken and Language Proficiency**

The MVMPO staff tracks languages spoken and language proficiency using decennial Census and ACS Five-Year Estimates, plus information from organizations serving regional constituents who speak languages other than English. For this RTP, the MVMPO staff has also made use of the newly developed MassDOT Title VI GIS tool showing languages spoken and transportation project

information by Census Tract. Staff emphasized outreach to "[Linguistically Isolated Households](#)" as defined by the U.S. Census, which are:

"a household in which no person 14 years old and over speaks only English, and no person 14 years old and over who speaks a language other than English speaks English "very well". All the members of a linguistically isolated household are tabulated as linguistically isolated, including members under 14 years old who may speak only English."<sup>2</sup>

The 2010 U.S. Census identified 38,950 limited English-proficient (LEP) persons in the MVMPO region, equivalent to 12.46% of all residents age five years or older and The percentage of LEP persons in the region grew 7.6% between the 2000 and 2010 Censuses, which is significant given the region's relatively modest(4.6%) total population growth between 2000 and 2010.

The U.S. Census reports that Spanish remains the language most frequently spoken by residents of the MVMPO region other than English, and is the only language other than English that is spoken in every MVMPO community. Most of the region's

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<sup>2</sup> KidsCount Data Center, [CHILDREN LIVING IN LINGUISTICALLY ISOLATED HOUSEHOLDS BY FAMILY NATIVITY](#) 15 JUNE 2015

Spanish-speaking residents and those Spanish-speaking residents who speak English ‘less than very well’ live in the cities of Haverhill, Lawrence, and Methuen. Table 10.4 shows 2009-2013 ACS data for populations speaking Spanish and those who speak English less than very well in the MVMPO region:

**Table 10.4: MVMPO Spanish-speaking populations and persons who speak English less than ‘very well’ (Source: 2009-2013 ACS)**

<b>Community</b>	<b>Populations Speaking Spanish</b>	<b># (%) who speak English ‘less than very well’</b>
Haverhill	7,900	2,648 (33.5)
Lawrence	45,644	24,833 (54.4)
Methuen	6,503	2,274 (35.0)

**Language Assistance**

The MVMPO staff has traditionally evaluated its need to provide language assistance by comparing Census tract-level, community-level, and region-wide level language data. The staff expanded its analysis after developing the 2012 RTP to include Census block group-level data, and going forward will also be utilizing block-level data when available. Staff also considers information on languages spoken in the region provided by constituents and organizations whose members

and/or constituents speak languages other than English.

As previously noted, Spanish is the most frequently spoken language other than English in the MVMPO region. The decennial Census and the 2009-2013 American Community Survey (ACS) indicate that there are many languages other than Spanish spoken in the MVMPO region. Chinese- and Vietnamese-speaking households exist in nine and six MVMPO communities, respectively. Vietnamese populations are highest in Methuen, Lawrence, and Haverhill while Chinese populations are highest in Andover, North Andover, and Haverhill. A few languages (i.e. Chinese, French, Italian, and Portuguese) are spoken in more than half of all MVMPO communities. Most of the region’s populations of Indian origin speak Hindi and Gujarati; both linguistic groups cluster in Andover, with smaller clusters of Hindi speakers in Lawrence and Gujarati speakers in Methuen. Accordingly, the staff reached out to a number of different organizations across the region whose members and/or constituents are likely to speak these languages. For example, the MVMPO staff contacted the Indian Association of the Merrimack Valley to inform members of the MVMPO’s activities and offer engagement opportunities.

The MVMPO staff provides written translations of

its Vital Documents as defined in its Public Participation Plan (PPP). The MVMPO offers oral and written translation of other MVMPO documents upon request. Particular to this RTP, the staff posted Notices and arranged for on-site translation services in Spanish at several RTP information sessions and in Vietnamese at a Lawrence-area RTP information session.

For example, the U.S. Census estimates (ACS 2009-2013) indicate that there are 1,344 persons in the MVMPO region who speak Chinese and speak English 'less than very well'. Accordingly, the staff is refining its analysis through interaction with a regional organization serving Asian populations to understand what dialects are most spoken in order to identify additional potential language assistance needs.

