

Merrimack Valley Priority Growth Strategy

“The Regional Land Use Plan”
for the
Merrimack Valley Region



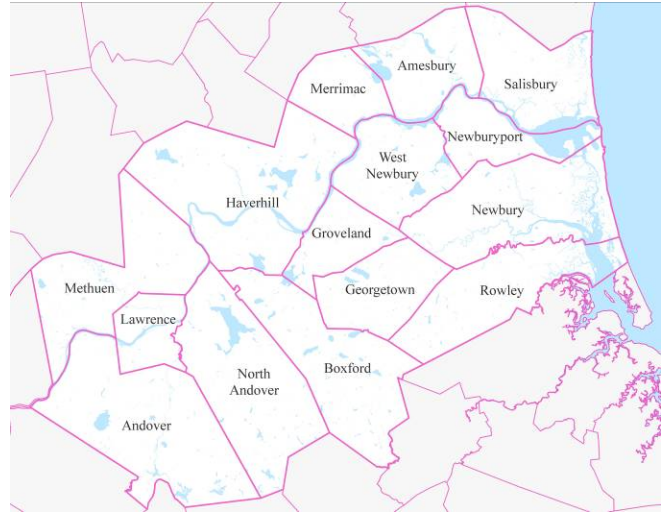
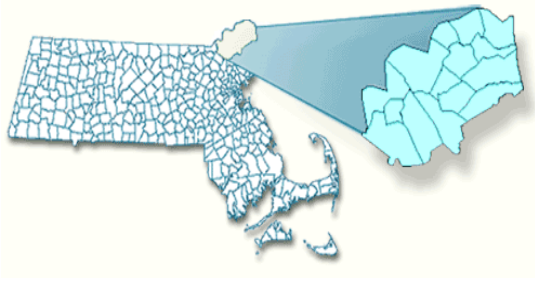
Amesbury Market Square



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Planning Commission

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 Daniel Ovale, Field Services Specialist
 James Terlizzi, Transportation Planner

GIS

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Mike Parquette, Comprehensive Planning Manager
 Ted Semesnyi, Economic Development Coordinator

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The Merrimack Valley Planning Commission (MVPC) was created in 1959 with the general purpose to “foster a cooperative effort among its communities in resolving common, regional problems, to allow its communities to plan jointly, and to promote with greatest efficiency and economy the coordinated and orderly development of the region and the general welfare of its residents.”

How do you get fifteen different communities, all separate a-political bodies, tied together through history, economics, transportation and natural resources to cooperate to resolve regional problems? How can communities plan jointly to promote the coordinated and orderly development of the Merrimack Valley region? The answers lie in the development of a regional strategy. A strategy based on “Smart Growth” principles, which identifies the roles each community plays and promotes a shared vision.

The vision they share is a region that promotes development in the right place that generates good jobs, new tax revenues, creates affordable housing, stimulates the economy and creates a sense of place. A region that balances growth with preservation, maintains open space and the character of the region, and is served by an effective transportation system. This Strategy is an attempt to realize this vision.

The strategy focuses on identifying Priority Development Areas (PDA) where communities want to encourage growth. It also identifies Priority Preservation Areas (PPA) that should be off limits to development to preserve the character of the region and protect environmental resources. And it evaluates the suitability of the regional transportation network to serves these land use patterns and recommends improvements that could be made to make it more complementary.

To ensure that the Strategy accurately reflected the communities’ priorities, elements in the Strategy were generated and formed with active local involvement. Not only were community representatives interviewed and used as a “sounding board” but all local Master Plans, E 418 Plans, Community Development Plans and Open Space & Recreation Master Plans where reviewed for guidance. To augment the traditional public process a number of unique outreach efforts were undertaken. Forum presentations on the draft Strategy were made at the 2008 annual Regional Planning Day, Merrimack Valley Metropolitan Planning Organization, Merrimack Valley quarterly planning directors meeting, Comprehensive Economic Development Strategy (CEDS) committee and the Merrimack Valley Regional Legislative Caucus. Presentations were also made to community leaders, Boards of Selectmen and Planning Boards, throughout the region.

In September, 2009 the commissioners of the Merrimack Valley Planning Commission unanimously approved the Merrimack Valley Priority Growth Strategy as the official regional policy plan for the region. In 2014 MVPC updated the Strategy to reflect the Commonwealth’s Planning Ahead for Growth initiative, which identified State PDA and PPA and recognized changes that had taken place in the region since 2009.

At the turn of the 20th Century the Merrimack Valley region's locus of economic activity were the employment centers of Lawrence and Haverhill. With the decline of these industrial centers, residents from the valley began to seek employment opportunities outside the region along the Route 128 corridor and in Greater Boston. As this economic shift grew in size and shape the commuting patterns changed. Today only two communities in the region, Andover and Newburyport, attract more workers than the number of residents that leave their communities for employment opportunities. The increase in commuting has also led to an increase in regional traffic congestion.

Not only did this economic shift change the region's economy and commuting patterns, it also changed the region's land use patterns. As more and more people moved closer to these new employment opportunities the supply and demand for housing dramatically increased the cost of housing in the greater Boston area. In search for more affordable housing lands previously used for farming or forestry in the Merrimack Valley region were developed for housing. Communities now needed to manage the impact of this new growth putting a strain on the regional infrastructure, traffic, and municipal services, particularly education services. The region's limited capacity to meet this housing demand has had two affects. It has dramatically increased housing costs in the region, which has limited the ability of existing residents and workers to stay in the region. And this "sprawl" is moving north of the region into Southern New Hampshire, which is further adding to the region's traffic congestion, particularly along Interstates 93 and 495.

Further adding to this dynamic is the way the region's communities finance municipal services. With their reliance on property taxes and the limits placed on this revenue source from Proposition 2 ½, most municipalities turn to economic development to expand their property tax base to keep pace with the increase cost of providing services.

However, equally important based on a public opinion survey of Merrimack Valley residents conducted at the end of the 20th Century, was the concern many residents have about the region's continued population growth and land development, and the implication for the region's future quality of life.

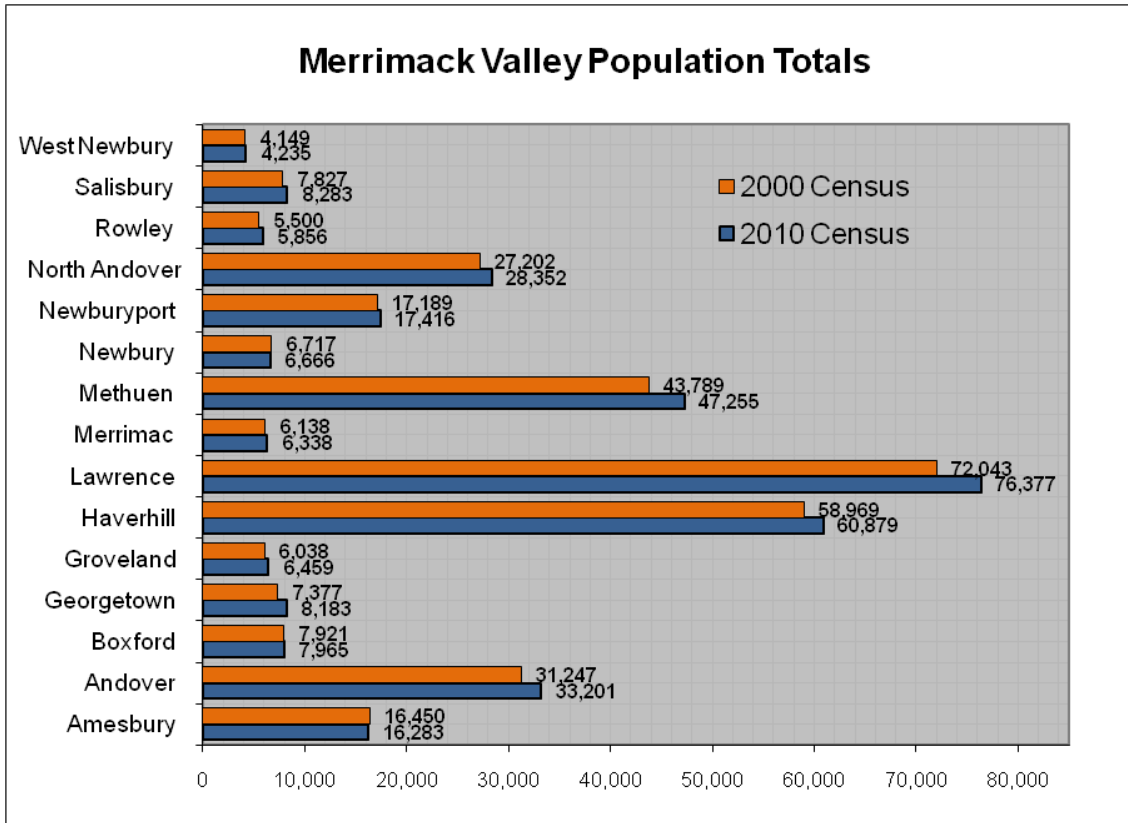
Clearly, these competing public policies demand a regional approach that addresses these challenges:

- Where do communities want to encourage regionally significant growth that creates jobs and affordable housing opportunities?
- Which areas of the Valley should be protected from future development due to environmental and other constraints to maintain the character of the Valley?
- How well does the region's transportation network support these land use priorities?



Population

The Merrimack Valley is Valley is a diverse region of 15 communities on 270 square miles of land, with a population of 333,748, ranging from 4,235 in West Newbury to 76,377 in Lawrence.



According to the U.S. Census Bureau, from 2000 to 2010, the region’s population grew by 4.8 percent, compared to 3.1 percent for Massachusetts and 9.7 percent for the United States. While considerably lower than the growth rate of 10.5 percent for the previous two decades and failing to keep pace with the nation as a whole, the Valley continued to outpace Massachusetts in 2010. Within the Valley, The Town of Georgetown had the largest percent increase in the region, rising 10.9 percent from 7,377 in 2000 to 8,183 in 2010.

	1980	1990	2000	2010
MVPC	260,893	288,280	318,556	333,748
% Change		10.5	10.5	4.8
Mass.	5,737,037	6,016,425	6,349,097	6,547,629
% Change		4.9	5.5	3.1
U.S.	226,545,805	248,709,873	281,421,906	308,745,538
% Change		9.8	13.2	9.7

**Percent Hispanic
Population: 2010**

Merrimack Valley: 23.3%
Massachusetts: 9.6%
United States: 16.3%

The region is diversifying, with individuals identified as White (of one race) decreasing from 83.1 percent in 2000 to 78.6 percent in 2010. In addition, the Hispanic population (of any race) rose to 23.3 percent in 2010, up from 17 percent in 2000. While

every community experienced an increase in the Hispanic population, the growth rate was especially pronounced in the region’s urban core. Lawrence’s Hispanic population now stands at 73.8 percent, compared to 59.7 percent in 2000. Other communities showing a marked increase include Haverhill (8.8% in 2000 to 14.5% in 2010) and Methuen (9.6% in 2000 to 18.1% in 2010). The Merrimack Valley’s Black (of one race) and Asian (of one race) population both stood at 3.2 percent in 2010.

2010 Census	Land Area (Sq. Mile)	Population per sq. mile
Amesbury	12.3	1,327.8
Andover	30.9	1,076.3
Boxford	23.6	338.1
Georgetown	12.9	636.3
Groveland	8.9	727.1
Haverhill	33.0	1,846.5
Lawrence	6.9	11,028.0
Merrimac	8.5	749.3
Methuen	22.3	2,124.0
Newbury	23.4	285.4
Newburyport	8.4	2,086.2
North Andover	26.3	1,077.8
Rowley	18.2	321.6
Salisbury	15.4	536.9
West Newbury	13.5	314.8
MVPC	264.1	1,263.6
Essex County	492.6	1,508.9
Massachusetts	7,800.1	839.4

Merrimack Valley Population Forecast

Based on demographic trends, the region is forecasted to grow 4.3 percent in the current decade, reaching 348,000 in 2020. This is expected to be followed by a rise of 5.2% to 366,000 from 2020 to 2030.

Community	2010	2017	2020	2025	2030	2035
Amesbury	16,283	16,700	17,000	17,450	17,900	18,200
Andover	33,201	34,120	34,650	35,500	36,500	37,400
Boxford	7,965	8,370	8,850	9,350	9,900	10,600
Georgetown	8,183	8,540	8,700	9,100	9,600	10,000
Groveland	6,459	6,860	7,100	7,500	7,900	8,200
Haverhill	60,879	63,400	64,400	66,400	68,550	70,500
Lawrence	76,377	76,800	77,200	77,600	77,900	78,000
Merrimac	6,338	6,500	6,600	6,800	7,100	7,500
Methuen	47,255	48,360	48,850	49,750	50,500	51,500
Newbury	6,666	7,100	7,300	7,850	8,250	8,600
Newburyport	17,416	17,650	17,750	17,850	17,950	18,000
North Andover	28,352	29,400	30,000	31,200	32,200	33,500
Rowley	5,856	6,000	6,100	6,450	6,900	7,500
Salisbury	8,283	8,750	8,900	9,300	9,700	10,100
West Newbury	4,235	4,450	4,600	4,900	5,150	5,400
MVPC	333,748	343,000	348,000	357,000	366,000	375,000

*Prepared by MVPC and MassDOT
From the 2012 Merrimack Valley Regional Transportation Plan*

Industry and Labor Market

Manufacturing has always been a critical industry sector in the Merrimack Valley. The massive mill buildings along the river tell a long, rich story of manufacturing employment in the region.

Percent of Total Private Employment in Manufacturing
Merrimack Valley: 20.8%
Massachusetts: 8.9%
United States: 10.8%

The key to the region’s economic survival is about successfully adopting to evolving industry trends. Today, the Valley is home to a number of cutting-edge firms and is well positioned to take advantage of promising new opportunities in life sciences, electronics, defense, and green technology. A significant challenge will be locating the sufficient number of highly skilled workers needed for new business activity, as well as the replacement of retiring workers.

Industries Employing 2,000 or more Employees: 2013
 (at three-digit and four-digit NAICS level)

NAICS	Industry	Number of Establishments	Employees	Weekly Wage
	Total, all industries	9,645	137,858	\$1,079
	Construction			
238	Specialty Trade Contractors	525	3,728	\$1,219
	Manufacturing			
311	Food Manufacturing	49	2,918	\$816
332	Fabricated Metal Product Manufacturing	105	2,143	\$1,312
334	Computer and Electronic Product Mfg	70	4,906	\$2,110
	Wholesale Trade			
423	Merchant Wholesalers, Durable Goods	190	2,487	\$1,615
	Retail Trade			
445	Food and Beverage Stores	218	4,892	\$379
4451	Grocery Stores	128	4,348	\$380
	Professional and Business Services			
541	Professional and Technical Services	1,045	8,561	\$1,760
5415	Computer Systems Design and Rel Services	211	2,244	\$2,094
551	Management of Companies and Enterprises	43	3,670	\$2,320
561	Administrative and Support Services	447	7,849	\$620
5613	Employment Services	87	4,785	\$545
	Education and Health Services			
611	Educational Services	158	12,257	\$1,025
6111	Elementary and Secondary Schools	58	10,189	\$1,075
621	Ambulatory Health Care Services	572	8,717	\$1,062
6211	Offices of Physicians	194	2,830	\$1,478
6216	Home Health Care Services	36	2,735	\$771
622	Hospitals	12	5,014	\$1,066
6221	General Medical and Surgical Hospitals	9	4,408	\$1,101
623	Nursing and Residential Care Facilities	106	5,270	\$636
6231	Nursing Care Facilities	30	3,167	\$687
624	Social Assistance	1,857	5,477	\$472
6241	Individual and Family Services	1,744	3,557	\$448
	Leisure and Hospitality			
713	Amusement, Gambling & Recreation Ind	127	2,120	\$350
722	Food Services and Drinking Places	642	9,798	\$336
7225	Restaurants and Other Eating Places	558	9,032	\$324
	Public Administration			
921	Executive, Legislative, & Gen Government	50	2,607	\$943
922	Justice, Public Order, and Safety Activi	62	2,034	\$1,406

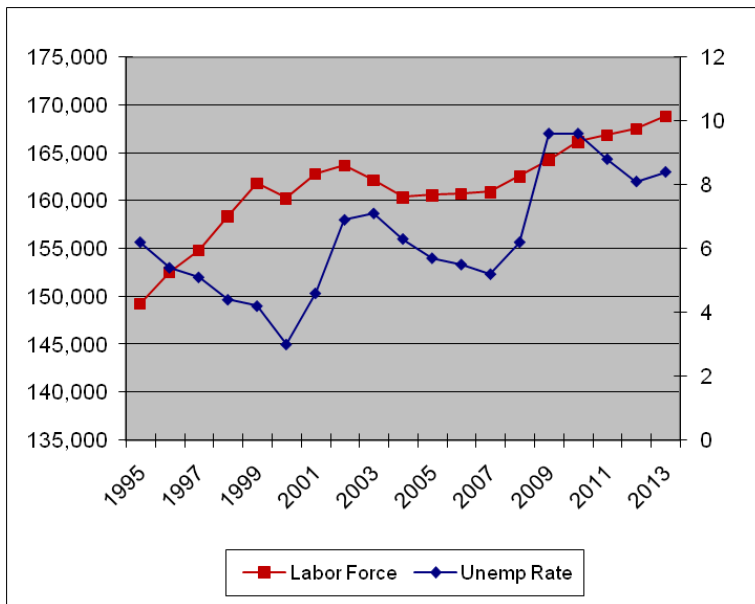
Key Manufacturing Sectors in the Merrimack Valley

NAICS	Description	Location Quotient: MVPC vs. State, 2006	Location Quotient: MVPC vs. State, 2011	Location Quotient: MVPC vs. U.S., 2006	Location Quotient: MVPC vs. U.S., 2011
	Manufacturing	2.07	2.43	1.84	2.14
311	Food Manufacturing	2.32	2.76	1.51	1.81
325	Chemical Manufacturing	2.26	2.21	1.85	1.88
326	Plastics & Rubber Products Manufacturing	1.78	1.08	1.47	0.84
332	Fabricated Metal Product Manufacturing	1.36	1.53	1.29	1.46
334	Computer and Electronic Product Mfg	2.04	2.52	4.66	5.54
3342	Communications Equipment Manufacturing	3.37	3.76	6.11	4.13
3344	Semiconductor and Electronic Components	2.35	2.08	4.03	3.71
3345	Electronic Instrument Manufacturing	2.15	3.78	5.68	9.73
3391	Medical Equipment and Supplies Mfg	1.93	2.34	3.15	3.34

Data Source: Employment and Wages (ES-202)

* A location quotient is a commonly used measurement tool used to compare a region's level of industry concentration relative to a larger geographic unit. Measurements of one mean that the local area has the same proportion of employment in a given industry as the base area. It is generally accepted practice to interpret location quotients of ≥ 1.25 as 'high' and ≤ 0.75 as 'low.'

Due to the severe national recessions of 2001-2002 and 2007-2009, the Valley's labor market has struggled, with the number of employed persons in the region as of 2013 still not surpassing the 2000 peak of 155,373. At the same time, the labor force has grown, causing unemployment rates to rise. A situation not unique to the region, there have been some encouraging signs in recent times, with the unemployment picture slowly improving since 2009.



Year	Labor Force	Employed	Unemp. Rate
2013	168,797	154,690	8.4
2012	167,501	153,981	8.1
2011	166,879	152,217	8.8
2010	166,157	150,180	9.6
2009	164,263	148,554	9.6
2008	162,522	152,446	6.2
2007	160,886	152,507	5.2
2006	160,727	151,824	5.5
2005	160,581	151,382	5.7
2004	160,363	150,208	6.3
2003	162,170	150,596	7.1
2002	163,692	152,344	6.9
2001	162,828	155,300	4.6
2000	160,244	155,373	3
1999	161,844	154,979	4.2
1998	158,358	151,356	4.4
1997	154,799	146,907	5.1
1996	152,490	144,248	5.4
1995	149,262	139,976	6.2

Housing

Total Housing Units in the Merrimack Valley: 2000-2010

Area	Occupied		Vacant		Total		Net Growth in Housing Units	
	2000	2010	2000	2010	2000	2010	Number	Percent
Amesbury	6,380	6,642	243	468	6,607	7,110	503	7.6%
Andover	11,305	11,851	285	572	11,590	12,423	833	7.2%
Boxford	2,568	2,688	42	69	2,610	2,757	147	5.6%
Georgetown	2,566	2,937	50	107	2,616	3,044	428	16.4%
Groveland	2,058	2,346	38	93	2,096	2,439	343	16.4%
Haverhill	22,976	24,150	761	1,507	23,737	25,657	1,920	8.1%
Lawrence	24,463	25,181	1,138	1,956	25,601	27,137	1,536	6.0%
Merrimac	2,233	2,417	62	138	2,295	2,555	260	11.3%
Methuen	16,532	17,529	353	811	16,885	18,340	1,455	8.6%
Newbury	2,514	2,594	302	342	2,816	2,936	120	4.3%
Newburyport	7,519	7,622	378	642	7,913	8,264	351	4.4%
North Andover	9,724	10,516	219	448	9,943	10,964	1,021	10.3%
Rowley	1,958	2,155	46	98	2,004	2,253	249	12.4%
Salisbury	3,082	3,441	1,074	1,109	4,156	4,550	394	9.5%
West Newbury	1,392	1,508	31	72	1,423	1,580	157	11.0%
MVPC	117,270	123,577	5,022	8,432	122,292	132,009	9,717	7.9%

Regional Chapter 40B Housing Inventory: April 2013			
Data Source: Mass. DHCD	Subsidized Housing Inventory	2010 Census Year Round Units	Percent Subsidized Housing
Amesbury	501	7,041	7.1
Andover	1,148	12,324	9.3
Boxford	23	2,730	0.8
Georgetown	362	3,031	11.9
Groveland	75	2,423	3.1
Haverhill	2,439	25,557	9.5
Lawrence	3,832	27,092	14.1
Merrimac	147	2,527	5.8
Methuen	1,643	18,268	9.0
Newbury	94	2,699	3.5
Newburyport	610	8,015	7.6
N. Andover	671	10,902	6.2
Rowley	92	2,226	4.1
Salisbury	308	3,842	8.0
W. Newbury	32	1,558	2.1
MVPC	11,977	130,235	9.2

According to the Census Bureau, the total number of housing units in the Merrimack Valley reached 132,009 in 2010, a 7.9 percent increase from 2000. The City of Haverhill had the largest increase, adding 1,920 units. Other notable additions included 1,536 for the City of Lawrence, 1,455 for the City of Methuen, and 1,021 for the Town of North Andover. On a percent level, the Town of Georgetown and Town of Groveland had the largest increase, rising 16.4 percent each, while the Town of Newbury had the lowest percent rise, increasing 4.3 percent.