The MVMPO staff provided RTP information in both English and Spanish; offered language assistance at each RTP outreach session, and in addition conducted a session with translation services advertised and offered in Vietnamese. Discussions with staff at the Asian Center of the Merrimack Valley indicated that Vietnamese-speaking populations in the region are growing. In addition, the MVMPO staff promoted the MVRTA's bi-lingual capabilities in conversations with constituents. Notably, 38% of the MVRTA's

bus/van operators and professional/administrative staff speak both English and Spanish.

Going forward, the MVMPO staff expects to continue preparing its Vital Documents and other materials, i.e. RTP Fact Sheets, in Spanish. As of FFY 2016, it will include Notices of meetings, document releases, and other activities with MassDOT's language assistance request clause in the following languages: Arabic, Chinese (simple and traditional); English, French, French Creole, Italian, Mon-Khmer – Cambodian, Russian, Spanish, and Vietnamese. It expects at a minimum to continue working with local groups to deliver its program to persons who speak other languages and may need language assistance.

The MVPC website Google Translate feature remains available for persons who wish to view the RTP or other MVMPO documents.



Photo: Community meeting for study on the Acre in Haverhill.

### **Low-Income Households Indicators/Thresholds**

The MVMPO is using 2010 Census and 2006-2010 American Community Survey (ACS) data to define Environmental Justice (EJ) Communities as those communities in which one or more Census-based unit(s) have the following socioeconomic characteristics:

- Household incomes at or less than 80% of area median (household) income (AMI). The MVMPO region's average AMI in 2010 was \$74,084, and 80% AMI = \$56,108.

There were 56,108 households with incomes at or below 80% AMI in the region in 2010, or 45.0% of all households.

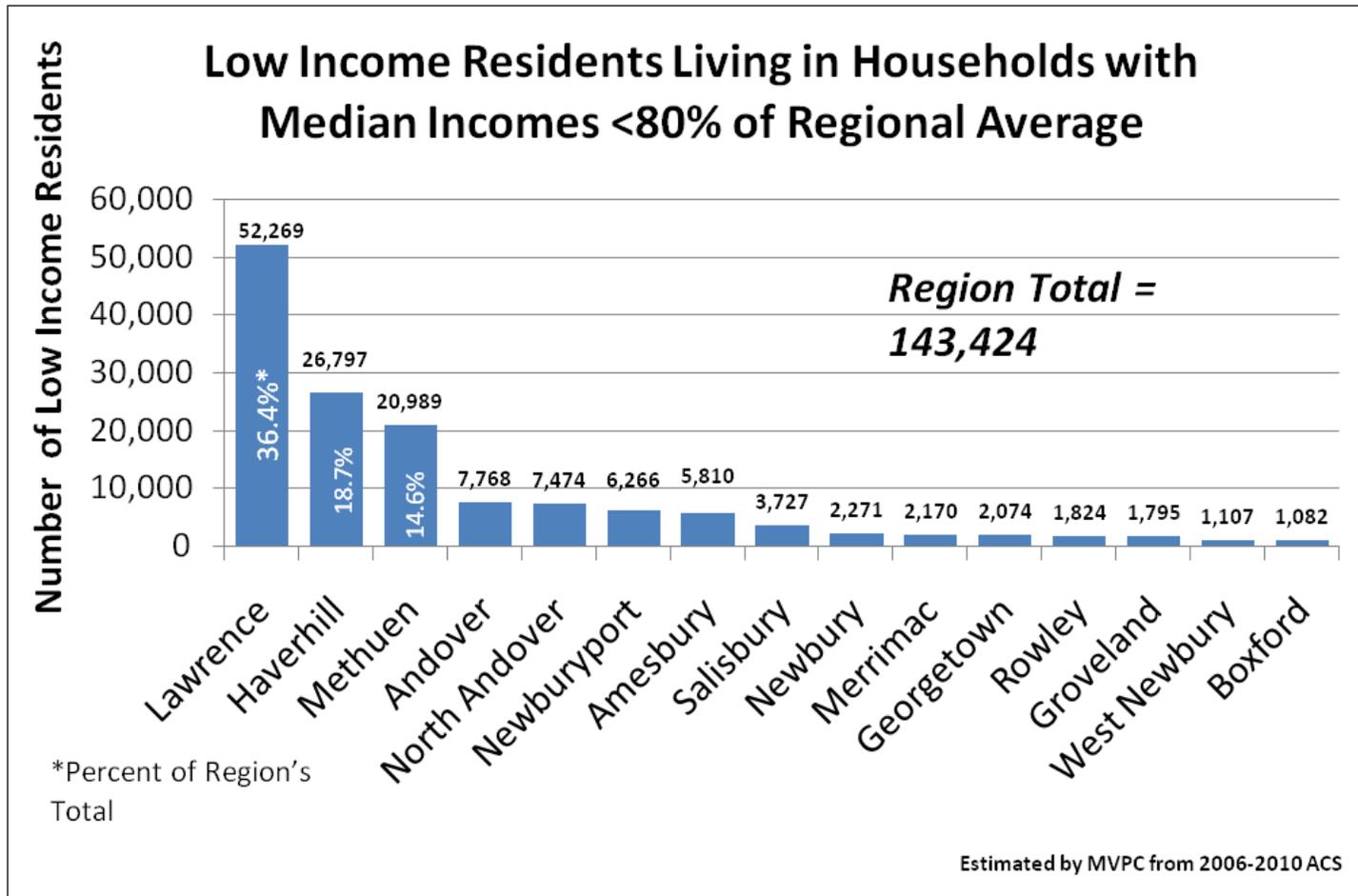
Figure 10.1 on the following page shows a distribution of the region's low-income residents by community (Source: ACS 2006-2010 estimates):

As shown below, low-income populations were present in every MVMPO community. However, 69.7 percent of the region's low-income residents lived in Haverhill, Lawrence and Methuen. The importance of public transportation to the region's low-income households is well documented. A 2012 MVRTA rider survey showed that:

- Approximately 56% of MVRTA riders had annual incomes less than \$22,000, and
- 56% of the MVRTA's bus routes serve low-income areas

Accordingly, the MVMPO has consistently worked with the MBTA and the MVRTA to make transportation service and capital improvements benefiting low-income populations.

Figure 10.1



**Households and Vehicle Availability**

In the Merrimack Valley it is well understood that vehicle availability is a potential employment access issue. The MVMPO staff reviewed ACS data for household and vehicle ownership in Lawrence and Haverhill and compared that data with household vehicle availability in other New England communities with significant Title VI and EJ populations, and for the U.S. as a whole. The results are shown in Table 10.5.

While the number of households in Haverhill without a vehicle is less than 1% higher than the U.S. average, it is below all other MA cities shown. The number of households in Lawrence without a vehicle (26%) is significantly higher than both the U.S. average and any of the MA cities listed.

However, the cities of Haverhill and Lawrence are the most intensively transit-served communities in the MVMPO region. It can be inferred that Haverhill and Lawrence are locations of choice for households who cannot afford to own a vehicle. It is known that low-income residents often arrange with family, neighbors, and friends to share rides to/from work.

**Table 10.5: Household vehicle ownership in U.S. and select New England Communities**

(source: 2010-2013 ACS, from Governing, 5/7/15)

Location	Vehicles per Household	% Households with no vehicle
United States	1.8	9.1
Lawrence	1.1	26.0
Haverhill	1.6	10.0
Brockton	1.4	15.8
Fall River	1.3	19.7
Framingham	1.6	10.4
Lowell	1.4	16.0
Lynn	1.3	20.9
Malden	1.3	21.6
New Bedford	1.3	19.7
Revere	1.3	20.2
Springfield	1.2	22.3
Worcester	1.4	16.6
Hartford, CT	0.9	35.7

### **Transportation Project Development and Regional Equity History - Disparate Impact Analysis: Highway Projects**

The MVMPO staff extracted findings from MassDOT's above referenced [Federal-Aid Highway Program Project Distribution and Title VI Populations in Massachusetts](#) (July 2014). MassDOT based its highway program analysis upon project location and spending data over 2007-2012). It defined Title VI communities as those municipalities and/or Census block groups with minority populations greater than 23.87% of that community's total population (a threshold that is approximately 1% higher) and only marginally less inclusive than the 22.8% threshold established by the MVMPO in 2010.