Transportation

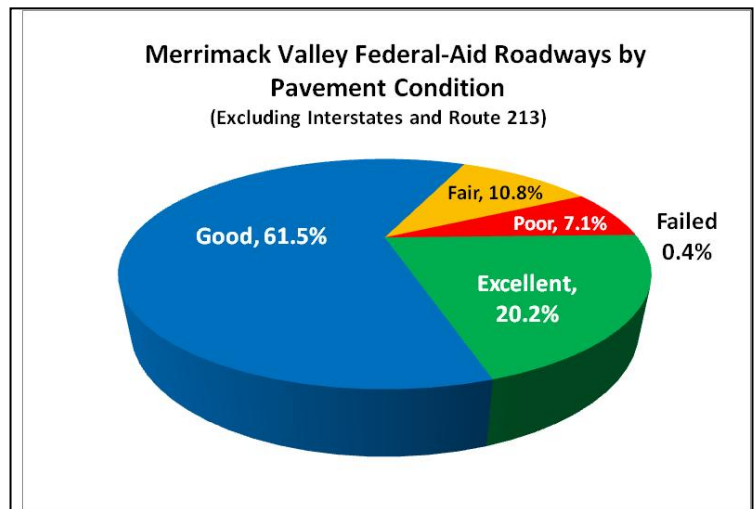
The region's 15 cities and towns are extremely well served by an excellent highway network with over 1,400 miles of roadway. Interstate highways 93, 95 and 495 traverse the region, providing vehicular access to the north, south and west. Both I-93 and I-495 link the region with Boston. I-93 extends north to Salem, Manchester and Concord, New Hampshire. I-495 is a circumferential roadway that crosses every major highway in eastern Massachusetts, including the Massachusetts Turnpike running west to New York State, and I-95 that passes through every major east coast city from Maine to Florida. At least one of these three interstates passes through 14 of the region's 15 communities.

While the interstate highways in the Valley carry the greatest numbers of vehicles, state-numbered arterial routes such as U.S. Route 1 and Routes 1A, 28, 97, 110, 113, 114, 125, 133, and 213 are of vital importance because they link the major activity centers of each community with other communities within the region. In addition, local roads, which make up approximately 62% of the region's highway network, are important to local communities because they provide access to residences and businesses.

Roadway Conditions

The condition of the region's roadways is one of the most visible characteristics of the transportation network. Roadways that are in poor condition cause damage to vehicles, can lead to drainage problems, and can even foster a perception of neglect.

During 2010, MVPC transportation staff conducted a survey of road surface conditions for the federal-aid roadways in the region. Only certain roadways are eligible for federally-funded transportation improvement projects. These include roadways classified as urban arterials and collector roadways as well as rural minor arterials. These higher-level roadways primarily carry traffic between activity centers and communities, while local roadways provide access to residential neighborhoods and small employment centers. Improvements to local streets are made by cities and towns using their state Chapter 90 funds, which are distributed on a formula basis.



Roadways were assigned Pavement Condition Index scores based on the presence of various types of roadway surface “distresses”. These include such characteristics as rutting of the roadways, presence of potholes, cracking of the surface and other characteristics. Taken together, these distresses allow us to accurately assess the overall condition of the road. Each roadway was divided into pavement segments based on such factors as changes in roadway condition, and changes in width.

The chart above shows the results of MVPC’s analyses. Roads were classified as being in “Excellent”, “Good”, “Fair” or “Poor” condition. The chart shows that almost 82% of the region’s arterial and collector roadways are in “Excellent” or “Good” condition. It should be noted that these figures do not include the 55 centerline miles of Interstate roadway in the Valley nor the four miles of Route 213, a limited access roadway. These roadways are evaluated by the state using a special vehicle that can gather road surface condition data using advanced technologies.

Bridges

There are 242 federal-aid eligible bridges in the Merrimack Valley Region. These are structures with spans of greater than 20 feet (i.e. distance between abutments). The most recent listing of Merrimack Valley bridges that was prepared by the Massachusetts Department of Transportation in 2014 identifies 16 Structurally Deficient bridges. Many of these bridges are programmed on the region's Transportation Improvement Program for replacement or appear on the state's bridge repair list. Each of these bridges is identified below along with a brief description of its status.

1. ***R Street Bridge over the Back River (Amesbury):*** While the design of a new bridge at this location is substantially complete, issues related to right-of-way and constructability must still be resolved.
2. ***Whittier Bridge over the Merrimack River (Amesbury/Newburyport):*** MassDOT has begun construction on a new, wider bridge to replace this structure. The new bridge will carry four travel lanes in each direction along with a shared use walkway. The new structure will be open to traffic in autumn 2016.
3. ***Route 28 Bridge over the Shawsheen River (Andover):*** This bridge does not appear on MassDOT's Bridge List or the MVMPO's FFY 2015-2018 TIP.
4. ***Route 28 Bridge over the MBTA Railroad (Andover):*** MassDOT is completing design work on a project that will replace the southern abutment/pier and portions of the northern abutment and replace the existing superstructure with a steel stringer bridge. A permanent utility bridge will carry all utilities. The project will be funded under MassDOT's Bridge Rehabilitation/Reconstruction Preservation Program.
5. ***Chandler Road Bridge over I-93 (Andover):*** MassDOT is working on the preliminary design for this project, which would replace the bridge's existing decking and add a 5.5 foot wide sidewalk along the south side of the structure. Collision damage to the north girder and the exterior erosion damage on the west piers and all four columns will also be corrected.
6. ***Route 125 Bridge over the Merrimack River (Haverhill):*** This bridge appears on MassDOT's Bridge List and is now in preliminary design. A determination has yet to be made whether this bridge and the adjacent bridge carrying Route 125 over the PanAM Railroad right of way will be replaced by a single new structure or rehabilitated..
7. ***Route 125 Bridge over the PanAm Railroad (Haverhill):*** (See #6 above).
8. ***I-495 Northbound (Newton Road) over Route 108 (Newton Road) (Haverhill):*** This bridge does not appear on MassDOT's Bridge List or the MVMPO's FFY 2015-2018 TIP.
9. ***I-495 Southbound (Newton Road) over Route 108 (Newton Road) (Haverhill):*** This bridge does not appear on MassDOT's Bridge List or the MVMPO's FFY 2015-2018 TIP.
10. ***I-495 Southbound Bridge over Amesbury Street (Haverhill):*** This bridge does not appear on MassDOT's Bridge List or the MVMPO's FFY 2015-2018 TIP.
11. ***I-495 Bridges over Merrimack River (Haverhill):*** MassDOT is now working on the preliminary design for a project to replace the structurally deficient bridges that carry I-495 over the Merrimack River in Haverhill. It is anticipated that this project will be completed using accelerated construction techniques. The new bridges will also have wider shoulders to meet current design standards.
12. ***Amesbury Street Bridge over the South Canal (Lawrence):*** This bridge does not appear on MassDOT's Bridge List or the MVMPO's FFY 2015-2018 TIP.
13. ***Route 213 Westbound over the Spicket River (Methuen):*** . This bridge does not appear on MassDOT's Bridge List or the MVMPO's FFY 2015-2018 TIP.

14. **Route 213 Eastbound over the former B&M Railroad (Methuen):** This bridge does not appear on MassDOT's Bridge List or the MVMPO's FFY 2015-2018 TIP.
15. **Hampshire Road over the Spicket River (Methuen):** This bridge suffers from a bridge scouring issue on one of the abutments. MassDOT will address this issue through one of its District-wide bridge contracts.
16. **Route 1 (Bridge Road) over the Merrimack River (Newburyport):** This bridge does not appear on MassDOT's Bridge List or the MVMPO's FFY 2015-2018 TIP.

The following bridges are not classified as structurally deficient, but are in the design process or under construction:

1. **I-495 Bridge over Powow Riverwalk (Amesbury):** MassDOT will soon complete design work on the rehabilitation of this bridge. The project appears in the FFY 2015 element of the MVMPO's FFY 2015-2018 TIP.

Traffic Congestion

One of the most visible and most noticed characteristics of any region's transportation system is traffic congestion. Congestion creates air pollution (and potential health risks), decreases gasoline mileage (thereby increasing the cost of driving), increases the costs of shipping goods and providing services, and often results in the diversion of traffic from arterial roadways to neighborhood streets. These local roadways were not intended to serve in such a capacity and the higher volume of traffic using them often reduces the quality of life of residents living along them.

Congestion on roadways is a function of traffic volume, plus the *capacity* of the roadways to handle that volume. The capacity of a given section of roadway is influenced by a number of factors, including: number of lanes, design speed, shoulder width, presence of on-street parking, and the directional distribution of traffic.

The Merrimack Valley Congestion Management System (CMS), conducts screening to identify congested roadways involves using calculated volume-to-capacity (V/C) ratios from the output of the Regional Traffic Model. When the V/C ratio for a section of roadway equals one, that roadway is said to be at capacity. It should be noted that when V/C ratios approach a value of one, severe roadway congestion is often present. V/C ratios provide an *approximation* of actual congestion, due to the wide variety of factors that affect roadway capacity. Nevertheless, they are a very useful measure in screening for congested roadway facilities. Over the years, the Merrimack Valley CMS has used a V/C ratio of .65 in identifying roadways experiencing congestion.

The following table lists sections of roadways in the MVPC region that have existing congestion problems based on the above screening criteria. Thirty-seven roadway segments were identified as having V/C ratios of .65 or greater during at least one of the peak travel hours of the day. Fifteen of these roadway sections are on I-495, while five are found on Route I-93 in Andover. The roadway with the highest V/C ratio not on the interstate system is Route 125 in Haverhill south of Rosemont Street. Sections of Route 97 in Georgetown and Haverhill also appear on this list. A description of many of these congested facilities is provided in the following table.

Existing Roadway Congestion

<u>TOWN</u>	<u>STREET</u>	<u>COUNT LOCATION</u>	<u>Highest V/C for Segment</u>
Haverhill	MAIN STREET	S of Rosemont St	1.16
Andover	INTERSTATE 495	NB North of I-93	0.91
Haverhill	INTERSTATE 495	SB North of Rt 125 C	0.89
Lawrence	SOUTH UNION STREET	NB at Andover TL	0.84
Haverhill	INTERSTATE 495	NB North of Rt 125 C	0.82
Methuen	INTERSTATE 495	SB North of Rt 213	0.81
Methuen	INTERSTATE 495	NB North of Rt 213	0.80
Andover	INTERSTATE 93	NB North of Rt 125	0.80
Lawrence	CANAL STREET	W of Prospect St	0.78
Haverhill	BRIDGE STREET	S of Water St	0.78
Andover	INTERSTATE 495	SB north of I-93	0.76
Methuen	HAVERHILL STREET	E of Lowell St	0.75
Methuen	ALBERT SLACK HWY	EB East of Rt 28	0.74
Haverhill	WINTER STREET	W of Hale St	0.73
Lawrence	INTERSTATE 495	SB North of Marston	0.72
Haverhill	GROVELAND STREET	E of Lincoln Ave	0.71
Andover	INTERSTATE 93	SB North of Rt 125	0.71
Salisbury	MAIN STREET	W of Willow Ave	0.71
Amesbury	MACY STREET (Route 110)	E of I-495	0.70
Andover	INTERSTATE 93	NB North of Dascomb	0.70
Lawrence	INTERSTATE 495	NB North of Marston	0.70
Haverhill	INTERSTATE 495	SB North of Rt 125 C	0.69
Methuen	ALBERT SLACK HWY	EB West of Rt 28	0.68
Andover	SOUTH MAIN STREET	S of Ballardvale Rd	0.68
Lawrence	INTERSTATE 495	SB North of Marston	0.68
North	TURNPIKE STREET	SE of Hillside	0.67
Andover	INTERSTATE 495	SB North of Rt 28	0.66
Andover	INTERSTATE 93	NB North of Rt 133	0.66
Lawrence	INTERSTATE 495	NB North of Rt 114	0.66
Andover	INTERSTATE 93	NB North of I-495	0.66
Lawrence	INTERSTATE 495	NB North of Marston	0.66
Andover	INTERSTATE 495	SB North of Rt 28	0.65
Georgetown	CENTRAL STREET	S of Library St	0.65
Haverhill	BROADWAY	E of Lowell Ave	0.65
Haverhill	INTERSTATE 495	SB North of Rt 97	0.65
Andover	INTERSTATE 495	NB North of Rt 28	0.65

Intersections

While the identification of congested roadway facilities is largely accomplished through the regional traffic model, identification of congested intersections is based on a number of sources including traffic studies, input from local officials and residents, combined with the MVPC transportation staff knowledge of the area. The table below lists the intersections in the region that have been identified as being congested.

Congested Intersections in the Merrimack Valley

<u>Community</u>	<u>Intersection</u>
Andover	Route 28 at Elm Street (Elm Square)
Andover	Route 28 at Route 133 (Shawsheen Square)
Georgetown	Route 97 at Route 133 (Georgetown Square)
Haverhill	Main Street (3 locations)
Lawrence	Route 28 at Route 110
Lawrence	Route 28 at Andover Street
Methuen	Howe Street at Jackson St (Marston's Corner)
Methuen	Howe Street at Route 213 Ramps
Newburyport	Route 113 at Low Street
Rowley	Route 1 at Route 133
Salisbury	Route 1 at Route 110 and Beach Road (Salisbury Square)

Journey to Work Data

The American Community Survey (ACS) is an ongoing survey conducted by the Census Bureau that provides data every year about the nation’s population. This includes data on age, sex, and race, income and education levels, the number of persons with disabilities and where people work and how they get there.

Using data from the 2006-2010 ACS along with data obtained from the 1990 and 2000 Censuses, an analysis was done to summarize the changes that have taken place in the overall pattern of where Merrimack Valley residents travel to work. It should be noted that the following table does not include all locations where Merrimack Valley residents worked during the three periods surveyed. Rather, this table provides insight as to how the distribution of area workers to major nearby employment areas has evolved. The results of this analysis are summarized below:

**Merrimack Valley Region Residents
Work Zone Destination**

Region	1990	(%)	2000	(%)	Δ '90-'00	Δ '90-'00 (%)	2006-2010	(%)	Δ '00-'10	Δ '00-'10 (%)
MVPC	78,743	61.0%	77,849	54.3%	-894	-1.1%	79,262	52.6%	1,413	1.8%
Southern NH	4,377	3.4%	5,599	3.9%	1,222	27.9%	7,676	5.1%	2,077	37.1%
Boston	7,026	5.4%	9,134	6.4%	2,108	30.0%	10,293	6.8%	1,159	12.7%
Greater Boston	7,155	5.5%	10,499	7.3%	3,344	46.7%	10,980	7.3%	481	4.6%
Route 128	13,293	10.3%	16,393	11.4%	3,100	23.3%	17,793	11.8%	1,400	8.5%
Route 495	715	0.6%	658	0.5%	-57	-8.0%	1,772	1.2%	1,114	169.3%
NMCOG Region	7,233	5.6%	8,506	5.9%	1,273	17.6%	8,655	5.7%	149	1.8%
Cape Ann	2,481	1.9%	4,144	2.9%	1,663	67.0%	3,928	2.6%	-216	-5.2%
Central NH	1,231	1.0%	2,511	1.8%	1,280	104.0%	3,669	2.4%	1,158	46.1%
Southern Edge	4,356	3.4%	5,276	3.7%	920	21.1%	5,793	3.8%	517	9.8%
MetroWest	389	0.3%	730	0.5%	341	87.7%	958	0.6%	228	31.2%
TOTAL	128,989		143,299		16,251	12.6%	150,779		7,480	5.2%

The table on the previous page shows that the number of Merrimack Valley residents that also work in the region has remained relatively the same over the past 15-20 years. However, there has been significant growth in the number of Valley residents that work in Southern New Hampshire, Central New Hampshire, in and around Boston, and along Route 495. As a result, the percentage of Merrimack Valley residents that work in the region has dropped almost 9% since 1990.

Transit

The Merrimack Valley Regional Transit Authority (MVRTA) is the primary provider of public transportation in the Merrimack Valley region. The MVRTA's operations include numerous local fixed bus routes, intercity bus service, commuter bus service, special employment shuttle services, advance request transit services (Ring & Ride), and demand response transportation services to the region's elderly and disabled populations (EZ Trans).

While the MVRTA provides year-round local fixed route bus service to the communities of Amesbury, Andover, Haverhill, Lawrence, Merrimac, Methuen, Newburyport, North Andover, and Salisbury, the system predominantly serves the region's two largest communities, Lawrence and Haverhill. Seasonal service to Salisbury Beach and Hampton Beach is provided during July and August. In addition, the MVRTA operates various intercity fixed routes in the Valley and one bus route (Route 41) beyond the region that operates between Lawrence and Lowell.

In Lawrence, all MVRTA buses originate at the Buckley Transportation Center, which is centrally located in the downtown section of the city. Ten local fixed routes operate within the greater Lawrence area serving major shopping centers, hospitals and medical facilities, city government offices, schools, the McGovern Transportation Center and residential apartment complexes. Connections to Lawrence's neighboring communities of Andover (Route 32), Methuen (Route 40) and North Andover (Route 33) are also available. Additionally, intercity routes operate between Lawrence and Haverhill (Route 01 with transfer to Route 51), Lawrence and Lowell (Route 41), and Lawrence and Salisbury Beach as well as Hampton Beach (Route 83) during the summer months.

In Haverhill, all MVRTA buses originate at the Washington Square Transit Station, which is located in the downtown section of the city. Six local fixed routes operate within the city of Haverhill serving MBTA commuter rail stations, shopping plazas, social service agencies, and the public library. Additionally, intercity routes operate between Haverhill and Lawrence (Route 01), Haverhill and Newburyport (Route 51), and Haverhill and Salisbury Beach/Hampton Beach (Route 83) during the summer months.

In Greater Newburyport, Route 54 links the communities of Amesbury, Newburyport and Salisbury.

Ring & Ride is a curb-to-curb transportation service for the residents of Boxford, Georgetown, Groveland, Newbury/Byfield and West Newbury. This service allows the residents of Boxford, Georgetown, Groveland, Newbury/Byfield and West Newbury to commute anywhere within those towns as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service in these areas also provides connections to the MVRTA fixed route bus system.

In addition, Ring and Ride service associated with existing MVRTA routes in Andover (Route 22), Methuen (Route 42) and Newburyport (Route 51) provides advance phone request origin-to-destination service.

Commuter Rail

The Massachusetts Bay Transportation Authority (MBTA), which is the regional transit operating agency for the Boston metropolitan area, provides commuter rail services to the Merrimack Valley region through a contract with the Massachusetts Bay Commuter Rail Company. Two commuter rail lines are located in the region, the Newburyport Line and the Haverhill Line, with seven stations.

The MBTA provides service from seven commuter rail stations along two different rail lines within the Merrimack Valley. The Newburyport Line operates on the Eastern Route, while the Haverhill Line runs on the Western Route.

The Newburyport Line is a 27.7-mile branch that operates between Boston’s North Station and Newburyport. This branch has eleven stops, two of which are located within the Merrimack Valley. The Rowley and Newburyport stations are the northernmost stops on the line, with Newburyport as the terminus of the route.

Presently, there are no MVRTA fixed route buses that serve the Rowley station, although communities receiving Ring and Ride service can access this location. Newburyport station is served by MVRTA Route 51.

The Haverhill Line is a 32.9-mile segment of the old B&M Western Route that runs between Boston’s North Station and Haverhill. This segment of the line has fourteen stops, five of which are located in the Merrimack Valley. There are two stations in Andover (Ballardvale and Andover), one in Lawrence, and two stops in Haverhill (Bradford and Haverhill), with Haverhill serving as the terminus of the line.

Various MVRTA bus routes service the five commuter rail stations on the Haverhill Line. Ballardvale station is served by the Andover Ring and Ride (formerly Route 22), while Andover station is served by routes 21 and 32. In Lawrence, routes 39A and 39B provide access to the McGovern Center. Finally, the Bradford station is served by Route 14, while Routes 01, 14 and 16 serve the Haverhill station, with the Route 83 Salisbury Beach/Hampton Beach bus stopping at the rail station during the summer months.

All MBTA commuter rail stations within the Merrimack Valley provide economical parking with a daily rate of \$4.00. The following table shows the capacity, the number of parking spaces used and available, and the average weekday utilization rates of each parking lot at commuter rail stations within the Merrimack Valley. The table below shows that none of the commuter rail parking lots are operating at or over capacity with only one, the McGovern Center in Lawrence, approaching that level. These utilization rates are generally lower than those observed in previous years and this is likely due to two factors: 1) overall commuter rail ridership in the region and around the state dropped because of the recession that began in 2008 and continued through many years thereafter, and 2) parking fees were increased from \$2.00 to \$4.00 at all MBTA station surface lots, which has caused many commuters to park on nearby streets instead.

Parking Space Utilization Rates at Commuter Rail Stations Located Within the Merrimack Valley, 2013

Station (Commuter Line)	Capacity	Used	Utilization Rate %
Andover (Haverhill)	146	93	63.7%
Ballardvale (Haverhill)	120	69	57.5%
Bradford (Haverhill)	303	76	25.1%
Haverhill (Haverhill)	159	58	36.5%
Lawrence (Haverhill)	400	369	92.3%
Newburyport (Newburyport)	820	150	18.3%
Rowley (Newburyport)	282	36	12.8%

Off Road Bicycle and Pedestrian Connections

The Merrimack Valley region has recently seen a dramatic increase in the number of off-road bicycle and pedestrian facilities that are open to the public. Currently, short sections of five multi-use transportation trails are open.

In Amesbury, the first phase of the Powow Riverwalk (1.3 miles) is open connecting downtown Amesbury with the Carriagetown Marketplace on Route 110.

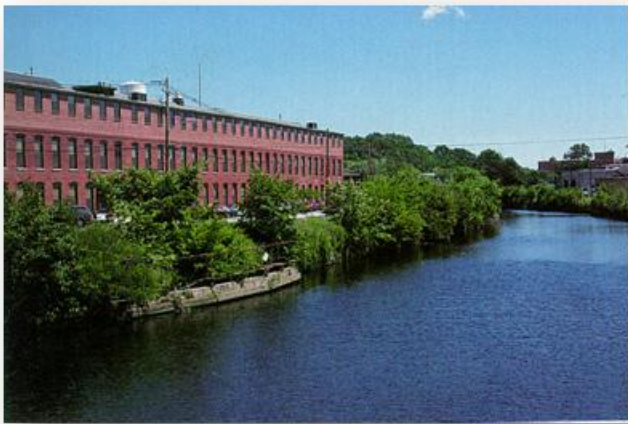
In Salisbury, 1.5 miles of the Salisbury Point Ghost Trail, which runs east/west between Lion's Park and Rabbit Road, is open to the public. This trail will intersect with the Salisbury Rail Trail, a north-south trail currently under design, and will eventually connect with Amesbury's Powow Riverwalk. The Salisbury Rail Trail will in turn connect to the 1.3-mile Eastern Marsh Trail, which runs between the Route 1 Bridge and Mudnock Road that opened to the public in 2010.