#### Chapter 90 Funding

MassDOT analyzed whether there was a correlation between M.G.L. Chapter 90 fund allocations and communities' minority or non-minority areas in funding 25% design costs for projects. MassDOT did not find a causal link between the presence of statistically significant protected populations in a community and that community's ability to bring projects to 25% design. However, MassDOT did find evidence of a positive correlation between the level of Chapter 90 funds provided to a community, the number of

active projects, and the expenditures per project. Increases in Chapter 90 funds to a community tended to generate an increase in the number of projects and the size of their individual budgets.

Importantly, MassDOT did not find patterns between the locations of minority (protected) populations and the distribution of project funds. Communities with higher minority concentrations were within the same threshold for project expenditures as those communities with lower minority concentrations. MassDOT also did not find a correlation between the 25% municipal design requirement, household income, and limited English proficiency.

#### Per Capita Spending

MassDOT's analysis also showed that per capita transportation spending by community was highest in the most rural communities with populations less than 1,400. Per capita project expenditures in urban communities were typically lower than in rural areas - attributed to population density, not the presence of minorities. Further, areas with fewer, more expensive projects (compared to areas with more, less expensive projects) had the highest per capita project costs. Among the Massachusetts communities surveyed, per capita transportation project spending in

Groveland during the five-year look back period was more than two times higher than in other 'similar, smaller-populated municipalities'. This statistic shows the impact of the \$49.7 million Bates Bridge Reconstruction Project (Groveland-Haverhill). It also shows that the per capita expenditure measure can misrepresent the assignment of benefits, particularly when a project involves multiple communities or is regionally significant. Table 10.6 shows FHWA-funded project spending by MVMPO community, 2007-2012.

The MVMPO's goal is to create a finer-grained analysis using comparisons already developed by MassDOT. This strategy retains the useful information developed at the statewide level while offering a more detailed socioeconomic analysis for regional planning purposes. For example, MassDOT and the MVMPO use different thresholds for low-income and minority populations. Also, MassDOT's statewide analysis is focused on the number and percentage of the entire community, not upon block groups. As a result, MassDOT classifies communities like Haverhill (largest MA communities) as non-minority; however, the MVMPO defines portions of the community as minority or low-income at the block group level. For communities of 30,000 – 50,000 population,

Methuen was classified as a minority community, while Andover is not. However, there are block groups in Methuen that meet the MVMPO's threshold for minority populations, and other Methuen block groups that do not.

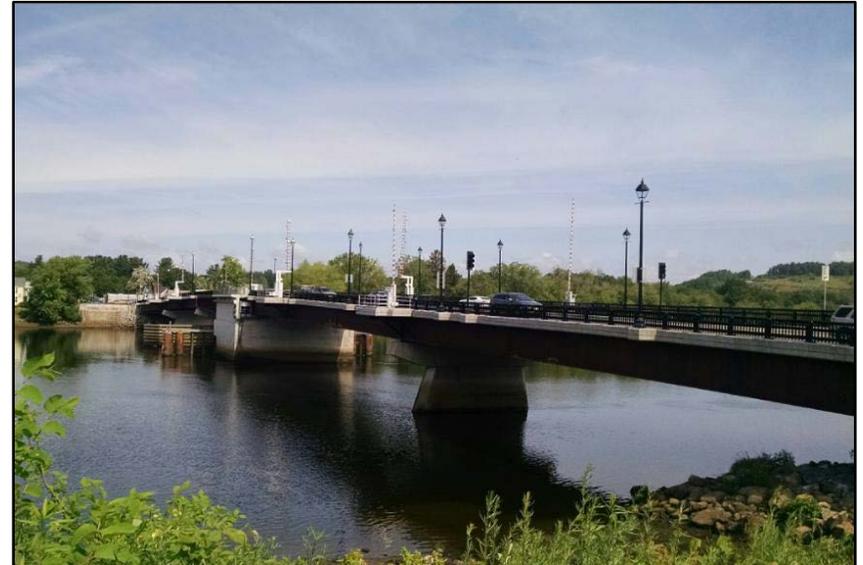


Photo: New Bates Bridge connecting Haverhill and Groveland.