Both the Eastern Marsh Trail and Salisbury Rail Trail described above along with the 1.4-mile Clipper City Rail Trail in Newburyport that connects the western end of downtown with the commuter rail station are part of what is known as the Border to Boston shared use trail that will ultimately extend from the Massachusetts/New Hampshire state line to the Boxford/Topsfield town line. The communities of Salisbury, Newbury, Georgetown and Boxford have been working in cooperation with MassDOT to complete the design of this project of the Border to Boston shared use trail.

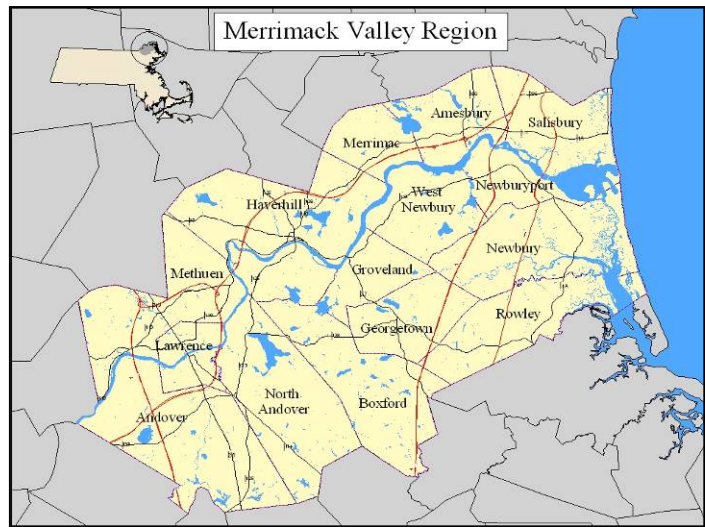
The Methuen Rail Trail opened in 2012 and extends a little over two miles from Hampshire Road at the New Hampshire State Line south to the Lawrence City Line.

The table on the following page shows the current (November 2014) status of the many off road trail projects in the Merrimack Valley region.

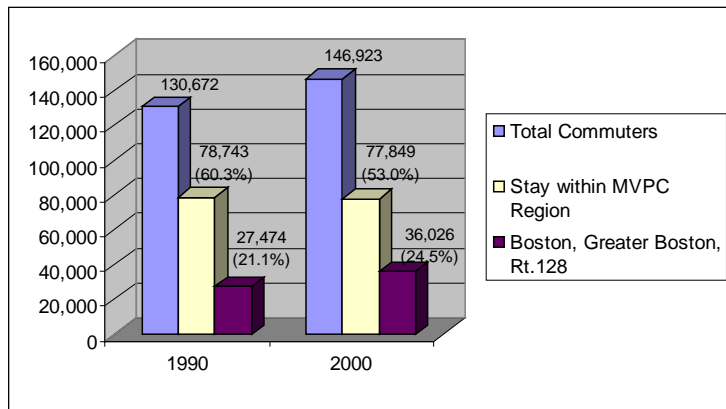
Status of Off-Road Trail projects in the Merrimack Valley			
<u>Community/Trail</u>	<u>Lqth. in Miles</u>	<u>Description</u>	<u>Status</u>
Amesbury			
<i>Powow Riverwalk Phase I</i>	TBD	Water Street to County Road	Design
<i>Powow Riverwalk Phase II</i>	1.30	County Rd. to Stop and Shop Plaza	Open
<i>Ghost Trail Connector</i>	.43	Rabbit Road to Old Elm St.	Prelim. Design
Boxford			
<i>Border to Boston</i>	1.51	Georgetown Line to Pond St.	Design
Georgetown			
<i>Border to Boston (southern)</i>	1.90	Boxford Line to West Main St.	Design
<i>Border to Boston (northern)</i>	3.30	W. Main St. to Byfield .(Newbury)	Design
Groveland			
<i>Community Trail</i>	1.96	Main St. to Georgetown Line	Prelim. Design
Haverhill			
<i>Bradford Rail Trail</i>	0.55	Railroad Ave. to Route 125	Construction
<i>Bradford Rail Trail Ext.</i>	0.27	Route 125 to Washington Park	Prelim. Design
<i>Georgetown Branch Rail Trail</i>	2.26	Washington Park to Groveland Line	Proposed
Lawrence			
<i>M&L Branch Rail Trail</i>	1.47	Methuen Line to Merrimack Street	Proposed
Methuen			
<i>Methuen Rail Trail</i>	2.08	Salem, NH Line to Lawrence Line	Open
Newbury			
<i>Border to Boston</i>	1.73	Byfield Village to Scotland Road	Prelim. Design
Newburyport			
<i>Clipper City Rail Trail</i>	1.05	Merrimack River to Train Station	Open
<i>Clipper City Rail Trail - Phase II</i>	1.6	End of Boardwalk. to Parker St.	Design
<i>Clipper City Rail Trail - Phase III</i>	.40	Parker St. to TrainStation	Proposed
Salisbury			
<i>Eastern Marsh Trail</i>	1.34	Merrimack River to Mudnock Rd.	Open
<i>Salisbury Rail Trail</i>	2.43	Mudnock Rd. to New Hampshire Line	Design
<i>Ghost Trail</i>	1.70	Lions Park to Rabbit Road	Open



The Merrimack Valley region is comprised of fifteen communities stretching from the north at the southern New Hampshire border from Salisbury and Newburyport and the mouth of the Merrimack River to the south along the river to Andover and Methuen. The region is made up of a diverse set of communities ranging from small communities like West Newbury, with 4,300 residents and Groveland, with 6,600 residents, to Lawrence with over 70,000 residents and Haverhill with 60,000 residents. Half of the communities are former farmlands but now largely residential communities. The other half are more developed and include 5 cities. 23% of the population in the region is Hispanic and concentrated in 3 communities, Lawrence 60%, Methuen 10% and Haverhill with 9% as they continue to provide housing for the new immigrants coming to the region.



At the turn of the 20th Century the Merrimack Valley region grew around the employment centers of Lawrence and Haverhill. Lawrence had a concentration of textile manufactures and Haverhill had a significant concentration of shoe manufactures. With the decline of the textile and shoe industries due to rising labor costs and cheaper imports these industrial centers lost their role as job generators. Between 1940 and 1960 Lawrence alone lost 25,000 textile jobs. Residents from the valley began to seek employment opportunities outside the region along the Route 128 Technology belt and Greater Boston. In 1990 60% of the Merrimack Valley residents worked in the Merrimack Valley. By 2000 this number decreased by 7% to 53% with the majority of these workers now commuting to Rt. 128 and the Greater Boston area.



Merrimack Valley Workers Employment Location

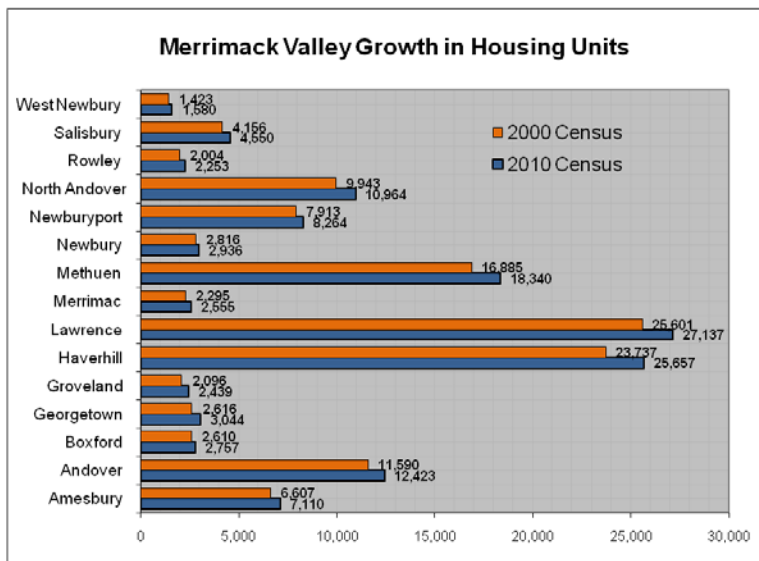
Also at the turn of the 20th Century housing in the Cities of Lawrence and Haverhill provided housing for the workers in the mills. As the mill workers prospered they moved to the communities surrounding the cities, which became growing suburbs of Lawrence and Haverhill. As the jobs left the region the workers migrated to the greater Boston area where the jobs were. Between 1960 and 1980 Lawrence lost over 10% of its population while Massachusetts saw an increase of over 10% over the same time period.

The demand for new housing caused periods of supply shortages and higher housing prices in the Greater Boston area. Since 1990 the median home price increased in greater Boston by 112%. As people looked for more affordable housing the Merrimack Valley region again became a destination. Lands previously used for farming or forestry were developed for housing. With this new development the region experience significant growth. The region’s population began to rise above the State average and the number of housing starts grew by almost 10% between 1990 and 2000.

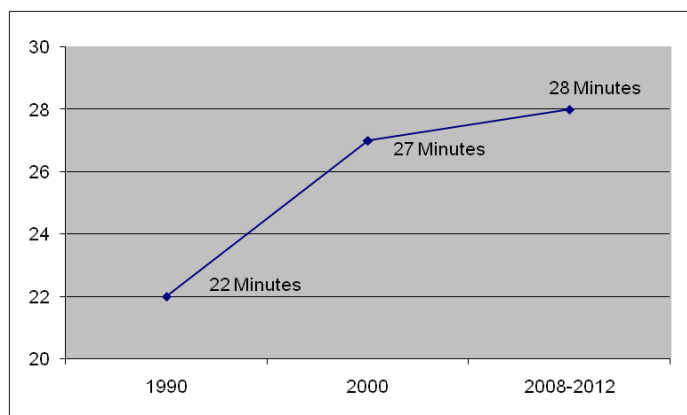
Population Growth

	10-year Census Numbers			Projection (MVPC and MassDOT)	
	1990	2000	2010	2020	2030
MVPC	288,280	318,556	333,748	348,000	366,000
% Change		10.5	4.8	4.3	5.2
Mass.	6,016,425	6,349,097	6,547,629	6,840,800	7,131,600
% Change		5.5	3.1	4.5	4.3

As housing demand in the MVPC region increased, so did the region's housing costs. According to the Census Bureau, The median value of an owner-occupied housing unit rose from \$228,229 in 2000 to \$362,108 in 2010. The region's limited capacity to meet this housing demand has had two affects. It has dramatically increased housing costs in the region, which has limited the ability of existing residents and workers to stay in the region. And this “sprawl” is moving north of the region into Southern New Hampshire, which is further adding to the traffic congestion of the region particularly I-93 and I-495.



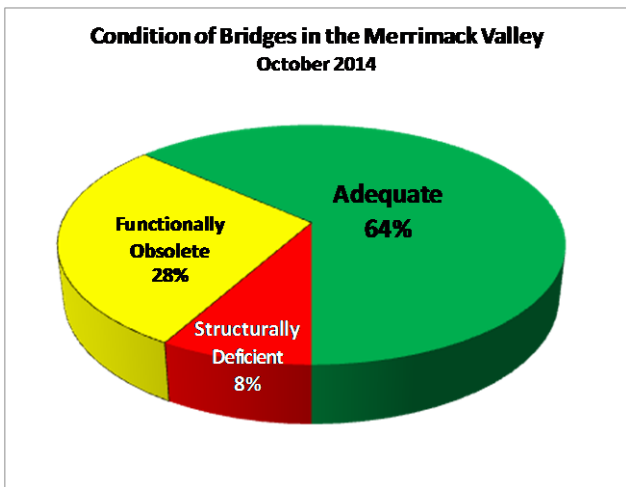
As this economic shift grows in size and shape the commuting patterns change. These land use trends have led to longer commuting times, which has added to congestion and the need to upgrade aging infrastructure. In 1990 the average commute in the Merrimack Valley was 22 minutes. By 2000 that number increased to 27 minutes. With the recession in 2008 came a reduction in the rate of growth in commute times with the latest data showing a commute time of 28 minutes.



Merrimack Valley Workers – Average Commute Time
Data Source: Decennial Census and American Community Survey

The Merrimack Valley MPO's 2011 Congestion Management Process found that 28 roadway segments in the region were identified as being congested. Sixteen of these roadways sections are on I-495, while five are found on Route I-93 in Andover.

In addition the Merrimack River, which binds the region together also creates infrastructure challenges as the region tries to keep pace with the need to maintain the 244 bridges in the valley. While 64% of the region's bridges are adequate, 8% are structurally deficient and 28% are functionally obsolete and need attention.



2011 MERRIMACK VALLEY METROPOLITAN PLANNING ORGANIZATION CONGESTION MANAGEMENT SYSTEM

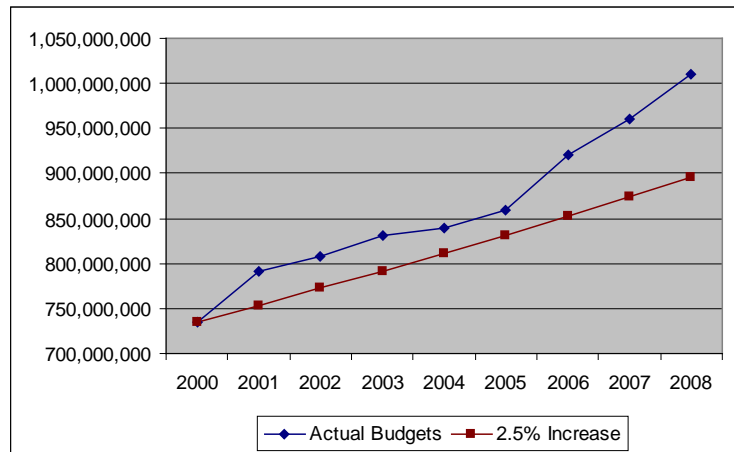
Merrimack Valley Planning Commission
Transportation Programs Unit
September 2011

Communities now find themselves needing to manage the impact of these changing land use patterns, which have put a strain on the region's economy, job opportunities, affordable housing, infrastructure, traffic, and municipal services, particularly education services. Further adding to the ability of the communities to manage the impact is the way the region's communities finance municipal services.

In 1982 Proposition 2½ was approved by statewide referendum. Proposition 2 ½ capped the amount of property taxes a community can assess to 2½ % of the total cash value of all taxable property in the community. A community's allowable property tax levy, which is the major source of revenue for all communities, cannot increase by more than 2½ % of the prior year's taxable property (levy ceiling) plus new growth. With their reliance on property taxes and the limits placed on this revenue source from Proposition 2 ½, most municipalities turn to state aid and economic development to expand their property tax base to keep pace with the increase cost of providing services. To illustrate this reliance the chart below was prepared by assembling and compiling all municipal budgets for the 15 communities in the region since 2000. The blue line indicates the budgets for all the communities in the region from 2000 to 2008. The red line indicates what the budgets would be if they stayed strictly to the 2½ % limits of Proposition 2½. The communities use new growth and new local aid to fill the potential budget gap between the lines.

Although many communities encourage growth to balance their budgets there is still concern from many residents that unmanageable growth could adversely affect the region. Before the turn of the 21st century MVPC conducted a public opinion survey of over 400 Merrimack Valley residents, and interviewed more than 30 local and regional planners, business organizations, educators and community leaders to develop a better understanding of the planning context and the key issues, opportunities, and concerns within the region. While many individuals who participated in the survey favored a strong economic base consisting of light industrial, office and commercial uses, they also did not want this economic growth to spur unmanageable growth at the expense of the region's perceived quality of life and community character.

Clearly, these competing public policies demand a regional approach that addresses these challenges. The region needs to encourage growth to finance municipal services but at the same time it needs to be concerned with the impact growth will have on school finances, traffic and the potential change to the character of the region's communities. The region needs to create good job opportunities for its children and reduce its commuting demands but not spur on too much growth. The region needs to keep housing cost affordable for future generation but not let this new housing growth adversely affect the region's quality of life.



Merrimack Valley Revenue – Total Municipal Receipts

The Merrimack Valley needs to develop a “Smart Growth” regional approach to growth that strikes a balance between this need to grow and the need to preserve the character of the region to address these regional challenges.

- Where do communities want to encourage regionally significant growth that creates jobs and affordable housing opportunities?
- Which areas of the Valley should be protected from future development due to environmental and other constraints to maintain the character of the Valley?
- How can the region's transportation network support these land use priorities?



As clearly outlined in Section 4.0 Regional Challenges for the 21st Century, if the communities in the region do not grow there is a good chance that they will not be able to meet the demands placed on them by their citizens: new jobs will not be created, housing will not be affordable, transportation options will be limited and local governments will not have the resources to provide municipal services. This does not mean that communities should allow uncontrollable growth or that there should not be a balance with protecting the character of the communities and of the region. There needs to be a responsible way of promoting the orderly development of the Merrimack Valley taking into consideration the needs to protect its natural resources. The approach recommended is to develop a regional priority growth strategy founded on the principles of “smart growth”.

The purpose of this section is to identify where growth is appropriate throughout the region based on zoning, infrastructure, access and limited environmental impacts. These areas have been identified as Priority Development Areas (PDA) and are defined as “areas of concentrated development, including a city or town center, consisting of existing and appropriately zoned commercial, industrial and mixed-use areas suitable for high-density development”.

To ensure that there is local buy in to this strategy and that it is a locally driven process each community was asked to identify growth areas that were consistent with the PDA definition. Once identified, data regarding each PDA was collected. The data collection was extensive and included the following:

- **Land Use:** Uses allowed by zoning were identified (Industrial, commercial and residential). The density allowed by each community in the PDA was reviewed and calculated. Any PDA targeted by the local, state or federal governments for development incentives was recognized such as Priority Development Sites (PDS) or 40R districts.
- **Infrastructure:** The availability of infrastructure to support development was identified, including; water, sewer, broadband & utilities.
- **Access:** Transportation access including road, transit and off road connections were recorded. Using the MVPC Congestion Management Study each PDA was evaluated for any congestion that may limit access or development potential.
- **Environmental:** All environmental constraints that could impact development of the PDA were identified, including, wetlands, flood plains, water supply protection areas and rare species habitats.

As can be imagined each PDA has unique zoning requirements, access points, available infrastructure and environmental constraints and as such needed to be evaluated as to the nature and suitability for development. MVPC collected and evaluated the PDA data shown in Appendix 10.6 according to three rankings: highly advantageous, medium and low. Criteria used to make these rankings were based on the following ranges:

- **Land Use:** Highly Advantageous – A PDA that allows a mix of uses, has density of at least a Floor to Area Ratio (FAR) of 1.0, and is designated a PDS to low - where single uses are allowed, a FAR of less than .5 and no PDS designation.
- **Infrastructure:** Highly Advantageous – A PDA that is served by water, sewer, broadband and all utilities to low - where the PDA has limited access to water and sewer.
- **Access:** Highly Advantageous – A PDA that has highway access, transit service and is friendly to bikes/pedestrians to low - where the PDA has limited highway access, no transit service and is not pedestrian friendly.
- **Environmental:** Highly Advantageous – A PDA that has minimal impact on wetlands, water protection areas, rare species habitats and not located in a flood plain to low - where the PDA has a significant impact on these environmental sensitive elements.

Once evaluated each PDA was classified according to how consistent they were in meeting the “smart growth” principles outlined throughout this Strategy and in particular in 8.0 Smart Growth Strategies of the Merrimack Valley.

In the spring of 2012 the Commonwealth of Massachusetts through the Executive Office of Housing and Economic Development (EOHED) began working with MVPC to expand the State “Planning Ahead for Growth” strategy into the Merrimack Valley. The EOHED had begun to work in various regions of the State with regional planning agencies to identify promising areas of new growth.. In addition to identifying areas for growth, EOHED partnered with the Executive Office of Energy and Environmental Affairs (EEA) to ensure that regional plans reflect a well-balanced analysis of future land use objectives for the region by also identifying appropriate areas to prioritize for preservation. In 2009 the EOHED worked in Southeastern Massachusetts developing the south coast corridor plan and in 2012 the metro west region along the I 495 corridor was introduced to the Planning Ahead for Growth Strategy. Unlike these other regional planning efforts, the analysis of local priorities and articulation of those priorities was already completed when EOHED and EEA began their work with MVPC. Using the Priority Growth Strategy Report, the state was able to accelerate its analysis of regional priorities in the Merrimack Valley.

MVPC identified 56 PDAs in the work that was completed in 2009. EOHED and EEA used the 56 sites as a starting point for the state’s regional planning process. MVPC’s Priority Growth Strategy also included a matrix of all 56 PDAs, and EOHED assigned each area a numerical value corresponding to the matrix’s scoring of high, medium and low. By sorting each of the PDAs by score, EOHED was able to determine a reasonable cut off (a score of 40 and above) to narrow the list of PDAs to those best suited for significant new growth. In total, 23 PDAs had a score of 40 or higher. Those 23 PDAs were then evaluated against EOHED’s criteria for areas with the best potential for appropriate new growth which include:

1. Downtowns and village centers;
2. Locations with potential for transit oriented development;
3. Areas which support the reuse of a previously developed site; and
4. Areas which present the potential for multi-family housing.

Based on the evaluation criteria established by EOHED, the 23 remaining PDAs were reduced leaving a total of 13 state PDAs in the region. This number was reached by combining 10 regional PDAs to create 5 larger state PDAs; adjusting the list to reflect updated information on areas which have increased potential for new growth since the Priority Growth Strategy was developed in 2009; and removing several sites that did not rise to the level of significance to be identified as a state PDA.

Subsequently MVPC designated PDAs either regionally significant or locally significant. Using the approach EOHED used to identify State PDAs, MVPC used the evaluation matrix to identify regionally significant PDAs determined by scores in excess of 35, as well as sites not selected by the State and identify local PDAs that were of local concern but did not rise to be designated regionally significant. A listing of each PDA by order of significance is as follows:

Priority Development Areas of State Significance:

Amesbury

- Golden Triangle
- Amesbury Village Center/Lower Millyard

Andover:

- Downtown
- Brickstone Square
- I-93/Osgood Street
- River Road

Haverhill:

- Downtown Haverhill
- Upper Hilldale

Lawrence:

- Malden Mills
- Lawrence Industrial Park
- Merrimack Street
- Lawrence Gateway/Downtown

Methuen:

- Malden Mills

Newburyport:

- Downtown Center

North Andover:

- Osgood Landing
- Machine Shop Village

Priority Development Areas of Regional Significance:

Amesbury:

- Cedar Street
- Route 150 Gateway Village

Andover:

- Rolling Green
- Lowell Junction

Georgetown:

- Georgetown Square Village Center
- National Avenue
- Norino Way

PRIORITY DEVELOPMENT AREAS (PDA)

Haverhill:

- Lifestyle Center
- Ward Hill

Merrimac:

- Merrimac Square

Methuen:

- Aegean Park
- Branch Street
- Downtown Methuen
- Griffin Brook Industrial Park
- The Loop

Newbury:

- Byfield Village Center

Newburyport:

- Newburyport Industrial Park

Salisbury:

- Redevelopment Zone
- Salisbury Village
- Salisbury Beach Center

Priority Development Areas of Local Significance:

Amesbury:

- Interstate 495/Hunt Road

Boxford:

- Old Village Center
- West Boxford Village Center

Georgetown:

- Route 133/Chestnut Street

Groveland:

- Groveland Village Center
- Route 97

Merrimac:

- Merrimac Route 110

Methuen:

- Lindberg Avenue

Newbury:

- Route One
- Central Street at Kent Way
- Central Street at Fruit Street

North Andover:

- Route 114 Corridor

Rowley:

- Route One
- Rowley Village Center

Salisbury:

- Business Park
- Gateway Site

West Newbury:

- West Newbury Village Center

The following is a description of the PDAs for each community and their PDA classification: State, Regional or local significance, along with recommendations on how the community can strengthen the PDA:

A MESBURY

Cedar Street

Land Use: The Cedar Street PDA is a relatively small, (7 acres) but dense area adjacent to the downtown core. This area is comprised of a cluster of older mill buildings (3.8 acres is developed) with high redevelopment potential. The city is promoting this area as a “downtown artist live/work district” and has put in place an overlay district that reflects this emphasis. The artist live/work space is allowed through a special permit from the planning board. The underlying zoning is central industrial (IC), which allows light manufacturing, general retail sales and service, restaurants, and by special permit multi-family housing. Maximum building area in both the IC district and the overlay district is 50%.

Infrastructure: This site is served by all the major utilities.

Access: Cedar Street connects to Route 150 and to other local roads. If the R Street Bridge is rebuilt, there will be additional access to this site from Elm Street, providing additional access to the interstates. The MVRTA operates Route 51, which travels along Elm Street. Once the R Street Bridge is fixed, this will provide close access to the Cedar Street site. This site sits amidst a more densely settled residential area with sidewalks. It has the potential to be a very walkable area. Rubel maps recommend this section of Route 150 as a bicycle route.

Environmental: One percent of this 7-acre area is considered wetlands, and nearly 17% of the area is located in the 100-year floodplain.

Recommended Strategies: The city of Amesbury has put together excellent plans and redevelopment strategies for the entire downtown area of which this is part. Great strides have been made in returning many of the older mill buildings into productive use. By allowing housing in the old mill buildings, many more people live downtown, and they have created the demand for good restaurants and retail stores. We recommend continuation of these efforts.

Interstate 495/Hunt Road: Designated a Local PDA

Land Use: According to city officials, this large 332-acre industrial zoned area located south of I-495 and Hunt Road, has the potential to be a very high growth area for Amesbury, and a possible third Priority Development Site (PDS) for the city. There is good access to the highway, and the land is mainly vacant or underutilized with only 7 developed acres. Zoning allows for manufacturing, research labs, accessory professional offices, and car/boat/truck sales. Warehousing, business offices, and auto repairs are allowed by special permit. General retail, hotels, office parks, shopping centers and housing are not allowed. Minimum lot area is 40,000 SF with 125 feet of frontage, and the maximum building area is 50%.

Infrastructure: This area has access to water, sewer, and gas.

Access: This site has easy access to I-495 at Exit 54. Hunt Road, the access to this site, has recently been upgraded and improved. This site is not accessible via the fixed bus route system. There are no sidewalks on South Hunt Road nor is this a recommended bicycle route. However, just south, Pleasant Valley Road is a recommended bicycle route and cyclists could connect to this site via Route 150.

Environmental: Less than 1% of this site is in the 100-year floodplain, and approximately 4.6% of this PDA is designated as wetlands.

Recommended Strategies: Zoning in the I-95/Hunt Road PDA appears somewhat fragmented and weak and should be upgraded to insure that all development that takes place in this area conforms to the community’s vision. For example, truck sales and auto repairs are allowed, but hotels and office parks are not. The community has raised concerns about “unwanted” businesses in this area. The zoning for this area should be reviewed.

Golden Triangle: Designated a State PDA

Land Use: This priority development area known as the “golden triangle” is also a 43D Priority Development Site (PDS) as designated by the State Interagency Permitting Board. The 117 acre site is zoned Office Park (OP), and allows such uses as professional offices, R&D, light manufacturing, and hotels. General retail sales, restaurants, housing and warehousing are allowed only by special permit.

Dimensional requirements call for a minimum lot size of 2.5 acres, 200 feet of frontage, and maximum building area of 40%. This PDA is also part of an overlay district called the Elm Street Overlay District. This district exists to protect the integrity of the older historic structures that provide a distinct visual character and identity to this important gateway to Amesbury. All uses allowed in the Office Park District are permissible in the Overlay District, except light manufacturing. In addition, the Overlay district allows retail sales and services and restaurants by right, and one residential unit per floor is allowed by right above the first floor. Additional units may be permitted by special permit.

In 2014, a new overly district for the golden triangle was created called the “Commercial Fashion Center Overlay District”. The goal is to encourage and allow high-end clothing and clothing accessory related businesses locate in the area. The district has strict guidelines relating to appearance, form, and function.

Infrastructure: Water, sewer, and gas are available to this PDA.

Access: This priority development site sits snugly between Interstates 495 (Exit 55) and 95 (Exit 58) with access to both from Elm Street/Route 110, hence the reference to the “Golden Triangle”. Some of the congestion concerns have been addressed with the reconstruction and widening of Rout 110 completed in 2012. Additional work at the intersection of Elm Street and Route 110 may be needed in the future to deal with potential safety and congestion issues. The MVRTA’s currently provides fixed bus service down Elm Street to Route 110. Pedestrian access will be improved with the extension of the Powow Riverwalk.

Environmental: Development of the land in this PDA is constrained by wetlands. Twenty-six acres or 22% of this area is considered wetlands.

Recommended Strategies: Because of its location adjacent to I-495 and I-95, this area has always been recognized as having development potential, but constrained by access, wetlands, and the historical properties on the Elm Street frontage. The reconstruction of Route 110 greatly improved access to the site. The overlay district has protected the historic properties along Elm Street, and zoning is designed to keep any large-scale development away from these important structures. The wetlands can and should be used as a positive element to provide attractive surroundings and open space for a potential office park in this location. Designed properly, any development in this PDA can turn what was once considered negative factors to development into positive attributes.

Lower Millyard: State Designated PDA

Land Use: The Lower Millyard is an 8-acre area of older mill buildings located between Elm Street and the Powwow River, just off of the downtown. The Lower Millyard is the focus of a significant economic development and mill revitalization effort and the city has established an overlay-zoning district that allows for a mix of uses in keeping with the city's master plan for downtown Amesbury. The stated goal of the overlay district is to focus on the areas unique natural resources, historic land use, and the properties along the Powwow River. The overlay district encourages redevelopment of the mill buildings into mixed-use properties with retail on the first floor and residential above. The zone also allows artist live/work space, professional and business offices, and personal services. The underlying zone is central industrial and allows industrial, light manufacturing, research labs, and parking facilities.

Infrastructure: All utilities serve this area.

Access: Located just off the downtown, the Lower Millyard is accessible from Elm Street, which provides access to Route 110, I-95 and I-495. Congestion may need to be addressed at the intersection of Elm Street and Market Square as redevelopment continues. Improvements at the intersection of Elm Street and Route 110 will also help in this regard. The MVRTA's fixed bus route 51 does provide service to Elm Street to the Lower Millyard PDA and a new intermodal transit center has been constructed in the center of the PDA. The Powwow River Walk leads right into the Lower Millyard. The next section of trail to be constructed will connect the Lower Millyard to the heart of downtown Amesbury. The city intends to build more parking in this area and has secured MassWorks funding to allow the realignment and addition of streetscape improvements to Water Street, providing for increased pedestrian and traffic safety.

Environmental: Approximately 20% of the Lower Millyard is in the 100-year floodplain and 20% of the area is designated as wetlands.

Recommended Strategies: The city has a solid plan in place for the redevelopment of this important area of Amesbury into a regionally significant smart growth center. The City has approved the relocation of the DPW yard currently located in the Lower Millyard, which will allow for a new park and boat launch to be constructed as well as a new Carriage House Heritage Museum. The state committed its Brownfield's Support Team to the area to facilitate the cleanup of the PDA for redevelopment. The City should consider using the MVPC Brownfield's Program to assist in this effort.

Route 150 Gateway Village: Designated a Regional PDA

Land Use: The Gateway Village PDA is a 50-acre site just south of I-495, east of Route 150 extension and north of Merrimac Street. This site has been zoned the Amesbury Gateway Village 40R Smart Growth Overlay District. The 40R district is a formal state designation to promote mixed use development. The Gateway 40R district encourages a wide-range of housing opportunities along with a mixed-use development component, to be proposed in a distinctive and attractive site development program that promotes compact design, preservation of open space, and a variety of transportation options, including enhanced pedestrian access to employment and nearby transportation systems.

The underlying zoning district is Office Park (OP) and a developer may elect either to develop a project in accordance with the requirements of the smart growth zoning, or to develop a project in accordance with requirements of the regulations for use and dimensions of the underlying zone. The OP zone allows retail, office, light manufacturing and service uses.

Infrastructure: All utilities are provided in this area.

Access: This site is easily accessible by three of the primary routes through Amesbury, Routes 150, 110 and I-495 at Exit 54. Safety issues may need to be addressed at the intersection of Route 110 and 150, which experience 44 crashes between 2009 and 2011. The MVRTA’s fixed bus route 51 does pass this area on Route 110. The roads in this area are not very pedestrian or bicycle accessible.

Environmental: Approximately 6% of this site is designated as wetlands, and 5% of the site is in the 100-year floodplain.

Recommended Strategies: The city obviously wants to see this area developed as a mixed-use smart growth center with compact development, large tracts of useable open space, and pedestrian walkways with good connectivity between the different land uses. We encourage this type of development. The City should try to identify improvements that can make the area more pedestrian and bicycle accessible.

Amesbury Village Center: Designated a State PDA

Land Use: The 38-acre Amesbury Village Center is Amesbury’s densely developed central business district that has seen major redevelopment and revitalization in recent years, including façade improvements on many businesses, sidewalk and traffic improvements, and many new units of housing created including affordable housing. These efforts have resulted in encouraging new retail shops and restaurants to open, thus bringing residents and families from surrounding communities to the downtown for shopping.

Zoning in the central business district requires a minimum lot size of 5,000 SF, and 50 feet of frontage. Dimensional setback requirements are 0 front, 5 side, and 30 rear, yet the rear and side yard setback requirements can be reduced to 0 upon granting of a special permit from the planning board. Maximum building area is 70%, and maximum height is 40 feet. Zoning allows for a full range of retail and wholesale commercial activities by right or special permit, along with multi-story mixed residential and commercial uses by special permit. Hotels, lodging houses, and bed and breakfasts are allowed by special permit.

Infrastructure: Water, sewer, gas, and broadband serve Amesbury’s central business district.

Access: The Village Center is accessible from Route 150 and is served by transit and is bicycle and pedestrian friendly.

Environmental: Less than 1% of the land in the central business district is considered to be wetlands, and 5% of the area is designated as being in the 100- year floodplain.

Recommended Strategies: Downtown revitalization is an on-going process. It doesn’t end when the downtown shops are filled and buildings renovated. Downtowns need constant attention to keep them vital and strong, especially during severe swings in the economy. Amesbury needs to continue its revitalization of this area and the other sections of downtown adjacent to the CBD.

Planned road improvements include replacement of the R Street Bridge which will connect the Lower Millyard with the Cedar Street PDA. Details such as period lighting and sidewalks will also help create a pedestrian connection for these sections.

Future road improvements should focus on the downtown gateways, such as fixing Route 150 and Elm Street, both of which need repair. Downtown parking presents the greatest challenge to downtown development. A 2002 MVPC report recommended increased parking if development were realized. Parking in the Lower Millyard also is planned and will help to alleviate some of the need.



Amesbury - Lower Millyard

ANDOVER

Downtown: Designated a State PDA

Land Use: Downtown Andover (171.61 acres) is the Town's traditional central business district. It consists of offices, shops, restaurants, civic and institutional uses; some residences cluster along its western slope toward the Shawsheen River. Historic properties are interspersed throughout. The Town's Department of Public Works and the MBTA's Line Andover Station are prominent nodes at the district's western boundary. Downtown Andover is zoned General Business (GB), which allows for single family residences, religious and municipal, banks and retail, lodging establishments, select medical uses, motor vehicle sales/rental and indoor commercial recreation. Special permits from the Board of Appeals are required for convenience stores, laundries, and motor vehicle repair. Special permits from the Planning Board are required for 'major' non-residential projects and certain eldercare facilities. Multifamily residential, cluster developments, certain elder facilities, manufacturing and industrial uses are prohibited. Dimensional and density regulations vary according to proposed use; however, a four-story or 50' building height maximum applies. The Town further regulates development in downtown Andover through a local Design Review Board that has jurisdiction over building permit requests in the GB zone.

Infrastructure: All major utilities serve Andover Center including Columbia Gas and National Grid Gas. Comcast and Verizon provide cable; DSL and fiber optic service to the premises.

Access: Route 28 (Main Street) is the principal roadway access. The MBTA Haverhill Line Commuter Rail stops at Andover Station, ¼ mile west of Main Street. MVRTA Routes 21 (Andover Shuttle) and 32 (Andover) offer hourly peak weekday bus service. Trucks provide local freight service; bicyclists and pedestrians share local roads.

Environmental: Urban land. .51 acre wet (.30%); 1.01 acres/.59% within a 100 year floodplain; no other environmental indicators limit development.

Recommended Strategies: MVPC supports the Town's efforts to maintain its vibrant traditional Town center, which remains competitive by offering a diverse, unique inventory of local services and attractions. MVPC also supports the Town's desire for more housing and mixed-use development in the downtown and the Town's proposed Department of Public Works' relocation project presents a rare opportunity with potential for transit-oriented development. The Main Street Streetscape Improvements Project recently constructed offers improved pedestrian and open spaces. MVPC is particularly supportive of the Town's efforts to develop the Shawsheen River Trail; this project will if constructed provide local and regional intermodal transportation benefits. It will link Downtown with Shawsheen Village and Ballardvale; provide access to the MBTA Ballardvale and Andover Commuter Rail Stations, and generate significant recreational benefits as well. Finally, the Town's review of municipal sites around North Main Street, Railroad Street and Essex Street may benefit future development directly adjacent to downtown.

Rolling Green: Designated a Regional PDA

Land Use: A 35.79-acre mixed-use area anchored by a large apartment complex; the Boston Sports Club, a small highway-business strip development, and the Internal Revenue Service processing facility. This PDA is surrounded by the Rolling Green Golf Club (north); single-family residences (east) and woods on Lovejoy Road (south), and I-93 on the west. Its character is appropriate for a suburban office park. Zoning is Limited Service (LS); single-family residential, municipal and religious uses are permitted. Special permits from the Board of Appeals are required for philanthropic institutions, banks, medical clinics, certain educational institutions; dine in restaurant, commercial recreation, business and professional uses, certain motor vehicle

uses, and hotels/motels. Special permits from the Planning Board are required for cluster developments and ‘major’ non-residential uses. Hospitals, boarding houses, multiple dwellings, manufacturing and industrial uses are prohibited.

Infrastructure: All major utilities serve the site. Columbia Gas; National Grid, Comcast and Verizon provide cable; DSL and fiber optic service to the premises.

Access: Route 133 (Lowell Street) serves as the principal roadway access. The site abuts the I-495/Route 133 intersection. MVRTA Routes 73 (Haverhill Employment Service) and 75 (Lawrence Employment Service) operate to serve employers west of I-93/Route 133, Route 75 can make local stops along Route 133. Trucks provide local freight service. Bicyclists and pedestrians generally share local roads.

Environmental: .27 acre or .74% is classified as rare species habitat. No other environmental indicators are documented.

Recommended Strategies: The site’s proximity to a major interstate interchange and the Town’s policies favor continuation of existing uses. MVRTA fixed route service could be adjusted if warranted. Connections to local neighborhoods east of the site, along Route 133, could be improved for bicyclists and pedestrian

Brickstone Square: Designated a State PDA

Land Use: The Brickstone Square complex is located in the historic Shawsheen Village section of Andover at the intersection of route 28 and 133. The 26-acre site is comprised of three multi-storied buildings offering nearly 1,040,000 square feet of commercial office space. There is parking on site totaling approximately 3,000 spaces. The Brickstone campus combines modern conveniences with architecturally significant, beautifully renovated, historic brick industrial buildings built in 1920. The owners of the complex have discussed possible expansion of the commercial space, as well as adding a residential component. The residential piece has the potential to be a 40R smart growth district.

Infrastructure: Brickstone Square is an existing office complex with adequate water, sewer, broadband, and other services to the site. The service was upgraded when these buildings were first redeveloped in the 1990’s.

Access: The Brickstone Square complex is within one-half mile from Route 495 and accessed from Route 28 (North Main Street) and Route 133 (Haverhill Street). Public transportation (bus) is available and runs on both route 28 and route 133. Downtown Andover and the Andover stop on the MBTA commuter train (Haverhill line) are located within 1.5 miles. The MBTA commuter rail tracks abut the Brickstone Square property, and the owners have discussed the possibility of a stop at the site (especially if the high density housing were to be built), but the likelihood of creating a station here is low due to the close proximity to the Lawrence and Andover stations. The MVRTA also operates a Commuter Bus service between Methuen and Boston with a stop at Shawsheen Square.

Shawsheen Village is one of the gateways to Andover with Route 28 leading drivers directly to the downtown district from the highway. Brickstone Square is impacted by the heavy congestion at the Route 28/133 intersection (Shawsheen Square), which also experiences a high number of accidents.

For the most part, sidewalks line the streets however, many of the sidewalks are in need of repair and the community has identified a need to increase pedestrian amenities and safety. Currently, there are no off-road options in this area, though Andover does have plans to build a multi-use trail along the Shawsheen River from Shawsheen Square down to Lowell Junction.

Recommended Strategies: Brickstone Square has the capability of becoming a “smart growth center” if the dense housing the owners have expressed an interest in building was to move forward, and if the zoning was opened up to some retail and more personal service establishments. Brickstone Square is only 1.5 miles from downtown Andover and a commuter rail stop, but if a rail stop were to be located at Brickstone Square, it would only add to its attractiveness and accessibility.

I-93/Osgood Street: Designated a State PDA

Land Use: The I-93/Osgood Landing Priority Development Area is an area of approximately 340 acres to the west of I-93, east of Osgood Street, and south of Route 133. This area is occupied by the Raytheon Missile Defense System facility, a major regional employer for many years at this site. Raytheon occupies over 20% of this area, which is in Andover’s industrial-A zoning district, an industrial office park zone with over 3 million square feet of building space. The zoning allows for professional business and office type uses, housing is not allowed and retail uses are generally not allowed. Limited sit down restaurants, hotels, and personal service establishments are allowed by special permit.

Infrastructure: Water, sewer, and broadband are all available in this area of Andover.

Access: This development area is located along Route 133 to the west of the I-93 interchange. This area is fully developed and has adequate road access to I-93 at the Route 133 interchange in the north, as well as, at the Dascomb Road/Frontage Road interchange to the south. Access to I-495 is two miles west along Route 133. Unavoidable congestion occurs during peak traffic hours when the thousands of workers employed in the area travel to and from work on the I-93 Interstate. The MVRTA operates two routes (72 and 73) that originate at either the Buckley Station in Lawrence or the Washington Square station in Haverhill and go to the IRS and Raytheon business sites. Pedestrian access is limited.

Recommended Strategies: This PDA has been a major regional employment center for many decades; and the Town has encouraged and assisted in its growth and expansion by assuring that infrastructure was upgraded accordingly. They have designated the area as a 43D site and an Economic Development Target Area, which qualifies the area for tax relief benefits. This policy should continue the industrial expansion as long as there are no harmful effects in nearby residential neighborhoods. A traffic Study of Route 133 and the impact of the I 93 interchange may offer some improvements to the congestion.

Lowell Junction: Designated a Regional PDA

Land Use: The Lowell Junction/ I-93 Priority Development Area (PDA) in Andover is part of a 700-acre development area located in portions of Andover, Tewksbury, and Wilmington. It presently represents one of the highest concentrations of employment and economic activity in the Merrimack Valley with notable employers such as Pfizer Pharmaceuticals, Procter and Gamble, and Charles River Labs. These companies, and hundreds of others, currently employ more than 6,000 people in a wide variety of industries and occupy almost 3.5 million square feet of building space. The three communities have been working together in an attempt to develop a Unified Development Vision to guide the development of the available land in this area in a highly coordinated manner consistent with Smart Growth principles and practices. All three communities have jointly applied and have been approved for a 43D Priority Development Sites within this development area.

Build out of the Junction PDA, subject to the construction of a new interchange off I-93, is estimated to be in excess of 3 million square feet of industrial, commercial, and retail space. It is also estimated that this development could support as many as 11,000 new jobs if fully developed.

Infrastructure: All major utilities are provided on the east side of I-93 in the developed area of this PDA, but they do not exist on the west side of I-93 in the mostly vacant land areas. Water, sewer, and broadband are all available in this area of Andover.

Access: Currently, the local transportation network hampers expansion of existing businesses in the Junction area. Access to this area is primarily from exit 41 or exit 42 off of I-93, but congestion sends traffic through a maze of residential streets. Traffic conditions have been a key factor in resistance to new development from both area residents and business owners. Vacant land to the west of I-93 is virtually landlocked.

In order for the Lowell Junction PDA to reach its' full economic potential, a full access north-south interchange off of I-93 between exit 41 and 42 must be realized. This interchange concept will provide direct interstate access to growing businesses and vacant in fill development parcels on the east side, as well as the undeveloped parcels on the west side of I-93.

The MVRTA operates a Call & Commute on-demand service that is paid for by members of the Junction Transportation Management Organization. The van service provides door-to-door service for residents of Andover, North Andover, Lawrence and Methuen as well as for those people who take the commuter rail to Ballardvale Station and require a shuttle to their jobs in the Lowell Junction Area. The Lowell Junction Area does not currently have bicycle and pedestrian access.

Environmental: The undeveloped Lowell Junction areas to the west of Route 93 have some environmental constraints including wetlands and rare species habitats, which have been well publicized. Environmental impact studies have been published and environmental organizations are involved in the process of master planning this area including approving a design for the potential new interchange off of Route 93.

Recommended Strategies: The Lowell Junction area is currently one of the major economic development districts in the Merrimack Valley. The area has the potential to grow and expand, but access to the vacant land to the east of Route 93 is needed. There has been a concentrated effort by the towns of Andover, Tewksbury, and Wilmington, and by state officials to make Lowell Junction development ready and the next major job producing area in the state. However this effort has struggled as of late with limited funding for transportation expansion projects and a less than favorable market analysis of the "form-based zoning code" proposed for the area. Because the undeveloped area crosses town borders, it becomes more complex, but there are now models of other such developments that cut across town boundaries, and we must learn from these models and develop new zoning and a master plan for the area that works to the benefit and economic development goals of the three communities.