**Table 10.6: FHWA spending Per Capita in MVMPO Communities**  
(source: MassDOT FHWA Title VI Analysis July 2014)

<b>Community</b>	<b>2010 Census Population</b>	<b>Minority Population (# and %)</b>	<b>Projects per community</b>	<b>Project Expenditures</b>	<b>\$ per capita</b>
Amesbury	16,283	804 (4.9)	13	\$12,948,225	\$795
Andover	33,201	5,503 (16.6)	25	\$15,845,720	\$477
Boxford	7,965	395 (4.9)	2	\$1,761,143	\$221
Georgetown	8,183	351 (4.3)	3	\$1,772,835	\$217
Groveland	6,459	229 (3.5)	1	\$33,131,246	\$5,129
Haverhill	60,879	12,485 (20.5)	16	\$43,470,193	\$714
Lawrence	76,377	60,740 (79.5)	12	\$3,780,834	\$70
Merrimac	6,338	271 (4.3)	8	\$2,844,070	\$449
Methuen	47,255	11,868 (25.1)	14	\$8,284,486	\$175
Newbury	6,666	198 (3.0)	4	\$2,329,109	\$349
Newburyport	17,416	842 (4.8)	13	\$9,208,246	\$529
North Andover	28,352	3,997 (14.0)	7	\$2,242,743	\$79
Rowley	5,856	196 (3.3)	5	\$400,602	\$68
Salisbury	8,283	399 (4.8)	10	\$8,356,311	\$1,009
West Newbury	4,235	156 (3.7)	4	\$7,289,348	\$1,721
<b>TOTAL</b>	<b>333,748</b>	<b>98,334</b>	<b>137</b>	<b>\$153,665,111</b>	<b>\$460.42</b>



Photo: Clipper City Rail Trail Phase I, by G. Vining/Essex Heritage

- **CPA Funding**
- MassDOT's analysis of roadway spending did not measure the effect of local Community Preservation Act (CPA) funds on the development of transportation projects to the 25% design level. Seven MVMPO communities participate in the CPA program and the availability of CPA funds has made a difference in their abilities to develop transportation projects.
- To date, the Commonwealth has approved use of the following CPA funds for transportation

projects:

- Boxford: \$84,000 as a local match toward the Border to Boston/North Recreational Trail, and built a walking path along one of the main roads in Boxford's East Village (Georgetown Road) as a 'test path' for development of a future in-town path network;
- Georgetown: \$30,000 (2004) Border to Boston local match toward MassDOT design;
- Groveland: \$500,000 for plan development, segments of its Community Trail project;
- Newburyport Clipper City Rail Trail:
  - Phase 1, 2008: \$10,000 leveraging \$25,000 in private funds for combined \$35,000, ROW amenities i.e. benches, signage, artwork;
  - Phase II, 2010 (\$60,000): survey, design and permitting costs;
  - Phase II, 2010 (\$18,000) for final design costs for bridge and excavation work and public safety corrections;
  - Phase II, \$22,000 appropriation for legal services and survey work required in

negotiating agreements with some landowners along the right-of-way, and

- o Phase II, \$45,000 (2011) and \$53,000 (2011) as local match for MassDOT design.
- North Andover: Machine Shop Village - Signage and Streetscape Refurbishment (\$95,000), and
- West Newbury: Indian River Bridge/Boardwalk - access to open space via a bridge over the Indian River and erect a boardwalk at Coffin St. trail to connect "Riverbend West" trails, \$40,100 (2013).

The end purpose of including this discussion in the 2016 RTP is to demonstrate that there are other transportation funding sources that are having a impact on regional transportation equity, and that the MVMPO staff will continue to monitor the levels and uses of these funds throughout the RTP's effective period.

**Transportation Project Development and Regional Equity History - Analysis of Disparate Impact for FTA-funded projects**

MassDOT applied FTA Title VI guidelines defining Disparate Impact

([https://www.massdot.state.ma.us/Portals/o/docs/CivilRights/TitleVI/FTA/0052\\_Chapter10.pdf](https://www.massdot.state.ma.us/Portals/o/docs/CivilRights/TitleVI/FTA/0052_Chapter10.pdf)) as

an impact that disproportionately affected members of a group identified by race, color, or national origin often resulting from what might appear to be a neutral policy or practice. MassDOT used a standard "20% below" threshold for the criterion of defining where a disparate impact may occur. Specifically, transit service provided to a subject population and area must be less than 80% of the larger subject population and area being analyzed to be considered as a potentially significant – and potentially problematic – difference in service provision. In places where this criterion was exceeded in the initial analysis (falling appreciably below the threshold), other factors then needed to be examined to determine if a disparate impact indeed occurred.

Data for the MVMPO communities in which one or more transit projects were funded during 2011-2013 is shown in Table 10.7. The table also displays each municipality's total population, total Title VI-defined minority population, and its "20% below" threshold minority population. MassDOT determined that no evidence of disparate impact was present when:

- A municipality had no statistics in the three right-most columns, which meant only that no transit projects or services were funded

there *during the last three years* (and no disparate impact);

- The percentage differential between a municipality's minority population served and threshold minority percentage for the entire municipality was negative, or
- The percentage differential was considered insignificant (less than five points).

MassDOT considered cases where the differential equaled or exceeded five percentage points a significant difference and examined each situation to see if there were other contributing factors.

### **MVMPO Transportation Planning Studies and Project Spending**

In March 2014 the MVMPO staff calculated the following Transportation Equity-related statistics for the region:

- Since the 2007 RTP was adopted, the MVMPO has programmed 40% of all FHWA and FTA funding spent in the region for projects in Haverhill and Lawrence, and
- in FFYs 2010-2014 the MVMPO programmed 51% of all funds used for traffic studies to support studies in the region's low-income areas.



Photo: The site of a Road Safety Audit that was conducted at the Water/Canal/Rt. 28 intersection in Lawrence.

**Table 10.5: MVMPO Minority Populations By Community and Percentage of that Community’s Population Living Within ¼ Mile of a Transit Project** Data: [MassDOT, June 2014](#)

<b>Municipality</b>	<b>2010 U.S. Census Population</b>	<b>Minority (including Hispanic) Population</b>	<b>Minority Population Percentage</b>	<b>"20% Below" Threshold</b>	<b>Average % Minority Pop. of all block groups within ¼ mi Transit Project Buffer</b>	<b>Percentage Δ: Buffer area vs. Threshold</b>
Amesbury	16,283	804	4.9	4.0	4.6	0.6
Andover	33,201	5,503	16.6	13.3	17.3	4.0
Boxford	7,965	395	5.0	n/a	n/a	n/a
Georgetown	8,183	351	4.3	n/a	n/a	n/a
Groveland	6,459	229	3.5	2.8	5.8	2.9
Haverhill	60,879	12,485	20.5	16.4	19.8	3.4
Lawrence	76,377	60,740	79.5	63.6	71.8	8.2
Merrimac	6,338	271	4.3	3.4	3.9	0.5
Methuen	47,255	11,868	25.1	20.1	23.1	3.0
Newbury	6,666	198	3.0	2.4	5.8	3.5
Newburyport	17,416	842	4.8	3.9	5.6	1.8
North Andover	28,352	3,997	14.1	11.3	14.8	3.5
Rowley	5,856	196	3.3	2.7	0.8	-1.9
Salisbury	8,283	399	4.8	3.9	7.0	3.2
West Newbury	4,235	156	3.7	4,235	156	3.7

Note: "20% below" threshold - indicates where a disparate impact may occur. Transit service provided to a subject population and area must be less than 80% of the larger subject population and area being analyzed to be considered as a potentially significant difference in service provision.

## Projected MVMPO Region Transportation Equity Trends

The MVMPO forecasts the following regional socioeconomic trends will occur during this RTP's effective period:

- Population growth will be modest and employment will remain at current levels;
- Median age and number of persons 65+ will continue to rise;
- Ethnic and racial diversity will increase;
- Household size will continue to decline;
- Household income growth will increase, but likely won't outpace inflation for many low- and middle-income households;
- Development growth will occur in some of the region's urbanized areas, and will decline in the region's more suburban and rural areas;
- Poverty and dependence upon social services will continue to rise in some, but not all, suburban and rural communities in the region, and
- Language assistance needs will increase as target groups become more numerous. Using the 2010 Census and 2009-2013 ACS



Photo: Reconstruction of this Main Street, Haverhill intersection is on the TIP. It provides an important connection to the local grocery store for Haverhill's Acre neighborhood.