As part of this planning process the communities should reconsider dense residential as one of the mix of uses that would be allowed. In addition, protecting, enhancing and incorporating the land adjacent to the Shawsheen River into the development scenario for a multi-use recreation and transportation trail should be encouraged. Pedestrian access and enhanced transit use should also be incorporated. While there has been some interest in constructing a commuter rail station as part of the development plan care should be taken to ensure that locating an additional station to the Haverhill commuter rail branch dose not degrade the overall service.

River Road: Designated a State PDA

Land Use: The River Road PDA is predominately a linear development of high end office and professional buildings located on River Road on both the east and west sides of I-93 in the Industrial A and Industrial D and the Industrial D-2 zoning districts. The area covers approximately 1,084 acres, of which 24 acres is developed and contains over 1 million square feet of building space. Total lot coverage in these zoning districts allows for 30%, 25%, and 30% respectively, with height limitations of 50 ft. in Industrial D and Industrial D-2, and 60 ft. in the Industrial A district. By right uses are limited to professional office and business uses, and retail, fast food, drive-through restaurants and convenience stores are allowed by special permit in the ID-2 district. Housing is not allowed in either the Industrial A or Industrial D or D-2 zoning districts.

Infrastructure: The businesses located along River Road have access to water, sewer, gas and broadband.

Access: The River Road area, characterized as a large upscale office park, is nestled around I-93 and the Merrimack River and is largely accessible by car. I-93 northbound north of I-495 heading toward the River Road interchange and beyond going north over the Merrimack River has a high volume-to-capacity ratio and is extremely congested in the late afternoon and early evening. Two intersections along River Road east of I-93 at North and Federal Streets have experienced higher crash rates. The MVRTA operates one bus route (37) to a portion of the River Road PDA east of I-93, which provides access for those attending the Greater Lawrence Regional Vocational School. There is no transit service to the west of the interstate. The Merrimack Valley Transportation Management Association, which focuses primarily on the River Road area, promotes cycling to and from this PDA. Interested cyclists may find a variety of on-road commuting routes on their web site (www.merrimackvalleytma.org). Rubel maps consider High Plain Road and Pleasant St to be primary bicycle routes. In addition, the Bay Circuit Trail, a pedestrian path, crosses through this area.

Environmental: Approximately 80 acres or 7.4% of this PDA are wetlands, and 82 acres are located in the 100-year floodplain.

Recommended Strategies: The River Road PDA is a very linear, automobile oriented series of upscale office parks. MVPC agrees with the upgraded zoning approved in 2013 which allows for a wider range of uses such as retail stores, banks, convenience stores, and restaurants in portions of the area. Traffic can become very congested on both I-93 in this area as well as River Road itself during commuting times. Improvements to River Road to increase mobility were made in recent years, which improved conditions, but it remains a very high traffic and congestion area. Any further development that is allowed in this area should limit the number of curb cuts to River Road and use existing roadways and entrances. Widening of I-93 to four lanes will relieve some of the congestion on the main line and eliminate the “bottle neck”, which will be created when I-93 is expanded to four lanes in New Hampshire and south of I-495.

BOXFORD

Old Village Center: Designated a Local PDA

Land Use: The Boxford Village center is a typical small town New England village center found throughout Massachusetts, New Hampshire, and Vermont. New England village centers often have a town common around which are churches, small stores, a post office, municipal buildings, and professional offices. In Boxford, the village center is zoned retail business district, which is intended for local neighborhood shopping and offices.

Infrastructure: The town of Boxford does not have municipal water or sewer service. Private wells and septic systems are the norm.

Access: Boxford's village center is located along the triangle formed by Georgetown Street, Depot Road, Elm Street, Main Street, and Middleton Street. The center is in close proximity to Interstate 95's exit 52 via Topsfield Road. The MVRTA operates the Ring and Ride in Boxford, a curb-to-curb transportation service. Boxford residents may use the service to travel within Boxford, Georgetown, Haverhill, and North Andover, as well as to various medical facilities. Though this area has three schools, library, police station, and fire station, there are no sidewalks in the Village Center and only one crosswalk located at the library. All roads in this area are recommended bicycle routes.

Environmental: There appear to be no environmental concerns in the village center.

Recommended Strategies: The town should consider installation of sidewalks in the village center to improve pedestrian access between the schools, library and other buildings in the town center.

West Boxford Village Center: Designated a Local PDA

Land Use: Similar to the Boxford Old Village Center, the West Boxford Village Center is a rural, quaint center of activity in the western section of the town of Boxford at the intersection of Route 133 and Main Street. This village center is also zoned retail business district and is intended for local neighborhood shopping and professional offices.

Infrastructure: Boxford does not have a public water supply system or sewer system but relies on private wells and septic systems.

Access: West Boxford Village center is accessed by route 133 and Main Street. There is no access to an interstate highway. The MVRTA operate a Ring and Ride in Boxford, a curb-to-curb transportation service. Boxford residents may use the service to travel within Boxford, Georgetown, Haverhill, and North Andover, as well as to various medical facilities. The area is not pedestrian friendly.

Environmental: There appear to be no environmental concerns in this area.

Recommendations: The town may want to install sidewalks in this small village to allow pedestrians to better access the different businesses.

GEORGETOWN

Georgetown Square Village Center: Designated a Regional PDA

Land Use: Georgetown Square comprises approximately 50 acres centered around the intersection of Routes 133 and 97 (Main Street and Central Street). Recent studies completed by the town identify 71 retail and service businesses in downtown, plus another 21 institutions and other commercial establishments. Sixty one percent of the space is devoted to community use. The Main Street section of downtown is very walk-able and compact. The Central Street area is more vehicular oriented with a shopping center appearance. The two areas feel somewhat disconnected because of this difference.

As recommended in the Master Plan and other studies completed for Georgetown in recent years, the town has proposed a Chapter 40R smart growth overlay district for an 8.5-acre portion of downtown. The goal of the overlay district is to promote mixed-use buildings, develop market rate and affordable housing, follow traditional development patterns, improve walk-ability, and promote streetscape improvements.

Infrastructure: The downtown is serviced by all public utilities, except for sewer, which has been problematic in attracting new businesses to the downtown.

Access: Georgetown's town center is located at the busy crossroads of Routes 97 and 133. Interstate 95 access is provided via Route 133, East Main Street. Interstate 95 can also be accessed on Route 97, (Central Street) at exit 52 in Boxford. Georgetown Square experiences high traffic congestion. Drivers experience long delays on virtually all approaches to this intersection during AM and PM peak periods. The MVRTA operates the Ring and Ride in Georgetown, a curb-to-curb transportation service for the residents of Georgetown. This service allows residents of Georgetown to commute within Georgetown with additional service to Haverhill, Lawrence General Hospital, Anna Jaques Hospital in Newburyport, and the Rowley Commuter rail Station. Sidewalks exist throughout the square and pedestrian safety has been enhanced with the inclusion of crosswalks and walking signals. Development of the rail-trail, which skirts the square, has been a priority for the community.

Environmental: Environmental issues should not affect downtown revitalization and redevelopment.

Recommended Strategies: The Town of Georgetown has worked diligently to develop a revitalization plan for the square. The proposed 40R smart growth-zoning district will take this process to the next level. At the spring 2009 Town Meeting the 40R provision was not approved. The Town should resubmit this request at another town meeting and attempt to address any concerns raised during the 2009 effort. The lack of a sewage system in the downtown continues to be problematic and the town needs to work to resolve this issue. The town should investigate funding through the MassWorks Program to assist in this effort. A MassWorks application would be enhanced and be highly competitive were a 40R District be approved by town meeting.

The bustling Georgetown Square sits at the busy intersection of Routes 133 and 97. Traffic congestion and safety have always been an issue and will remain so as this is a primary regional commuting route. Conducting a traffic study to identify potential improvements would be warranted.

Promoting and enhancing bicycling and pedestrian opportunities is one of the town's goals. The development of the Border to Boston rail-trail will certainly benefit the community and provide a connection to nearby Byfield. Additional bicycle and pedestrian connections within the community should be made to the rail-trail and other open spaces. The future possibility exists for building a second rail-trail that would provide a connection to Groveland and Haverhill.

National Avenue: Designated a Regional PDA

Land Use: This industrially and commercially zoned area is located just north of Route 133 and adjacent to I-95. The 95-acre site is mostly undeveloped although some underutilized older industrial buildings are on site. The site has been designated a Chapter 43D Priority Development Site and an Economic Target Area. The town anticipates that 400,000 to 500,000 sq. ft. of commercial/industrial space could be built, and that if multi-storied office or mixed-use were included, the build out could increase significantly. Land-use proposals received in prior years ranged from a supermarket facility to retail development.

Infrastructure: Properties in the I-95/National Avenue PDA have access to the public water distribution system, gas, electric and broadband. There is no public sewer system in this location.

Access: This site is located off Route 133, adjacent to exit 54 on I-95. Existing local roadways that also serve the site are Carleton Drive and National Avenue. The MVRTA operates the Ring and Ride in Georgetown, a curb-to-curb transportation service for the residents of Georgetown. This service allows residents of Georgetown to commute within Georgetown with additional service to Haverhill, Lawrence General Hospital, Anna Jacques Hospital in Newburyport, and the Rowley commuter rail station. C&J Trailways provides commuter bus service to Boston. The Massachusetts Highway department was evaluating locating a new park and ride bus transit facility within this PDA. The area is not bicycle or pedestrian friendly.

Environmental: This PDA does contain significant wetland areas, however, extensive upland areas exist within the site and the Town of Georgetown expects the potentially buildable areas to yield approximately 400 to 500 thousand SF of gross ground floor area at full build out. Multi storied buildings of higher density could increase this number significantly.

Recommended Strategies: This area of Georgetown is critical for the financial stability of the community and is large enough to have a major impact on the community (both positive and negative) when developed. The town should carefully review the zoning in this area, and determine whether it meets community goals and objectives for use types and scale and marketability.. In addition the Town needs to determine if the lack of sewer services will limit their development goals.

As an alternative to one or two-story large box facilities, the town should consider development of higher density, multi-storied mixed-use buildings on less area with large tracts of open space and pedestrian connections between buildings. The same square footage can be achieved and more land will be preserved as open space.

The town may also want to consider developing a form-based code for this important economic development area of Georgetown. In addition, due to traffic safety concerns, the Community should evaluate the traffic patterns in the area.

Norino Way: Designated a Regional PDA

Land Use: The Norino Way PDA is a 50-acre light industrial zoned site just east of I-95 and north of the Route 133 interchange. The site has been designated a Chapter 43D Priority Development Site. Existing development in this area totals approximately 367,000 square feet. Permitted uses in this zoning district (light industrial B) include wholesaling, light industry, and business offices. Retail uses are only allowed through the special permit process. Housing is not allowed in this zoning district, although a large housing development was built in close proximity to this site in the industrial zone through the state's Chapter 40B program. This housing development may serve to hamper industrial development of Norino Way, even though industrial uses are allowed by right. Commercial uses that serve this residential community may be more appropriate and marketable.

Infrastructure: This area is served by public water and gas, electric and cable. Properties are privately sewered.

Access: This site may be accessed via National Avenue just east of I-95, exit 54 or via Tenney Street and Long Hill Road. The MVTRA operates a Ring and Ride in Georgetown, a curb-to-curb transportation service for the residents of Georgetown. This service allows residents of Georgetown to commute within Georgetown with additional service to Haverhill, Lawrence General Hospital, Anna Jacques Hospital, and the Rowley commuter rail station. The area is not pedestrian or bicycle friendly.

Environmental: There are wetlands documented to the south and west, however, the Norino Way PDA has only 1% of its area designated as wetlands.

Recommended Strategies: The Town, in accordance with its 2007 Master Plan, is trying to create opportunities for economic development to help ease the tax burden on homeowners. An economic development committee has been working to determine the areas of town best suited to industrial and commercial development, and has streamlined the permitting process in these areas. Like most Merrimack Valley communities, the committees work to retain existing businesses and attract new business has been hampered by the economic recession. As also recommended in the Master Plan, the town should examine the dimensional standards and uses allowed in the commercial and industrial zoning districts and make sure they meet the town's current vision for economic growth. The industrial and commercial zoned areas adjacent to I-95, require zoning upgrades if the town desires to develop these areas as higher density "smart growth" centers that allow for a mix of uses. In addition, the Community should evaluate the traffic patterns in the area.

Route 133/Chestnut Street: Designated a Local PDA

Land Use: This six-acre site, located just outside the Georgetown Square on Route 133 (East Main Street), is zoned business and commercial district B. This zoning district allows for a wide-range of uses including retail sales, restaurants, auto sales and service, wholesaling, and business offices. Housing is prohibited in this zoning district. Sixty-five percent lot coverage, and a 30% maximum building coverage is allowed in this zone. The uses that currently occupy the site include a used car dealership, lumberyard, and liquor store. The developed portion of this site totals approximately 38,000 SF. Across the street on route 133 is a strip commercial retail development. This PDA has no special designation and was not part of the proposed smart growth 40R overlay district for the downtown core.

Infrastructure: This site is served by water, gas and other utilities except for sewer. The lack of a public sewer system is seen as an impediment to further development and to downtown revitalization.

Access: The site may be accessed via Route 133, which provides direct access to I-95. The MVTRA operates a Ring and Ride in Georgetown, a curb-to-curb transportation service for the residents of Georgetown. This service allows residents of Georgetown to commute within Georgetown with additional service to Haverhill, Lawrence General Hospital, Anna Jacques Hospital, and the Rowley commuter rail station. There is good pedestrian access along Route 133 with crosswalks. Shoulders also exist for potential bicycle access; however, this portion of Route 133 is not a recommended bicycle route on the Rubel bike map.

Environmental: The site is comprised of 5.37 % wetlands, and nearly 14% of the site is in the 100-year floodplain, which will affect any further development of this area.

Recommended Strategies: This PDA is an older commercial area just outside of Georgetown Square. While the site has active businesses, its function and appearance could be improved. If any of the existing businesses were to close, there may be the opportunity for redevelopment and revitalization. Zoning allows for many different uses, some of which may not be compatible with the vision the town has for downtown Georgetown. Examination of the zoning is recommended to insure that any future uses on this site will be in conformance with the town Master Plan.

GROVELAND

Groveland Village Center: Designated a Local PDA

Land Use: The Groveland Village Center is approximately 101 acres and is zoned business, limited business, and residence district C. A mix of uses is allowed in this area including medium density residential, offices, service establishments, business in single-family units, and retail establishments. The town's master plan calls for the creation of a vibrant mixed-use town center with a balance of small and medium size businesses and adjacent residences that provide a sense of place. The master plan also called for the development of an urban design plan for the town center and establishment of Groveland Square theme with unified lighting, signage, and streetscape improvements. Much of this work has been completed. The town also wants to expand waterfront access to the town center.

Infrastructure: The town center area has access to water and sewer service.

Access: Located at the entrance of town after crossing the new Bates Bridge, Groveland's village center focuses on the area around Main Street (Route 133) and Route 97 and Elm Park.

The new Bates Bridge, including new traffic signals and turning lanes, was completed in 2014, easing traffic congestion at the busy intersection of Route 97 and 113. The MVRTA provides Ring and Ride service (on demand) for Groveland residents 60 years and older. Gardner Street is a recommended bicycle route and Main Street is recommended as a secondary bicycle route. Sidewalks and crosswalks exist on Main Street and Route 97.

Environmental: Although much of Groveland is protected land and has natural resource constraints, the downtown village center has water and sewer service and no environmental constraints.

Recommended Strategies: The town of Groveland should continue with the Master Plan recommendations to redevelop and revitalize the village center. Some of the recommendations include: create a continuous network of sidewalks and passageways for safe and comfortable access within the downtown area; provide public access to the Merrimack River with scenic overlooks wherever possible; locate additional public parking spaces where feasible and convenient for shoppers; create a public/private partnership to seek investment interest in village center revitalization.

Route 97: Designated a Local PDA

Land Use: This 85-acre area is located on along Salem Street (Route 97) at the Georgetown town line. It is zoned mainly industrial with a small area zoned for business. The vision for this area as noted in the Towns' Master Plan is for mixed commercial, light manufacturing, and light industrial. Groveland's zoning bylaw, allows for residential uses within business and industrial districts. Consequently, this area currently contains some residential, some limited industrial development, and vacant land.

Infrastructure: There is water service to this area, but no sewer service. This will limit the amount of light industrial or commercial development that can occur.

Access: The site has access to frontage on Route 97, a significant regional roadway, but it does not have easy access to the interstate highway network. In addition, this site is impacted by the traffic congestion in Georgetown Square. The MVRTA provides Ring & Ride Service (on demand) for Groveland residents 60 years and older. Sidewalks are located on the southern side of Route 97 in the vicinity of this site. Route 97 is not a recommended bicycle route.

Environmental: Approximately 20% of this site is considered as wetlands, and portions of it may be designated as priority for open space protection. In addition, adjacent land across the town line in Georgetown is designated as protected open space.

Recommended Strategies: Infrastructure capacity is crucial to the economic development of an area, and due to lack of sewers in this area, industrial/commercial development is limited. The Town should evaluate whether public sewer services are required to support future growth of this location. There is some room for business development in this area along Route 97 at the Georgetown line, but the town must manage any growth carefully in order to protect the land designated by NHESP.

H.AVERHILL

Downtown Haverhill: Designated a State PDA

Land Use: The Downtown Haverhill PDA is approximately 169 acres along the northern bank of the Merrimack River. It is the City's traditional civic, industrial and commercial district and consists of almost 5 million square feet of building space.

This PDA is perhaps the most dynamic mixed-use area in the City. Long a center of commerce and industry, mill conversions completed by the Beacon Companies, Forest City Residential, and Planning Office of Urban Affairs are leading the PDA's transition to a 'smart growth' future. Major architectural assets include a significant inventory of late 1800's multistory brick commercial buildings / storefronts in Railroad Square and on Merrimack Street; many are tenanted and others are available. The PDA also hosts a variety of multifamily housing stock, some single-family homes at the periphery, professional services and retail including a full-service supermarket at its eastern end. Public vest-pocket parks are found in Railroad and Merrimack Squares.

Downtown Haverhill is generally zoned Commercial Central (CC). General and professional offices are allowed, as are most establishments principally offering convenience items, services and/or proprietary goods. Multifamily residential uses are subject to City Council approval and a special permit. Key structure dimensional and density maximums include: 2.0 FAR (Floor to Area Ratio), appropriate for the context; 60% lot coverage and 60' building height also apply. A 54-acre portion at the western side of the PDA proximate to Merrimack Street, Railroad Square and Essex Street is designated a Chapter 40R DSGOD (Downtown Smart Growth Overlay District). Within the DSGOD are five subzones: three according to density; and two according to use (multifamily and townhouse). The DSGOD's purpose is to allow greater flexibility in converting former mill space to live-work or other residential dwellings; to develop affordable and market-rate housing, and to create mixed uses as-of-right to minimize the need for relief under the City's Zoning Code. The City has also enacted a Waterfront District (WD) zone and a Merrimack Street Gateway Renaissance Overlay District (MSGROD). The WD is a comprehensive zoning district with eight distinct sub-zones with goals for creating mixed-use development appropriate for that zone. A major objective of the WD is to promote physical and visual connections between the Merrimack River and downtown. The MSGROD is aimed at encouraging additional smart growth, fostering a range of housing opportunities along with mixed-use development and provide for public and private access and use of the Merrimack River.

Infrastructure: Downtown Haverhill enjoys municipal water and sewer service, National Grid natural gas, and two telecommunications service providers. DSL and broadband service are available.

Access: Routes 97 (Ginty Boulevard/Winter Street), 110 & 113 (Washington/Merrimack Street), and 125 (Main Street) are both neighborhood streets and regional roadways. I-495 is approximately two miles west. MBTA Haverhill Line and Amtrak Downeaster passenger rail services call on the downtown Haverhill station. MVRTA operates nine bus routes that serve the PDA; many originate at its Washington Square station. Trucks provide freight service to local businesses. Ample sidewalks and crosswalks provide good pedestrian access. Bicyclists share local streets. The Basiliere Bridge is structurally deficient and should be rehabilitated. The intersections of Main@Water/Merrimack; Main@Winter/Summer; and Main@Ginty/Bailey had 78, 60, and 42 total accidents respectively between 2009-2011, but all three intersections are slated for improvements in 2015 – 2016.

Environmental: The PDA is densely developed urban land. 6.16 acres, or 5.04%, are classified as wetlands; 21.04 acres or 17.21% are within a 100- year floodplain.

Recommended Strategies: MVPC recognize the improvements made in the downtown and actively supports the City’s goals and policies for the PDA, particularly: 1) to retain existing business; 2) to increase mixed uses; 3) to improve streetscapes and provide visual and pedestrian access to the river, and 4) to generate new economic development in this area. The City must continue to aggressively pursue state and federal funds for infrastructure improvements vital to the continuation of the downtowns revitalization. Additionally, the city has completed portions of the downtown riverwalk, and the Bradford section will be under construction in 2015. The city has mapped priority bicycle routes and painted bike lanes in the downtown, sidewalks have been widened along Washington Street and neck-downs added, street trees have been planted, and the floodwall improved. The current plans for redevelopment of Merrimack Street are exciting and MVPC supports the proposed revitalization plans. Also, a study completed by MVPC found that the lower acre neighborhood that abuts the Haverhill Downtown could be enhanced by improved access and connections to the downtown. To this end MVPC recommends that the City consider redesigning and reconstructing Winter Street to be more pedestrian friendly.

Lifestyle Center: Designated a Regional PDA

Land Use: The Lifestyle Center site comprises approximately 336.84 acres northwest of downtown and consists of almost 900,000 Square feet of building space. Route 97 (Broadway) bisects the site and it provides access to local roads and to I-495. The northern site portion was initially developed as an industrial park with highway oriented businesses lining Broadway; some interior parcels have since redeveloped for ‘big box’ retail. Some commercial offices are present; other parcels remain undeveloped. The southern site portion is chiefly wooded land and a small commercial business at its frontage on Broadway. The PDA is particularly well buffered from surrounding suburban-scale residential developments.

Zoning for the entire southern site portion and some interior parcels on the northern site are Industrial Park (IP). Parcels along Broadway on the northern site are zoned Neighborhood Commercial (CN) and Highway Commercial (CH). Principal use and dimensional/density data includes:

- Residential uses: prohibited, all zones.
- Retail/service commercial uses: prohibited in IP; by-right CH. CN: special permit required for retail above 50,000 sq. ft.
- Eating/drinking establishments: IP (prohibited); by-right (CH). Dine-in restaurants by right only (CN).
- Wholesale, transportation and industrial uses: generally by-right (IP); prohibited (CH and CN).
- FAR: 1.25 (IP) and .50 (CN and CH).
- Maximum building heights: 50’ (IP); 40’ (CH), and 35’ (CN).
- Maximum lot coverage: 50% (IP); n/a (CH and CN).