- estimates, the staff anticipates growth in populations who will speak another language than English **and** speak English less than very well as follows:
  - Chinese: Amesbury, Andover, North Andover
  - Spanish: Haverhill, Lawrence, Methuen, Newburyport, North Andover, Salisbury
  - Vietnamese: Haverhill, Lawrence and Methuen

The following concurrent transportation trends in the region are projected:

- Increased demand for public transportation, including special transportation services as the population ages;
- Increased emphasis upon state of good repair;
- Capacity expansions will require creative modifications to *existing* infrastructure;
- Increased truck-based freight movements to, within and through the region;
- Increased number of trips, particularly in suburb-to-suburb travel, and
- Slower growth in traditional suburb-to-city commuting.

### **2016 RTP Projected Transportation Project Spending and Transportation Equity**

Table 10.8 provides a community-by-community comparison of the number of roadway and bridge projects appearing the FFY 2016 MVMPO Regional Transportation Plan.

#### ***Objective 1: Prioritize Transportation Planning and Investments That Eliminate Barriers for Environmental Justice (EJ) Communities.***

19 of the **54 (35.2%)** of all projects included in the 2016 RTP are located in Haverhill, Lawrence and Methuen, constituting an investment of **\$248**

million investment or **53%** of all transportation spending during the RTP effective period.

#### ***Objective 2: Remove barriers to participation in the MVMPO process***

Performance Measure: number and quality of outreach opportunities for MVMPO region Title VI/EJ communities. During the development of this RTP, the MVMPO staff removed significant barriers to participation by attending scheduled meetings with a wide variety of groups and individuals and working in brief RTP presentations/ discussions, in addition to hosting three RTP-specific sessions at various locations as shown in Table 10.9.

**Table 10.6: 2016 RTP Distribution of Projects in MVMPO Communities**

<b>Community</b>	<b>Projects included in RTP</b>	
	<b>No.</b>	<b>Amount</b>
Amesbury	6	\$18,831,169
Andover	6	\$89,150,462
Boxford	3	\$4,513,755
Georgetown	3	\$16,941,406
Groveland	3	\$8,853,758
Haverhill	8	\$159,282,296
Lawrence	6	\$55,448,107
Merrimac	1	\$2,390,264
Methuen	5	\$33,392,230
Newbury	1	\$2,641,697
Newburyport	3	\$10,486,972
North Andover	4	\$28,620,990
Rowley	2	\$17,669,958
Salisbury	3	\$17,358,685
West Newbury	0	\$0
<b>Totals</b>	<b>54</b>	<b>\$465,581,750</b>

**Table 10.9: RTP Public Outreach Opportunities (updated 6/16/15)**

<b>Regional Group or Organization</b>	<b>Date Met</b>	<b>Title VI/EJ Constituents Present?</b>
MVPC Region Planning Directors	1/8 & 5/12, 2015	
Merrimack Valley Transportation Committee (MVTC)	1/14/2015	Yes
Legislative Briefing Session	1/26/2015	
MVPC DPW Directors	3/4 & 4/1, 2015	
Community Action, Inc.	4/3/2015	Yes
Merrimack Valley Regional Coordinating Council	4/9 & 5/14, 2015	Yes
MVPC Mayors and Managers	4/13/2015	
Merrimack Valley Chapter of the NAACP	4/14/2015	Yes
MVPC Commissioners	4/16/2015	
Merrimack Valley Workforce Investment Board	4/28/2015	Yes
General public listening session North Andover	5/12/2015	Yes
General public listening session Haverhill	5/19/2015	
Community Health Network Area (CHNA)	5/20/2015	Yes
Greater Newburyport Association of Realtors (GNAR)	5/21/2015	
General public listening session, Salisbury Town Hall	6/1/2015	
<b>Community-Based Organizations and Events</b>	<b>Date Met</b>	<b>Title VI/EJ Constituents Present?</b>
Methuen Arlington Neighborhood (MAN), Inc.	3/10/2015	Yes
Newburyport Traffic and Safety Committee	3/12/2015	
Lawrence Mayor's Health Task Force	3/24/2015	Yes
Lawrence Community Development, (neighborhood orgs.)	3/26/2015	Yes
Newburyport Local Poverty Matters Discussion Group	4/1/2015	Yes
City of Lawrence	4/8/2015	Yes
ESL Program - City of Haverhill	4/10/2015	Yes
Lawrence Council on Aging (Spanish and English)	5/21/2015	Yes
Lawrence Partnership	TBD	
Lawrence Council on Aging (Vietnamese)	6/19/2015	Yes
Council on Aging Directors	6/10/2015	Yes
Greater Lawrence Community Action Council	6/3/2015	Yes
Merrimack Valley Area Health Education Center	TBD	

### **Benefits and Burdens Analysis**

Almost all of the projects included in the 2016 RTP Universe of Projects involve repair or reconstruction of existing transportation assets to maintain or restore those facilities to a State of Good Repair.

Accordingly, the region's protected populations (and the public at large) will benefit from these projects.

As shown in Table 10.10, almost all of the projects that are 'new' are public transit, bicycling, and walking projects. Most of the bicycling and walking projects utilize existing rights-of-ways, and transform those rights-of-way to provide greater public benefit than at present. Such projects also introduce maintenance and surveillance that benefit abutting residents; residents within ½ mile, and the general public. Individually and collectively, these projects are expected to provide significant benefits to all of the region's residents, and in particular will support lower-cost transportation modes that are very important for households with limited incomes.

Some burdens will be experienced with all of the projects during each project's construction phase. Typical burdens will involve generation of noise and construction vehicle traffic.

### **Conclusions**

The MVMPO 2016 RTP region-wide Environmental Justice Analysis indicates that it (along with State

and Federal Transit funding) does not have a disparate impact on the identified EJ communities.

Regionally, the amount of benefit within low-income and minority populations was proportional to non-EJ Communities, if not higher, with better access to frequent transit service, and fewer households within 500' of major transportation facilities in the Plan compared with historical averages.

Furthermore, the projects included in the Plan are intended to reduce congestion and vehicle hours of delay for all users of the transportation system while increasing the amount of funding available for alternative modes of transportation including transit, bicycling and walking – which benefit low-income and minority populations to a greater degree.

A financial analysis of expenditures by mode share for low-income populations and transit expenditures by minority populations revealed that while roadway expenditures slightly favor non-low-income populations, transit and bicycle/pedestrian expenditures generate an overall benefit for low-income and minority populations.

**Table 10.8: RTP Universe of ‘New’ Transportation Projects**

<b>Project Community</b>	<b>Project Name</b>	<b>Title VI/EJ populations within 1/2 mile?</b>
Amesbury	Powow Riverwalk Phases II and III	Yes
Amesbury/Salisbury	Whittier Bridge and Ghost Trail Connectors	Yes
Andover	Shawsheen River Pedestrian Trail	Yes, in some segments
Boxford	Border to Boston Trail	No
Georgetown	Border to Boston Trail	Yes
Georgetown	New Park & Ride Facility, MA-133	No
Haverhill	Bradford Rail Trail Phases II-IV & MBTA Bradford Station Connector	Yes
Haverhill	Buttonwood/Riverside Trail Connector	Yes
Haverhill	MVRTA Intermodal Transportation Center	Yes
Lawrence	Merrimack Riverwalk	Yes
Lawrence	M&L Branch Shared Use Path	Yes
Lawrence	New Downtown Parking Facility	Yes
Lawrence	McGovern and Buckley Transportation Centers	Yes
Newbury	Border to Boston Trail	No
Newbury-Newburyport	Clipper City Rail Trail Phases II – III	Yes
Newburyport	MVRTA Downtown Transportation Facility	Yes
Region-Wide	MVRTA Bus, Coach, Van and Staff Vehicle Purchases	Yes
Salisbury	Border to Boston Trail	Yes

### Strategies

The MVMPO staff proposes the following work during the effective period of this RTP to advance regional transportation equity:

- Continue advancing and evaluating actions that address protected populations' unmet travel needs;
- Continue investing in infrastructure and services in communities where protected populations are present;
- Prioritize walking, bicycling and public transit infrastructure and service development/maintenance, and
- Increase engagement of protected populations in the MVMPO's transportation planning activities.