Infrastructure: The site is served by municipal water and sewer. National Grid provides electric and natural gas services. Two telecommunications companies provide DSL and broadband services.

Access: The Lifestyle Center site is accessible via Route 97, just west of Exit 50 on I-495. MVRTA Route 15 provides fixed-route public transportation to part of this site with a turnaround at the Target store. Service operates hourly on weekdays and less frequently on the weekends. The MBTA Haverhill Line and the Amtrak Downeaster both provide passenger rail service to downtown Haverhill, approximately two miles east. Trucks provide freight service. Bicyclists and pedestrians typically share local roads; Route 97 at this location is a recommended bicycle route, according to a local bike map authority. Some sidewalks are present in the vicinity of the Target store. Route 97 is slated for reconstruction (traffic signals, sidewalks, bike lanes, etc.) between Research Drive and Silver Birch lane which will improve vehicular and pedestrian access in this area.

Environmental: 72.42 acres (21.6%) are wetlands; 51.5% acres (15.3%) are within a 100-year floodplain. Vernal pools may be present in the wooded wetlands.

Recommended Strategy: The site's proximity to I-495 and Route 97 is a significant asset. The City should ensure that the site is optimally zoned for maximum economic and environmental benefit with a more contemporary site plan. Low impact development techniques might reduce land consumption with less impact to nearby wetlands. Shared parking facilities and pavement management/parking removal should be considered. Future development at this site will also present an opportunity to upgrade public transportation, bicycling and walking infrastructure.

Upper Hilldale: Designated a State PDA

Land Use: The Upper Hilldale/Fondi Road Priority Development Area (PDA) is located in northern Haverhill, on the Plaistow, NH border. The area is comprised of five contiguous parcels of industrially zoned land totaling approximately forty-seven (47) acres. Thirty-eight (38) acres is undeveloped woodlands, and the remaining nine (9) acres is the site of WBE Extrusion Corporation, the owner of all five parcels. This area was designated a Priority Development Site (PDS) by the state in 2007. If developed, this will be the largest industrial development in Haverhill in nearly forty years.

Infrastructure: The City received a MORE grant in 2007 to extend sewer service to the site and to install new water lines and this project has been completed.

Access: This site is located off Hilldale Avenue, a rather small, rural, two-lane road. Access to the closest major highway, Route 495, is best done through Plaistow, NH on route 121 to 125, but access to and from this site to the highway is not ideal. Industrial development along Hilldale Avenue will ultimately bring more traffic to this somewhat isolated roadway. Both automobile and truck traffic will increase, and therefore it may be prudent to conduct a traffic analysis to determine what level of traffic the existing roadway can accommodate and whether the street can be upgraded and improved to handle the amount of traffic generated by build-out at current zoning. The City may need to consider re-zoning the site to a floor area ratio compatible with the amount of traffic the street can accommodate, if in fact the capacity cannot be increased. The site does not currently have access to public transportation, and Hilldale Avenue is a narrow road without shoulders or sidewalks and is not recommended for bicycle or pedestrian traffic.

Recommended Strategies: As an area designated a growth district by the city, this site does not have good access to the highway, and public transit does not serve this area. If the area is industrially developed, automobile and truck traffic will increase and it is doubtful whether Hilldale Avenue can accommodate much of an increase in traffic because currently, it is a small narrow two lane rural road. The city may want to consider completing a build-out analysis of this area and then conduct a corridor analysis to determine whether the roadway can accommodate the amount of build out allowed by zoning. If not, then the roadway will have to be upgraded, or the zoning changed to allow only for the amount of growth the road can handle.

Ward Hill: Designated a Regional PDA

Land Use: Ward Hill is located in the City's southwestern quadrant. Its business park, approximately 542 acres, is perhaps the most dynamic and visually prominent such park in the community. Ward Hill Business Park counts approximately 56 members and consists of approximately 2.7 million square feet of building space, including:

- food manufacturers and distribution, i.e. Cedar's
- medical uses, i.e. Whittier Rehabilitation Hospital
- light manufacturing
- warehousing/distribution
- agricultural uses, i.e. Spring Hill nursery & dairy
- large retail (BJ's Wholesale Club)
- hospitality, i.e. Comfort Suites,
- indoor recreation facilities, i.e. Valley Associates Ice Rink; Cedardale Health Club

Ward Hill is bounded by I-495 on the west, the Merrimack River to the north and south, and a mix of woods, residences and commercial uses on the east. The site is zoned Industrial Park (IP). No residential uses are permitted. 1.25 FAR, 50% lot coverage and 50' structure height maximums apply.

Infrastructure: City water and sewer services are available. National Grid provides electric and natural gas services. Two telecommunications companies provide DSL and broadband services in the community. The 56 member Ward Hill Business Park association provides certain maintenance and security services including marketing.

Access: Ward Hill is bisected by the I-495/Route 125 connector road which is the area's transportation gateway. MVRTA Route 14 (Bradford/Ward Hill) serves the northern and southern Business Park; peak headways are forty-five minutes. Trucks provide local freight service; bicyclists and pedestrians share local roadways.

Environmental: 16.79 or 3.10% is wetlands; 30.40 acres or approximately 6 acres are in 100-year floodplain. No other onsite environmental factors would limit development.

Recommended Strategies: The City's 2006 zoning revisions enabled the Park to become more competitive in the current economy. MVPC supports continued efforts by the city and the Business Park's Board of Directors to ensure the Park remain competitive by improving the infrastructure, image, and by expanding business opportunities.

LAWRENCE

Malden Mills: Designated a State PDA

Land Use: This 100-year old industrial mill site is located on the City's border with Methuen along Route 28 (Broadway). It consists of several buildings (approximately 1.8 million square feet) and vacant sites in Methuen and Lawrence adjacent to the Spicket River. The Lawrence portion of the site consists of 46 acres. The Arlington Mills Historic District is a part of this PDA and the City approved the Arlington Mills Smart Growth Overlay District (40R), making it easier for developers to obtain permits to transform the mill buildings into a mix of new uses, including housing. As a 40R, at least 20% of the housing units in each project must be maintained permanently affordable to local families. Several apartments have now been leased.

Infrastructure: This site is served by all the major utilities.

Access: Broadway (Route 28) is the PDA's frontage, providing connections to Routes 113, 213 and I-93 on the north and I-495 on the south. MVRTA Route 40 provides local and intercommunity connections. Bicyclists share use of existing roadways. Sidewalks exist along all streets providing easy pedestrian access to the site, but no sidewalks exist on the industrial site itself. Access upgrades are planned. Groundwork Lawrence constructed a 3.5 mile multi-use trail that runs along the Spicket River in Lawrence, which connects directly to Malden Mills.

Environmental: 6.16 acres or 13.4 percent of the land at this PDA is considered wetlands. 17.2 percent of the land is located within the 100-year floodplain.

Recommended Strategies: MVPC supports the City's rezoning of the site to allow a mix of uses. In order to further encourage new commercial development, the City should consider pursuing a 43D designation. Marketing will play a key role in determining the long-term success of this new community, not only for attracting new businesses, but also for encouraging individuals to consider the site for housing.

Lawrence Industrial Park: Designated a State PDA

Land Use: This PDA is zoned I-1, Industrial Park District, which is zoned to "permit less intense industrial uses in industrial sub-divisions and planned parks in order to facilitate the best use of land" but consists of almost 3 million Square feet of building space. It is located roughly one mile from I-93 and has rail access. The site has a total of 270 acres.

Infrastructure: This site is served by all the major utilities.

Access: Lawrence Industrial Park has good road access. It is closest to the River Road Exit off I-93, but can also be accessed via a variety of local roads. In addition, there are no major traffic congestion issues in the area. In terms of public transit, the site may be accessed via bus Route 37 out of the Buckley Transportation Center. MVRTA runs frequent service with 25-minute headways during peak periods.

Environmental: 31 acres, or 11.5 percent of the land at this PDA is considered wetlands. 62 acres are located within the 100-year floodplain.

Recommended Strategies: The construction of a rail siding to add storage capacity would greatly increase freight service. Existing freight rail users have indicated that they would expand their operations and hire additional workers when this is accomplished.

Merrimack Street: Designated a State PDA

Land Use: Located along the southern bank of the Merrimack River, this 117-acre PDA is home to Monarch on the Merrimack and the Riverwalk Properties, two of the City's most significant mill building redevelopment projects. It is zoned I-2 for General Industrial District. In December 2008, a portion of the PDA from 280-350 Merrimack Street was designated a 43D site, serving to streamline the permitting process. The Merrimack Street PDA is also part of Lawrence Canal District Revitalization Area Growth District, designated as such by the state's Growth Districts Initiative, which indicates that the PDA is open to significant new growth, whether commercial, residential, or mixed-use and consists of 4.5 million Square feet of building space.

Infrastructure: This site is served by all the major utilities.

Access: This development site is located in the heart of Lawrence along the southern bank of the Merrimack River and may be accessed via a variety of local roads as well as from Exit 44 on I-495. MVRTA's bus Route 33 runs along Merrimack Street. This route has frequent services with 25- minute headways during peak periods. In 2005, the Senator Patricia McGovern Transportation Center opened for service at 211 Merrimack Street. Service to the station is provided by the MBTA Haverhill/Reading Line from Boston to Haverhill, both inbound and outbound.

Environmental: 6.2 acres or 5.3 percent of the land in this PDA is considered wetlands. 32.4 percent of the land is located within the 100-year floodplain.

Recommended Strategies: The City should continue aggressive pursuit of infrastructure assistance in order to promote new development, as recommended in the Lawrence Canal District Strategic Master Plan. In addition, the City needs to find a better way to promote its federal Renewal Community designation to businesses.

Lawrence Gateway/Downtown: Designated a State PDA

Land Use: Many transportation improvements have been made in recent years that improve the accessibility to this section of Lawrence. In July 2008, Essex Street was reverted back to a two-way road, easing traffic flow and congestion. The Marston St/Canal St/Prospect St intersection has been rebuilt. Also, a new bridge to improve access to Island Street has been constructed.

In addition to a General Industrial District, this PDA also contains the Main Business District, as well as the 2003- enacted Reviviendo Gateway Overlay (RGO) District. In the RGO, mixed-use is generally permitted and encouraged in parts of the overlay, with residences above ground floor. Additionally, in the industrial sections of the new overlay, restaurants seating 50 or more are permitted in existing buildings.

The Lawrence Gateway/Downtown PDA is also part of the Lawrence Canal District Revitalization Area Growth District, designated as such by the state's Growth Districts Initiative, which indicates that the PDA is open to significant new growth, whether commercial, residential, or mixed-use and consists of almost 7 million Square feet of building space. Finally, this PDA is part of Lawrence's federally-designated Renewal Communities district, which provides for special tax benefits for qualifying businesses that operate in the PDA.

Infrastructure: This site is served by all the major utilities.

Access: This PDA is located in the heart of Lawrence and has extensive MVRTA transit service. The area may be accessed via a variety of local roads as well as from Exit 45 on I-495. Essex Street reverted back to a two-way road in July 2008.

Environmental: 11 acres or 5.8 percent of the land at this PDA is considered wetlands. 30.2 percent of the land is located within the 100-year floodplain.

Recommended Strategies: The City should continue to aggressively seek infrastructure assistance in order to promote new development, as recommended in the Lawrence Canal District Strategic Master Plan. In addition, the City needs to find a better way to promote its federal Renewal Community designation to businesses.

MERRIMAC

Merrimac Square: Designated a Regional PDA

Land Use: Merrimac Square is the 18-acre Village Center of Merrimac. It is located in the center of town, bisected by Route 110. Broad Street connects the square to I-495 at Exit 53. The Village Center zoning district is set forth "to preserve and enhance the historic built form of Merrimac Square, develop and sustain a vital local economy, provide goods and services used predominantly by residents of the Town, and provide a village that encourages people to live and work in the community." Some residential use is allowed. Generally, permitted uses include live-and-work spaces, home professional offices, and housing above ground floor in buildings with at least 30% commercial uses. Single family dwellings are prohibited. Multi-family dwellings are allowed special permit but generally restricted to occupancy by persons over 55 and/or people with disabilities. Permitted retail uses include small grocery stores, restaurants, baked goods, dry goods, clothing, hardware stores and medical and business offices and service establishments. Other retail and businesses uses allowed by special permit only. All permitted uses are subject to Site Plan Review.

Infrastructure: This site is served by all the major utilities.

Access: Merrimac Square is both a thoroughfare for drivers headed east/west as well as the primary pedestrian area in the town. Upgrades have been made to some of the sidewalks leading to the square as well as some of the crosswalks. Additional sidewalk improvements are being made as part of the town square reconstruction project. None of the roads experience regular high congestion. The MVRTA does operate limited bus service on the Route 51 fixed bus, which stops in downtown Merrimac.

Environmental: 1.5 percent of the land in this area is considered wetlands. No part is located in the 100-year floodplain.

Recommended Strategies: The Town of Merrimac updated its zoning to allow for more smart growth development in Merrimac Square. This was an important step. The town square reconstruction project, scheduled to be completed in 2015, will greatly improve pedestrian accessibility and vehicular traffic flows. MVPC recommends a continuation of efforts to improve the pedestrian experience. An economic development committee should lead efforts to attract new business to the area.

Merrimac Route 110: Designated a Local PDA

Land Use: Situated just east of Merrimac Square between Route 110 and I-495, this site has easy access to both major roads in town via Broad Street. This PDA consists of 159 acres divided into two zoning districts. The Highway Services district is set forth "to manage traffic flows on Broad Street between I-495 and Route 110, and provide goods and services that serve local and non-local customers." Permitted uses include retail/service and restaurants of 2,500 sq. ft or less; small grocery/convenient stores, and bakeries; plus banks/real estate/insurance offices, and service establishments. Other uses including larger restaurants by special permit only. Prohibited uses include retail over 10,000 sq. ft. The permitted uses of the Office-Light Industrial district generally include professional offices and light manufacturing buildings, health clubs, recycling centers and the like. Residential is not permitted in this PDA.

Infrastructure: Water and sewer upgrades would be needed at this site to accommodate substantial new development.

Access: None of the roads, including I-495, are routinely congested.. The MVRTA does operate limited bus service on the Route 51 fixed bus, which stops in downtown Merrimac. Sidewalks do exist on Route 110 and on Broad Street. None of the roads linking this area is a recommended bicycle route.

Environmental: 6.3 percent of the land in this area is considered wetlands. No part is located in the 100-year floodplain.

Recommended Strategies: If the Town of Merrimac decides that it would like to broaden its tax base, then a committee should be formed to assess infrastructure upgrades needed to attract businesses to the PDA. In addition, the zoning for this area should be reviewed to consider allowing for more of a mix of uses.

METHUEN

Aegean Park: Designated a Regional PDA

Land Use: The Aegean Park PDA is a 92.16-acre district in the Town’s northwest quadrant proximate to Interstate 93. Aegean Drive provides access to the northern Park segment, and is developed with large warehouses and commercial structures and has almost 700,000 square feet of building space. Aegean Drive is bordered by single-family residential properties to the north, east and west. The less-developed portion of Aegean Park is south of Pelham Street on Danton Drive. It borders “Peat Meadow” on the south and west; residential properties at the northwest corner, and Interstate 93 on the west. Zoning is Limited Industrial District (IL). Permitted uses include small retail, warehouses, and storage facilities. Special permits are required for some retail. Shopping centers and residential uses are prohibited. Key structure dimensional and density maximums include: 35% lot coverage and 45’ height which yields a low-density development aspect that is common to most industrial parks.

Infrastructure: The PDA is served by municipal water and sewer. Columbia Gas provides natural gas service to the City. Statewide data indicates that Comcast is the sole broadband service provider.

Access: The Park has good access to local and regional roadways, particularly to Interstate 93 via the Pelham Street exit. MVRTA provides limited transits service to the Pelham Street Area. Trucks provide freight service. Bicyclists and pedestrians share local roads. Access to Interstate 93 is improved due to a new turning lane from Pelham Street onto I-93 southbound. The City is pursuing improvement of the intersection of Danton Drive/Pelham Street.

Environmental: 28.4 acres (30.8%) are classified as wetlands; 40.11 acres (43.52%) are within a 100-year floodplain, and 42 acres (45.6%) are classified as rare species habitat. A potential vernal pool may be present.

Recommended Strategies:

MVPC supports the City of Methuen’s Master Plan recommendations for further development of the Park, including proposed roadway access upgrades. Bicyclist and pedestrian accommodations are recommended.

Branch Street: Designated a Regional PDA

Land Use: This site comprises 28.93 acres in the community’s southwest quadrant adjacent to the Merrimack River. Much of the site is developed for office / commercial use with three buildings (comprised of approximately 400,000 square feet of space) and an expansive surface parking lot adjacent to Interstate 93 and Route 113. The north and west site portions are buffered from adjacent residences by woods. Route 113 and industrial/commercial land uses abut the site on the south. The site is zoned Business Highway (BH as follows:

- By-right uses include: most agricultural, municipal offices and recreation facilities, medical clinics, general offices, personal services, small/medium retail, storage, warehouse and wholesale use.
- Special permit uses include: public utilities, eating/drinking establishments, general business, motor vehicle use, industrial/commercial, research and development, select manufacturing uses.
- Prohibited uses include: all residential uses, including planned unit and open space residential developments.

Dimensional and density maximums include: 25% lot coverage and 40’ maximum structure height. There is no floor area ratio. The City’s 2007 Master Plan goals appear consistent with the character of this site.

Infrastructure: Branch Street is served by municipal water and sewer. Columbia Gas provides natural gas service to the City. Comcast provides broadband service to Methuen.

Access: This development site is located along Route 113 just before the Route 110/113/Interstate 93 Rotary. MVRTA Route 35 provides direct site access and MVRTA Route 41 operates within walking distance and operates on 25 minute headways in peak periods. Bicyclists share use of local roads. Pedestrians can access the site using sidewalks on the north side of Route 113.

The Merrimack Valley Metropolitan Planning Organization (MVMPO) programmed reconstruction of the Interstate 495 / Route 110 rotary in the 2013 and construction began June, 2014. . This project involves construction of a partial cloverleaf interchange for the I-93 NB and I-93SB ramps. Particularly, this project includes signalization of Route 113 at the site access. The project is slated to take 4 years to complete.

Environmental: .04 acres or 15% of the site contains wetlands. None of the site is within a 100-year floodplain. No rare species, vernal pools or other environmental factors are documented onsite.

Recommended Strategies: MVPC supports the City's goal to maximize development potential at this site and the designation of the site as a Chapter 43D Priority Development Site (PDS). Its regional highway and transit connections offer significant potential.

Downtown Methuen: Designated a Regional PDA

Land Use: Downtown Methuen comprises 59.63 acres at the City's geographic center. It hosts a traditional mix of multi-story commercial buildings, institutions and residences bisected by the Spickett River north to south. It is bounded by open space on the north and east; by institutional and residential uses to the south, and a former Boston and Maine Railroad right-of-way on the west. The zoning is Central Business District (CBD). Allowed uses include: retail, service, office and residential; personal services and restaurants. Generally, no single and two family residences are allowed. Special permits are required for multi-family dwellings, small and medium retail, and other specified uses. Dimensional and density standards permit greater densification, with no floor-area ratio standard, and maximums of 40% lot coverage and 45' height. The City's goal is to promote mixed uses in order to diversify economic activity and to generate and expand this portion of the City as its compact, walkable living and working area.

Infrastructure: PDA properties are served by municipal water and sewer. Columbia Gas provides natural gas service to the City. Statewide data indicates that Comcast is the sole broadband service provider.

Access: Route 28 (Broadway) bisects Methuen's downtown, providing very good local roadway access. Route 213, ½ mile north of downtown, connects Downtown with Interstates 93 and 495 to the east. MVRTA Route #40 operates on Broadway; weekday peak hour service headways are 25 minutes. MBTA Haverhill Line commuter rail is accessible at the McGovern Transportation Center in Lawrence and in Andover. Bicyclists share local roadways. Pedestrian accommodations are good and improved with the completion of Riverwalk Park, which connects the new retirement community on Gleason Street to various downtown destinations.

Environmental: 4.76 acres (7.97%) of the site is classified as wetlands. 10.58 acres (17.75%) are within a 100-year floodplain. No rare species, vernal pools or other environmental factors are documented onsite.

Recommended Strategies: The City should consider designating the downtown as a 40R District, 43D for housing district, or Housing Development Incentive Program district. Downtown has been identified as a potential site for a station along the proposed “Bus on Shoulder” service recommended in the I-93 Transit study completed in 2008. The City should continue its support for this potential service and plan for the potential transit oriented development (TOD) that could occur because of this service. The City’s Master Plan recommends general consideration of shared parking; downtown is a possible candidate. It is also recommended that Gleason Street sidewalks be upgraded and that the Riverwalk be completed to the Music Hall.

Griffin Brook Industrial Park: Designated a Regional PDA

Land Use: The Griffin Brook PDA comprises 110.70 acres. The PDA is approximately 50% developed as an industrial park, which represents over 600,000 square feet of building space with the remainder in wooded land and wetland areas adjoining Griffin Brook. Single-family residential properties and wooded land abuts on the west; Hickory Hills Golf Club to the north; homes on Lowell Street (Route 110) on the east, and Wheeler Road residences on the south. Zoning designates the area as a Limited Industrial District (IL).. The IL district is intended to accommodate light industrial uses. Residential uses are prohibited and retail uses are allowed by special permit only. No FAR; 35% lot coverage and 45’ structure height maximum applies.

Infrastructure: Municipal water and sewer serve the PDA. Columbia Gas provides natural gas service to the City. Comcast provides telecommunications services to the City of Methuen including broadband Internet.

Access: The PDA is located between Routes 110 and 113 approximately one mile west of Interstate 93; its sole access is Route 110 which leads directly to the Interstate 93 rotary. The Route 113/110/I-93 rotary is under construction for access and capacity improvements and is slated to be completed in 2018. MVRTA Route #41 (Lowell-to-Lawrence) operates on Route 110, providing 25-minute headways during peak periods. MBTA Commuter Rail service is available at the McGovern Center in Lawrence and in Andover. Bicyclists share local roads; pedestrians can use sidewalks on the north side of Route 110 east of the I-93 rotary.

Environmental: 12.91 acres (11.66%) are wetlands; 47.44 acres (42.85%) are within a 100-year floodplain. Rare species habitat comprises .13 acre (12%) of the site; no vernal pools or other environmental factors are found on site.

Recommended Strategy: MVPC supports the City’s Master Plan goal to fully develop this PDA.

Lindbergh Avenue: Designated a Local PDA

Land Use: The Lindbergh Avenue PDA is zoned Limited Industrial District (IL) which is intended to accommodate a variety of light industrial uses. Residential uses are prohibited and retail uses are allowed by special permit. No FAR; 35% lot coverage and 45’ maximum building height maximums apply.

Infrastructure: Lindbergh Avenue is a private road. A portion of the PDA properties are served by water and sewer. Columbia Gas provides natural gas service to the City. Comcast provides telecommunications services to the City of Methuen including broadband Internet.

Access: Lindbergh Avenue connects to Interstate 93 via Mystic Avenue and Pelham Street. MVRTA Route #40 operates on Pelham and Mystic Streets, but does not enter Lindbergh Avenue. Freight movements to/from this PDA would utilize trucks. Bicyclists and pedestrians generally share local roads. A new vehicular turning lane on Pelham Street onto the I-93 southbound ramp has been constructed. A MassDOT Park-and-Ride Lot is located on Pelham Street, east of Route 93; MVRTA provides three Boston-bound trips per weekday from this location.

Environmental: .99 acre (4.73%) is classified as wetlands. No other environmental factors are documented.

Recommended Strategies: The City's 2007 Master Plan recommends redevelopment of the area once the City-owned Department of Public Works yard and garage is relocated. The zoning should be reviewed for land use and appropriate densities. If developed as planned, Lindberg road would need to be widened and upgraded and a traffic study conducted to assess suitable access off Pelham Street. Bicycle and pedestrian improvements need to be made in the area.

Malden Mills: Designated a State PDA

Land Use: This PDA is a traditional New England mill complex south of Methuen's downtown. It consists of several buildings (over 1.2 million square feet) and vacant land in Methuen and Lawrence adjacent to the Spicket River. The site is approximately 19.6 acres. Single, two and multifamily residences mix with commercial uses along Broadway, on the northeast and east site boundaries. Mill structures and vacant lots occupy the southern site portion. The Spicket River and Stevens Pond generally serve as the west and north site boundaries. Land uses within one mile of the site are densely developed; Methuen's central business district is north; the Arlington neighborhood to the east; the Lawrence portion of the Malden Mills site on the south, and a mix of wooded slopes and residential uses along the west shore of the Spicket River.

The Methuen portion of the Malden Mills site is comprised of property in three zoning districts: 1.) Limited Industrial District (IL). General industrial, warehousing and storage; office uses and certain retail are permitted. Warehousing and bulk material storage is permitted. Motor vehicle uses and most retail uses require a special permit. Residential uses and mixed uses are prohibited. Dimensional and density maximums include 35% lot coverage and 45' building height; no floor/area ratio applies. 2.) Multifamily B (MB), which allows single, two and multifamily residences and small retail uses permitted. Most other residential, municipal, institutional and retail uses allowed require a special permit. Prohibited uses include large-scale retail or medical; bars, restaurants, motor vehicle businesses; general business or industrial uses. Structures up to 35% lot coverage and 40' building height are permitted. 3.) Highway Business District (BH), which allows retail, wholesale, office and service uses by right; certain other retail uses require a special permit. Residential uses are prohibited. Structures up to 35% lot coverage and 40' height are permitted; no floor/area ratio applies.

Infrastructure: PDA properties are served by municipal water and sewer. Columbia Gas provides natural gas service to the City. Comcast provides telecommunications services to the City of Methuen including broadband Internet.

Access: Broadway (State Route 28) is the PDA's frontage, providing connections to State Routes 113, 213 and Interstate 93 on the north and Interstate 495 on the south. MVRTA Route #40 provides local and inter-community connections. Bicyclists share use of existing roadways. Sidewalks exist along all streets providing easy pedestrian access to the site, but no sidewalks exist on the industrial site itself. Access upgrades are planned. Groundwork Lawrence has constructed a multi-use trail that runs along the Spicket River in Lawrence, which connects directly to Malden Mills in Methuen.

Environmental: .20 acre (1.01%) is classified as wetlands; 4.55 acres or 3.23% is within a 100-year floodplain. No other environmental factors are documented onsite.

Recommended Strategies: MVPC supports the City's recent rezoning of the site to allow a mix of uses; however, the City might reconsider whether residential uses can constitute a greater proportion of the overall site development, subject to market conditions. The objective would be to create a more active, economically productive site perhaps encouraging conversion of old mills into a mix of uses. Permitted uses in the Limited

Industrial site portion include warehousing and storage, these uses tend to generate modest neighborhood benefits and/or activities.

The Loop: Designated a Regional PDA

Land Use: This PDA is the site of a very active commercial development known as “The Loop” and consists of over 1.4 million square feet of buildings and includes entertainment, restaurant and retail uses. The PDA is comprised of two zones: East (281.84 acres), and West, which includes “The Loop” (207.86 acres). The eastern portion has also been referred to as Old Ferry Road. Zoning: East (Highway Business, BH): Retail, wholesale, office and service uses permitted. Residential uses prohibited. 35% lot coverage and 40’ structure height maximum applies. Certain retail uses subject to special permit. West (Limited Business District, BL): Primarily for offices, small-scale retail and general business, personal service establishments, research/development labs, and light industrial, i.e. product assembly. Certain retail, residential uses: attached dwellings, multi-family developments, and planned unit developments are subject to special permit. 30% lot coverage and 45’ structure height maximum applies. The west portion of the Loop has a dense Chapter 40B residential development.

Infrastructure: PDA properties are served by municipal water and sewer. Pleasant Valley Street has water and sewer; some minor infrastructure upgrades might be required. Columbia Gas provides natural gas service to the City. Comcast provides telecommunications services to the City of Methuen including broadband Internet.

Access: Routes 113 and 213 connect the Loop with local roads as well as Interstates 93 and 495. MVRTA provides service Mondays through Saturdays to the Loop and seasonal service from the Loop to Salisbury and Hampton Beaches. Bicyclists and pedestrians share existing roadways; there are also sidewalk segments but little connectivity.

Environmental: Wetlands: East (27.99 acres/9.93%) and West (13.77 acres/6.62%); 100-year floodplain: East (41.67 acres/14.86%) and West (11.80 acres/5.68%).

Recommended Strategy: MVPC supports the City’s Master Plan goals for the Loop, which are similar to City goals for PDA’s proximate to major roadways. Regional interstate access, utilities and onsite land uses are positive attributes. Considering the residential uses that abut this PDA improving pedestrian access would be helpful and encouraged. Additional transit service should be considered as PDA activity intensifies.

NEWBURY

Route One Corridor: Designated a Local PDA

Land Use: This 517 acre area is located on Route 1 (Newburyport Turnpike) beginning at the rotary and commuter rail station and runs south to Boston Road. The PDA is zoned Business and Light Industrial (BLI). Professional offices, retail establishments, mixed use structure, restaurants, and most industrial uses are allowed by right. Residential uses are not allowed. In 2008, the area adjacent to the commuter rail station was proposed to become a chapter 40R smart growth, mixed use, transit oriented development. The project, which achieved several objectives outlined in the Town's Master Plan, envisioned a high-density, mixed use pedestrian friendly development anchored by the commuter rail station. The plan failed to garner the necessary approval from town meeting in 2008. This area could still be developed as an industrial site or a scaled-back version of the TOD may re-surface in the future.

Infrastructure: Public water supply is available from Newburyport, but there is no town sewerage in Newbury. It may be possible to connect to the sewerage system in nearby Newburyport.

Access: The Route One Corridor PDA follows the BLI Zoning District that runs along Route 1 from the Newburyport line to Boston Road and roughly bounded by Highfield Road, Boston Road and the commuter rail tracks. The Newburyport MBTA commuter rail station is located in this PDA, and transit service is from the MVRTA's fixed bus Route 51. Direct access to the parcels in this area is mainly from Route One, Highfield Road, and Boston Road. For pedestrians, Route 1 is a high-speed road; the rotary is not accessible or safe and there is currently no safe access across Route 1 at any of the intersections. Newburyport is developing the Clipper City Rail Trail; the first phase opened in 2010 and connects the downtown to the train station. The second phase will loop around farther east and end up on the waterfront by Joppa Flats and is under design. In addition, Newburyport, Newbury, Essex National Heritage Commission, MVPC, the Parker River National Wildlife Refuge (NWR) and the National Park Service partnered to examine bicycle and pedestrian connections between the train station and the NWR. The consulting firm, Vanasse, Hangen, Brustlin, Inc. (VHB), provided several recommendations for better access around the rotary, across Route 1 for the second phase of the Clipper City Rail Trail and better connections between the properties all the way to the NWR. Further funding is needed to pursue those opportunities.

Environmental: There are some environmental constraints in this area. Approximately 22% of the site is designated as wetlands, and 13% is within the 100-year floodplain. There are areas of this PDA that are located in a Water Supply Protection Overlay District.

Recommended Strategies: The proposed smart growth development called Village at Little River met several land use and economic development objectives identified by the Town in their 2007 Master Plan. The Town should work towards development of this area as a pedestrian friendly, mixed-use TOD within a scale that is acceptable to its residents. Large sections of this BLI zoning district have been identified as parcels for potential open space acquisition. The Town should consider and weigh this option as development occurs in this area.

Central Street at Kent Way: Designated a Local PDA

Land use: This 16 acre area is approximately 25% developed / 75% wooded or open land. Key development parcels include Olde Byfield Business Center, comprised of commercial space, a self-storage facility and surface parking. The Parker River divides the site on a northwest/southeast axis; industrial uses have clustered on the River at this location since colonial times. Adjacent land uses include residential/agriculture (south and north); commercial, highway and Byfield Village (west), and I-95 to the east. The property is subject to two zoning districts: Olde Byfield Business Center is zoned Commercial Highway-A (CHA); land on the west bank of the Parker River is zoned Light Industrial Byfield (LIB). CHA allows most commercial and retail uses, restaurants, professional business offices, and personal care establishments. Medical care and assisted living facilities are by special permit. Most industrial uses and all residential uses are not allowed. The LIB District allows light manufacturing and fabrication, machine shops, and establishments servicing cars and trucks. Single and two-family homes are allowed.

The area is subject to two overlay zones: Flood Hazard and Water Supply Protection.

Infrastructure: The Byfield Water Company serves the immediate area; there are also private wells. Most properties utilize on-site septic tanks; some new developments in the community have installed package treatment plants. National Grid provides electricity; natural gas service is not available. Verizon and Comcast provide telecommunications services.

Access: Portions of the site are accessible to Main Street (west of the Parker River) and from Kent Way, east of the Parker River. Main and Central Streets provide direct access to I-95; Site/interstate connections are optimal at less than ¼ mile. Trucks provide local freight service; bicyclists and pedestrians share local roads.

Environmental: 44.45 acres (98.77%) of the site is located within the Town's Water Supply Protection District – particularly relevant to the Town's Forest Street Well which is within one mile to the west. A federal Rivers Protection Act 100' buffer overlays the site, following the Parker River's centerline. 2.50 acres (5.56%) are classified as wetlands.

Recommended strategies: The site's proximity to the Parker River and a water supply, plus other environmental factors, requires protection of certain site features and innovative design/construction for the remainder. MVPC supports the Town's Master Plan recommendations for this area, and several of these have been implemented since the Plan was adopted in 2007 including upgrading zoning, site plan review, and transportation studies and improvements.

Central Street at Fruit Street: Designated a Local PDA

Land use: This PDA is a 45 acre site of which approximately 80% remains undeveloped. Pearson's Plaza occupies the southern portion of the site along Central Street. Site is bounded by: I-95 (west); Central Street (south), woods, agriculture and residential development to the north and east. The site is zoned Commercial Highway (CH). Allowed uses include most commercial uses, restaurants, research and development, and agriculture. Wholesale and transportation allowed by special permit. Residential is not allowed. 50% lot coverage and 35' height maximums apply.

Infrastructure: The Byfield Water District provides service, and there are private wells. Most properties utilize on-site septic systems; some new developments in the community have installed package treatment plants. National Grid provides electricity; natural gas service is not available. Verizon and Comcast provide telecommunications services. DSL is available; fiber-optic to the premises services is planned. Actual services to properties must be individually confirmed.

Access: Properties have excellent vehicular access; Wayside Avenue connects to Fruit Street, to Central Street and I-95 within one half-mile. Commuter Bus service to/from Boston is provided by the Coach Company from Pearson's Plaza. Trucks provide local freight service. Bicyclists and pedestrians share local roads; few if any sidewalks exist. The future Border to Boston Trail will, when developed, pass through Byfield Village at approximately one mile west of Wayside Avenue. The trail will connect with MBTA Commuter rail at Newburyport Station. The Coastal Trails Coalition trails network, a 30-mile network of off-road trails and on-road bicycle lanes connecting the communities of Amesbury, Salisbury, Newburyport and Newbury, is also expected to benefit the Town generally.

Environmental: There appear to be no environmental concerns that would preclude development, although some parcels are in 61A.

Recommended Strategies: In 2012, the Town re-zoned a large section of this site from Residential to Commercial Highway and has identified this area as their "prime development area." Wayside Avenue, like other commercial areas in Newbury, can support a certain amount of development while maintaining infrastructure standards limited by water and sewer capacity. Its proximity to I-95, the presence of lower density residential with substantial wooded buffer areas and few, if any documented environmental factors are significant assets. The Town may want to consider this area as a potential Chapter 43D designation. Redevelopment could include commercial, office, research and light manufacturing uses.

Byfield Village Center: Designated a Regional PDA

Land Use: The Byfield Village Center is a densely settled area of approximately 24 acres located west of I-95 and incorporates the area surrounding the intersection of Main Street and Central Street. This area is an important civic, cultural, and neighborhood service center for the southwest portion of Newbury. The Town's library is located in this PDA. The area is zoned Byfield Village Business District (BVB) and allows a mix of uses including single and two-family housing and multi-family housing up to 4 units by special permit, retail and office, restaurants, and community facilities.

Infrastructure: Byfield Village Center has access to public water infrastructure, but there is no public sewer in this section of Newbury.

Access: Easily accessible from I-95 at exit 55, Byfield Village is situated in the southeast corner of Newbury. Central Street leads out of Byfield center to I-95 and eventually to Route 1. Main Street connects this section of Newbury to Georgetown, Newburyport, and West Newbury. The MVRTA and Town of Newbury instituted Ring & Ride service in Newbury in 2009. Ring & Ride is a curb-to-curb service available to Newbury residents. There is little in the way of pedestrian access, except for a few crosswalks and sidewalks. The Border-to-Boston Trail is being planned, which will go through the center of Byfield.

Environmental: Byfield Village is in the Water Supply Protection Overlay District.

Recommended Strategies: Zoning in the village center of Byfield promotes a healthy mix of uses consistent with the historic development pattern of the area. It is the only area that allows a mixture of retail, office and housing. MVPC recognizes that the town has followed recommendations from the Master Plan and improved the zoning in Byfield in 2012. The town should work to improve pedestrian access in this village center.

NEWBURYPORT

Downtown Center: Designated a State PDA

Land Use: Downtown Newburyport is comprised of approximately 150 acres of densely developed mixed uses. It includes retail, service, and office uses. The scale is intended to reinforce downtown's role as the focus of activity in Newburyport. Multi-use development combining residential and business use is encouraged. Activity is oriented to pedestrian traffic and centralized parking is in place. Businesses that consume large amounts of land and interrupt pedestrian circulation and shopping patterns, and single and two-family dwellings are prohibited. Newburyport's historic downtown has been a bustling center of activity and vitality for the last three decades. Unlike many communities located on the water, Newburyport, to its' credit, has developed a much better connection to the water than most, although there are still areas where improvement can be made towards a more functional, attractive and accessible waterfront. Newburyport continues to work to improve riverfront access and functionality.

Infrastructure: Downtown Newburyport is served with water, gas, sewer, and broadband.

Access: The downtown may be accessed via Route 1, which connects north to Salisbury and south all the way to Boston along the coast. Alternatively, Route 113, High Street, connects to Interstate 95 at Exit 57. By traveling north on I-95 one Exit across the Merrimack River, a connection can be made with I-495 via Route 110. Newburyport is serviced by the MVRTA's fixed bus Route 51, which also connects with the Ring and Ride service out to Plum Island. In addition, commuter bus service into Boston stops both downtown and at the Park and Ride on Storey Avenue (Rt. 113) adjacent to I-95. Newburyport also has a commuter rail station off of Parker Street and Route 1.

Newburyport is the first community in the Merrimack Valley region to create bicycle lanes, which are on High Street. Beginning at the waterfront, the Clipper City Rail Trail is a multi-use trail that connects the downtown to the train station.

Environmental: Approximately 3% of the downtown is considered wetlands, and 11% is in the 100- year floodplain.

Recommended Strategies: Newburyport has a very vibrant downtown redeveloped in the 1970's using smart growth principles well before that term became popular. As economic conditions fluctuate, the city needs to work to keep the downtown attractive and keep vacant storefronts to a minimum. The city needs to continue implementation of the waterfront plan to make the immediate riverfront more functional and accessible. Plans to redevelop and expand the waterfront should be encouraged and supported.

Road infrastructure is adequate for accessing downtown, though it does experience seasonal traffic congestion and truck deliveries on State Street can cause expected traffic congestion. However, parking is inadequate during the summer months and efforts should be made to consider a parking structure to address this issue. A transit study should also be undertaken that will look at the option of creating a seasonal circular bus between Amesbury, Salisbury and Newburyport, including the commuter rail station so that the existing underutilized parking available may more accessible for summertime use. Other transit needs include synchronized connections between the downtown and the commuter rail.

Planning should continue for the second phase of rail-trail construction, the City Branch Trail that will create a loop with the Clipper City Rail Trail.

Newburyport Industrial Park: Designated a Regional PDA

Land Use: The Newburyport Industrial Park PDA is an area of approximately 443 total acres of which approximately 80 acres is developed and has almost 3.5 million square feet of building space. This area is zoned Industrial-1 (west of Henry Graf Jr. Road) and Industrial 1B (east of Henry Graf Jr. Road), which allows a broad range of manufacturing and industrial uses as of right, along with accessory retail uses. Most non-industrial uses are prohibited, as are all residential and marine uses. Parcels in this zoning district must be at least 50,000 square feet in area, maximum lot coverage ranges from 30 to 40 percent, depending on use, and buildings cannot exceed 40 feet in height.

According to Newburyport's Strategic Land Use Plan, this area is likely to see incremental, infill development on the remaining buildable lots, and possible expansion of existing developed lots where feasible given zoning, environmental considerations, and existing covenants on the land.

Infrastructure: All parcels in this PDA have access to public water, sewer, gas, and broadband.

Access: The primary access roads that flank the Industrial Park are Low Street and Route 1. Parker Street runs through the site and provides access to Route 1. Low Street provides access to Route 113 close to the Exit 57 interchange of I-95. Scotland Road and Park Street also provide access to I-95 in Newbury at Exit 56. During the period 2009–2011, 27 accidents occurred at the intersection of Storey Avenue @ Low Street.

The MVRTA's fixed bus route 51 does provide access to this area along Low Street, Henry Graf Junior Road and Parker Street. The train station is situated in the southern section of this site below Parker Street. The Clipper City Rail Trail will be accessible from a portion of the Industrial site and provide easy access to the train station and downtown.

Environmental: Future development in this PDA can occur, but will be somewhat limited due to 29% of the land being in water supply, 7% being wetlands, and 3% being in the 100-year floodplain.

Recommended Strategies: The City's Strategic Land Use-Plan suggests that future development in the industrial park follow different site planning guidelines than what has been built in the past. Most street frontages have been dominated by parking lots; future building should be closer to the street line with parking in back. The Plan also recommends that higher density development be achieved through redevelopment of existing parcels, rather than on vacant parcels of land.

In addition, MVPC strongly supports the proposed 40R district near the MBTA Commuter Rail Station and the Route 1 traffic circle. All new development should be multi-story, mixed-use buildings with much greater total floor area. Recommended uses in this area include retail, office, and residential with integrated parking and shared lots. Following density and design now in the downtown, this area could be a dramatic new gateway to Newburyport.

Recent redesign of the Low Street and Storey Avenue intersection has reduced congestion and reduced collisions. The site is also impacted by the Route 1 rotary and improvements to this intersection would be beneficial. Pedestrian safety would be significantly enhanced with the inclusion of sidewalks on area roads.

NORTH ANDOVER

Osgood Landing: Designated a State PDA

Land Use: Osgood Landing is a 169-acre site located at 1600 Osgood Street in North Andover. The site is home to over 1.5 million square feet of building, which previously housed the operations of Lucent Technologies. Approximately 126 acres of this Priority Development Area has been approved by the commonwealth as a Chapter 43D Priority Development Site (PDS), and the remaining 43 acres has been approved as a Chapter 40R Smart Growth Overlay district. In the spring of 2004, the Town entered into a tax increment-financing plan with the owners of the property, Ozzy Properties.

The Osgood Landing Master Plan and its zoning favors a mix of uses to complement the existing office and manufacturing space, and at the same time encourage a pedestrian oriented campus. Zoning allows for a wide range of complimentary uses including retail, restaurant, and professional services such as banks, office supplies, and day care. The high-density 40R residential district, which accommodates up to 650 housing units, is but a 5-minute walk from the principle structure.

Infrastructure: The Osgood Landing site is served by existing municipal water and by a private sewer line that leads directly to the greater Lawrence sewer district. The property is bordered on the north by the Haverhill line of the MBTA commuter rail, with a spur onto the property for freight.

Access: The Osgood Landing PDA is located 2.5 miles from interstate 495 via route 125 and the Ward Hill connector. Route 125 is a four-lane road from the site to the connector. Access to Interstates 93 and 95 are an easy 10 and 15-mile drive on route 495. Several well-defined entry points access the site from route 125, two of which are controlled by traffic signals.

As mentioned, the Haverhill line of the commuter rail borders the site. The possibility of constructing a commuter rail station has been discussed and would provide a benefit to the greater North Andover community. The proposed rail station would accommodate approximately 300 parking spaces.

Pedestrian access around the site is currently very limited, but the master plan calls for the provision of walkways and trails, and a clear hierarchy for pedestrian, car and truck circulation.

Environmental: There are some wetlands on site but they appear to be well defined and only subject to local jurisdiction through the Wetlands Protection Act. There is however a wetland on the west property line that is identified as a perennial stream which will be subject to permitting through the Rivers Protection Act. Stormwater management throughout the site is antiquated and will need to be updated and improved as the property is redeveloped.

Recommended Strategies: Osgood Landing has a well thought out master plan, which should allow the area to develop into a true smart growth center. MVPC has conducted a corridor analysis taking into account the development of Osgood Landing as well as the surrounding area. Specific corridor improvements and zoning recommendations were made, namely: limited cub cuts, Route 125 widening and signalization control and sensitive design that allows for clustering of development to maximize open space retention. Some of the recommended zoning upgrades have been approved. Access to the rail spur is limited and improvements are needed.

Route 114 Corridor: Designated a Local PDA

Land Use: The Route 114 Corridor PDA comprises 394 acres along this state roadway. Boundaries: Lawrence City line (north); centerline of Route 114 (east); Flagship Drive / Route 114 intersection (south) and Andover town line (west). Prominent landmarks include Merrimack College @ Routes 114/125 intersection; the Willows Business Park complex; restaurants, numerous commercial enterprises, and multifamily housing developments. About 17% is presently developed and has well over 1 million square feet of building space. The zoning is variable according to location: one industrial (Willows Business Park); four businesses, and three residential. The industrial zone allows public buildings, professional offices and educational institutions; manufacturing and medical uses, research & development, and some recreational uses. Other recreation uses and daycare centers require a special permit. Residential is prohibited. The business zones in general allow religious, professional offices, public buildings, research and development, and retail of varying types/sizes; like industrial zones, residential uses are generally prohibited. The residential zones allow various types of housing units and agriculture. Most recreational uses, nursing facilities, daycare and public buildings require a special permit.

Manufacturing, storage yards, medical uses, warehouses and wholesale distributors are prohibited in the residential zones.

Infrastructure: Properties are well served with Town water and sewer; National Grid electric, and Columbia and National Grid natural gas. Two telecommunications companies provide cable and Internet service; DSL is available. Fiber optic to sites along the corridor is not yet available.

Access: Route 114 from I-495 in Lawrence to Willow Street in North Andover is a very congested corridor with several different individual problem areas. Traffic congestion during peak travel periods occurs between Willow Street and the Andover Bypass (Route 125) and between the Shawsheen River Bridge and Waverly Road (in Lawrence), due to the roadway narrowing, thereby reducing its carrying capacity of these two choke points.

Some intersections along Route 114 may experience safety problems. The intersection of Route 114 and the Andover Bypass (Route 125) saw 32 accidents between 2009-2011. During this period, the intersection of Peters Street and Route 114 experienced 35 accidents and the intersection of Andover Street and Route 114 experienced 38 accidents.

The MVRTA does not operate fixed bus services along Route 114 within this site. Bus Route 39A ends at Waverly Street; Bus Route 33, which runs along Route 125 ends at Route 114, and the Andover Shuttle ends just short of Route 114.

Pedestrian access is inconsistent along Route 114. Sidewalks are absent east of the Andover Bypass. West of the Bypass, sidewalks are evident primarily on the north side of the street. Crosswalks are evident and crossing signals are also present north of Route 125. Development has been structured so that businesses are set back from the road with large parking lots. Route 114 is not a recommended bicycle route by Rubel Maps.

MassDot conducted a road safety audit in 2013 along this section of Route 114, and several improvements are needed to make the road safer for both automobiles and pedestrians.

Environmental: 47.39 acres (12%) are classified as wetlands; approximately 81 acres (20%) are within a 100-year floodplain. 11.75 acres (2%) are classified as Rare Species Habitat. Vernal pools are present in select locations.

Recommended Strategies: The Town has strategically planned for development to occur on Route 114, and to preserve or limit growth in outlying Town areas. The fragmented zoning in this corridor will limit this desire and should be reviewed for appropriate uses and densities to ensure that the existing infrastructure can support the desired development. The review of the zoning should consider the role Merrimack College can play in the corridor. The College is a core of the corridor and creates more of a sense of place than the current strip development feel of Route 114.

To accomplish this, the town where possible, should convert the linear strip commercial development along route 114 into more functional compact nodes of mixed-use development. Two such potential mixed-use “nodes” appear to exist. The area between route 133 and Waverly Street has high density housing and retail/commercial uses in very close proximity to each other. More attractive streetscape and better pedestrian connection between the two could transform it into a 21st century multi-use center. Another such area is at Merrimack College and Royal Crest which are within easy walking distance to nearby retail stores and services, but not easily walk-able. Given the number of people at both Royal Crest and the college, it makes economic sense to produce aesthetically attractive corridors that connect these folks with the nearby businesses. Consideration of providing MVRTA services to the corridor should be considered, connecting the College and other residential neighborhoods to the corridor and the community at large. Improvements are vital to Route 114 in order to improve traffic flow and improve pedestrian access from the residential complexes to the retail stores and restaurants. The Town should work to get these improvements designed and the project placed on the MPO - Transportation Improvement Program.

Machine Shop Village: Designated a State PDA

Land Use: This 89-acre area is part of a nationally recognized 600-acre “Machine Shop Village District.” Its industrial roots define its character; local residential streets and neighborhood commercial uses cluster around several rehabilitated mill structures on Cochichewick Brook. The area is generally urbanized and particularly suited to ‘smart growth’ development. Following recommendations provided in the 2009 PGS, the Town adopted a “Downtown Overlay District” the purpose which is to encourage a diverse mix of residential, business, commercial, office, governmental and entertainment uses for workers, visitors, and residents. By right uses include general merchandise retail stores, banks, professional offices, medical offices, restaurants, multi-family dwellings less than 18 units, and mixed-use structures.

The underlying zoning districts are variable according to location and include: Industrial-S which allows research and development facilities, business and professional offices, light manufacturing, and warehousing; General Business which allows retail stores, banks, restaurants, automobile filling and service stations, and residential uses provided they occupy no more than 50% of total floor space; Residential-3 which allows single family residences, rooming houses, public and private educational facilities, and golf courses.

Infrastructure: Municipal water and sewers, and natural gas are available throughout. Two telecommunications firms provide cable and Internet service: DSL is available; fiber optic to the premises is not yet available.

Access: Main, Water, Elm and High Streets are four of the area’s principal roadways. Interstate 495 is less than one mile northwest; the best connections are to Main Street and Massachusetts Avenue. MVRTA Route 33 connects to MBTA Commuter Rail at the McGovern ITC in Lawrence. Trucks provide local freight service. Bicyclists share local streets; pedestrians have use of a well-developed sidewalk/crosswalk network.

PRIORITY DEVELOPMENT AREAS (PDA)

Environmental: 3.58 acres or 4.02% is wetlands; 4.17 acres or 4.68% are within a 100-year floodplain; 56.48 acres or 63.46% are classified as Rare Species Habitat.

Recommended strategies: MVPC continues to support the Town's improvement plans for this area. Since the PGS was adopted in 2009, the Town has made improvements to Elm Street (sidewalks, curbing, paving) and they plan to replace the old streetlights with decorative period lighting in 2015. The Town has also hired an engineering firm to redesign Water Street at the intersection with High/Elm and will install new signage in the area. A rail trail for the inactive right-of-way at the northern boundary will be designed shortly. MVPC applauds these efforts.

ROWLEY

Route One: Designated a Local PDA

Land Use: The Rowley Business/Light Industrial Zones and Retail District Zone form a contiguous 634 acre area along Route 1. This area hosts professional offices, a retail center, restaurants/motor vehicle uses and individual commercial/light industrial businesses and has over 1 million square feet of building space. Most of the surrounding area is wooded; there are also some residences and recreational facilities nearby. Business/Light Industry (BLI) zoning applies to the northern and southern zone sections totaling 469 acres. The Retail District (RE) is 164 acres, proximate to the Route 1 / Route 133 intersection.

The Retail District is intended as an area for retail business for consumers arriving primarily by automobile. By right uses allowed include: small and medium retail sales establishments, professional and business offices and services, medical and dentistry clinics, banks without drive through, and restaurants (other than formula fast food). Uses allowed by special permit include: office parks and shopping centers, banks with drive through, research laboratories, light manufacturing, and filling and service stations.

The Business/Light Industry District is intended for office and professional buildings and for assembly and light manufacturing uses consistent with the Town's suburban character. By right uses allowed include: medical and dentistry clinics, professional and business offices and services, veterinary hospitals and kennels, enclosed storage yards, and offices for general construction, landscaping, or similar contractors. Uses allowed by special permit include: research laboratories, wholesale trade, light manufacturing, office parks, and warehousing/distribution facilities.

The Town maintains overlay zoning for floodplains and municipal water supply protection that may include certain parcels in these zones. Dimensional and density standards in both zoning districts include: 50% lot coverage and 35' height maximums. No floor-area ratio applies.

Infrastructure: Municipal water service is available. Property owners furnish their own on-site sewage disposal. National Grid provides natural gas, and two telecommunications services provide either DSL or 'fiber to the premises' (i.e. FIOS) in the community.

Access: Route 1 and Route 133 offer direct roadway access. Route 133 connects to I-95, approximately two miles to the west. MBTA Newburyport commuter rail service stops at Rowley Station, three miles east. Trucks provide local freight service; bicyclists and pedestrians share local roadways.

Environmental: 112.8 acres (17.80%) are located within the Town's water supply; 113.30 acres (17.87%) are classified as wetlands. Approximately 133 acres (20.9%) are within a 100-year floodplain.

Recommended Strategies: The Town's Master Plan and zoning for the Route 1 corridor south of Wethersfield Street has effectively promoted industrial and business development at a smaller scale than Route 1 communities to the south. The Town has also purposely limited the size and expanse of retail uses. MVPC finds that the Master Plan and zoning have been somewhat effective in this regard, and supports longstanding Town initiatives to refine site access by reducing curb cuts, adding turn lanes and making other improvements.

Rowley Village Center: Designated a Local PDA

Land use: The Rowley Village Center is the Town’s historic center, situated at the intersection of Route 1A/Central Street. It comprises 67.5 acres and includes the Town Hall, its library, several churches, a cemetery and a village green. Residences line local streets. The Center is zoned Central District (CD). Allowed by-right uses include single family and townhouse dwellings, municipal buildings, religious and educational, and cemeteries. Uses allowed by special permit include multi-family dwellings, in-law apartments, small retail, banks without a drive through, professional, medical and business offices, automobile uses, antique shops, and lodging facilities. The PDA is generally subject to a local historic district overlay zone.

Infrastructure: Municipal water is available; however, property owners furnish their own on-site sewage disposal. National Grid natural gas and two telecommunications services provide either DSL or ‘fiber to the premises’ (i.e. FIOS) in the community.

Access: Route 1A and Route 133 are the principal local streets and regional roadways. Route 133 connects to I-95, approximately three miles to the west. A quintessential New England village center, Rowley’s downtown needs only enhancements to its pedestrian infrastructure. Roadway access is adequate, as is bicycle access.

Environmental: 1.56 acres (2.32%) are classified as wetlands. 2.06 acres (3.05%) are within a 100-year floodplain.

Recommended Strategies: MVPC supports the Town’s Master Plan goals for the Village Center including: maintenance of existing municipal and civic uses; protection of its historic character and specific historic properties, and accommodation of new commercial growth along Route 1 and Route 133, away from the Village Center. Roadway improvements on Route 133 east of Route 1 are also recommended.

SA LISBURY

Business Park: Designated a Local PDA

Land Use: The Salisbury Business Park comprises 151.2 acres in the Town's northwest quadrant. It is also known locally as the Fanaras Industrial Park. Zoning is Industrial (I) which allows by-right the following: light industry, food processing, chemical warehouse, automobile repair, sales, and service, professional and business offices, research and development laboratories, and wholesale trade and distribution. Uses not allowed include: housing, department stores, motels, gas stations, restaurants, and retail stores. Key dimensional and density maximums include a 40% lot coverage and a 40' building height. The PDA is well buffered from existing low-density residential properties by undeveloped, wooded land on the east and southeast, and by the Interstates 95-495 interchange on the west. Current PDA uses are well established and include warehousing/distribution; construction, wholesalers, and light manufacturing.

Infrastructure: The Town reconstructed Rabbit Road in 2009, installing new water and sewer service to this area which is vital for future growth of this economic development area. DSL Internet service is available in the Town; broadband availability varies. National Grid provides natural gas service to the community.

Access: The Business Park PDA has excellent local, state and interstate roadway access. It is located on Rabbit Road and Faranas Drive, abutting the interchange of Interstates 95 and 495. U.S. Route 1 is within one mile to the northeast, and State Route 286 is .50 miles north via Rabbit Road to Main Street. The Merrimack Valley Regional Transit Authority Route #51 (Haverhill-NECC-Merrimac-Amesbury-Newburyport) provides weekday and weekend bus service to stops at Port Plaza and at the Stop & Shop on Elm Street (Route 110), approximately .75 mile south of the PDA.

Reconstruction of Route 110 in Amesbury, completed in 2011,, improved access to the site from the south via Rabbit Road. Improvements to Route 1 between Salisbury Square and the New Hampshire State Line are in the preliminary design phase. The Town, regional and state officials have also considered potential intersection improvements for Route 286 at the PDA's northern end. As roadway access is generally very good, no new or expanded roadways are proposed.

Environmental: Wetlands comprise 23 acres (15%) of the PDA. None of the PDA lies within a 100-year floodplain.

Recommended Strategies: The Town of Salisbury's 2008 Master Plan targets the Business Park PDA as a locus of commercial business growth. MVPC supports the Town's plans for further economic growth in this PDA.

Gateway Site: Designated a Local PDA

Land Use: At 3.92 acres, this site is zoned r Commercial (C) and is presently developed as a retail site. Zoning allows for single-family and mobile home residences, automobile repair, sales, and service, carwashes, department stores, product assembly, professional offices, restaurants, and retail stores - all by-right. Accessory apartments are allowed by special permit, as is raising of livestock, food processing, lumberyards, and self service gas stations. Multifamily residences and light industry are not permitted.

Infrastructure: Town water and sewer services are available. Some properties in the area are served by private sewer. The Town's water supply is interconnected with the Towns of Amesbury, MA and Seabrook, NH for emergency purposes. DSL Internet service is available in the Town; broadband availability varies. National Grid provides natural gas service to the community.

Access: The site forms the southwest corner of the Route 286 (Pike Street) and Route 1 (Lafayette Road) intersection. This site is well connected to Routes 1, 1A, Interstates 95 and 495. Local streets adjacent to the site are in good condition. No public transportation or freight rail service operates in the vicinity of the site. Bicyclists and pedestrians share existing area roadways.

Environmental: No wetlands, 100-year floodplain or Rare Species Habitat exists to limit development.

Recommended Strategies: This site's regional visibility requires a strong and positive statement that reflects the community's history and future vision, while meeting current economic needs. Consideration of the use of "form based code" should be considered.

Salisbury Beach Center: Designated a Regional PDA

Land Use: This 119-acre PDA is a unique community asset. It is the entrance to Salisbury Beach State Park and the commercial/entertainment hub at Salisbury Beach. Its historic recreation and amusement park attractions feature fewer amusements than in the past but the Center still retains a lively atmosphere in the summer months.. Beachgoers and residents patronize several eating/drinking establishments, small-scale retailers, recreation amenities and an adult entertainment venue. Seasonal and year-round beach residences are located on the north and south of this PDA, while grassy marshlands surround the PDA on the west.

Salisbury Beach Center is zoned Beach Commercial (BC) which permits a wide variety of residential and commercial activity. It is also subject to a special overlay district comprised of three distinct sub-districts. The overlay district is intended to promote mixed-use development, and allows for building heights of 65'. Development is subject to design review. Special permits are required for: accessory apartments, adult entertainment, motorcycle sales/service, laundromats, marinas and nursery schools. Densely developed lots characterize this PDA; buildings frequently cover up to 100% of their sites, and a 35' building height maximum (underlying BC zone) applies. Few of the structures in the PDA are multi-story.

Infrastructure: Salisbury Beach Center has Town water and sewer services. The Town's water supply is interconnected with the Towns of Amesbury, MA and Seabrook, NH for emergency purposes. DSL Internet service is available in the Town; broadband availability varies. National Grid provides natural gas service to the community.

Access: Beach Road (Route 1A) is the principal roadway connecting the PDA with the Town. Route 1A connects to New Hampshire on the north and Newburyport to the south. North End Boulevard, Old Town Way and Central Avenue provide roadway access to the northern section of the Beach, to other Town points, and to Seabrook and Hampton Beach in New Hampshire. MVRTA Route #83 (Salisbury Beach/Hampton Beach) operates weekdays and Saturdays on Route 1A with one stop at the Center. Bicyclists share existing area roadways; a pedestrian sidewalk runs on one side of Beach Road to/from the PDA, and there are sidewalks within the PDA. Truck freight deliveries to local businesses are permitted; no other freight operations are permitted.

Environmental: The PDA abuts land classified as salt marsh, wetlands and barrier beach. Approximately 66 acres (55%) are classified as wetlands, and 99 acres (approximately 84%) of the PDA are within a 100-year floodplain.

Recommended Strategies: MVPC supports the Town’s 2008 Master Plan goals for Salisbury Beach; the Town’s Beach Betterment and its Beach Partnership, and the Salisbury Chamber of Commerce’s efforts to retain important assets while providing for new growth and tourism. The surrounding natural environment is the PDA’s greatest economic development asset. Federal and state agencies will do their part; and the Town is moving in a complimentary direction. However, MVPC finds that this PDA’s zoning may be somewhat fragmented and weak. The zoning should be upgraded to insure all development that takes place in this area conforms to the community’s vision. The community has raised concerns about “unwanted” businesses in this area, but the question of whether current zoning is consistent with community goals remains. MVPC supports the Town’s Zoning Review Committee’s ongoing work on this issue.

Redevelopment Zone: Designated a Regional PDA

Land Use: This 190-acre PDA on the western edge of the Town straddles Interstate 95 south of Baker Road and the Business Park PDA. It abuts Interstate 495 and the town of Amesbury’s “Golden Triangle” on the west. An inactive Boston and Maine Railroad right-of-way forms the southern boundary. Undeveloped wooded areas buffer the PDA from single-family residential properties to the north and east.

The PDA is zoned Commercial IV (C-4) east of I-95 and is zoned Office Park (C-3) west of I-95. The C-4 district allows single family homes, mobile homes, professional office buildings, and distribution facilities by-right. Not permitted are retail stores, restaurants, hotels, light industry, and multi-family dwellings. The C-3 district allows professional office buildings, research and development, restaurants, retail stores, and product assembly by right. No housing is permitted. Hotels and light industry are allowed by special permit.

Infrastructure: Public water and sewers now serve this PDA site.. The Town’s water supply is interconnected with the Towns of Amesbury, MA and Seabrook, NH for emergency purposes. National Grid provides natural gas service to the community. DSL Internet service is available in the Town; broadband service varies. The Town constructed a new municipal water and sewer service on Rabbit Road within this PDA. As with the Business Park PDA to the north, this \$4.9 million investment will enable the Redevelopment Zone to reach its development potential.

Access: The Redevelopment Zone PDA has direct access to State Route 110 via Rabbit Road. Route 110 connects to Interstates 95 and 495 within one mile of the PDA. The Merrimack Valley Regional Transit Authority Route #51 (Haverhill-NECC-Merrimac-Amesbury-Newburyport) provides weekday and weekend bus service to stops at Port Plaza and at the Stop & Shop on Elm Street (Route 110), approximately .25 mile south of the PDA. Bicyclists and pedestrians share existing area roadways. Freight rail service is not available.

Environmental: Wetlands comprise twenty-six acres, or 22%. No 100-year floodplain, rare species habitat or other site environmental factors are documented.

Recommended Strategies: This PDA’s development potential is directly related to its location adjacent to I-495 and I-95. MVPC applauds the Town’s efforts and the Town achieved an important goal by creating the new C-4 zoning district on Rabbit Road, and extending sewer service to serve this new district and the existing industrial district. The Town should continue to encourage business development in the most suitable areas.

Salisbury Village: Designated a Regional PDA

Land Use: Salisbury Village comprises approximately 24 acres at the community’s geographic center. It is the Town’s traditional civic focal area and hosts several municipal office functions, institutional uses (churches), and historic structures. The area is zoned Village Center District (VC) and encourages redevelopment and infill development in the Salisbury Square area in a manner that promotes compact building form, protects and enhances the value of land and buildings and provides for a variety of businesses and residential uses. The VC district establishes distinctive dimensional and design standards that reinforce and enhance the traditional architectural styles and historic development patterns evident in the district.

Infrastructure: Public or private water, and Town or private sewers serve the Village. The Town’s water supply is interconnected with the Towns of Amesbury, MA and Seabrook, NH for emergency purposes. The Town is seeking funds to upgrade the water distribution system in the Village Center. They wish to remove and replace existing water mains on Elm Street, Bridge Road, and Park Street, and to install a new water main on School Street. National Grid provides natural gas service to the Town. DSL Internet service is available in the Town; broadband service varies.

Access: The Village is situated at the junction of U.S. Route 1, Route 110, Beach Road (Route 1A) and several local roads. MVRTA Route # 83 travels through the Village but runs express from points west to Salisbury Beach; no stops at present. Rail infrastructure is inactive; existing rights-of-way are proposed for trail use. Bicyclists presently share use of local roads; pedestrian sidewalks surround the Village, and are being extended in connection with various improvement projects.

Environmental: Less than 1% of the Village is classified as wetlands. No other environmental resources are inventoried.

Recommended Strategies: MVPC supports the Town’s efforts to improve traffic circulation and add bicyclist/pedestrian amenities at this location. MVPC also supports the Town’s efforts to upgrade the water distribution system in Salisbury Square and to redevelop into housing the Brownfield sites at 29 Elm Street and the abandoned Spaulding School. The Town has also invested in its Town Hall, and in other civic structures.

WEST·NEW·BURY

West Newbury Village Center: Designated a Local PDA

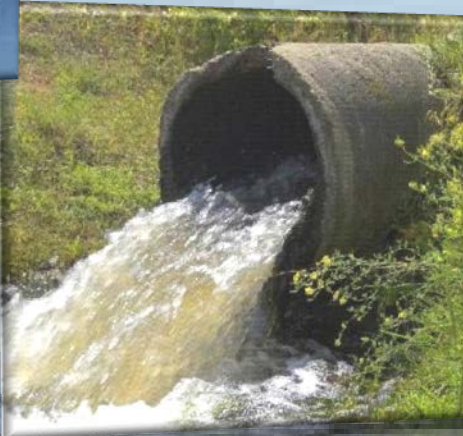
Land Use: West Newbury’s village center is the business zoned central business district, which runs along route 113 from Whetstone Street to just beyond Church Street. Allowed uses in this 17-acre area include retail stores, professional offices, and restaurants by right, and uses such as hotels, drive through facilities, and gasoline service stations allowed by special permit from the planning board. Residential units located in the same building with commercial enterprises have been allowed by special permit since June 2008.

Infrastructure: Water service exists in the village center, but, like many rural towns, West Newbury currently operates without a municipal sewage system. Instead, all sewage is treated with on-site septic systems on individual properties. Many of the commercial septic systems in the commercial center are barely meeting capacity requirements and are at risk of septic failure.

Access: The Village Center is located on Route 113 (Main Street) at Whetstone St, Church St, and Maple St. Maple Street heads southeast toward Interstate 95 (Exit 55), located in Newbury. Main Street (Route 113) connects to Newburyport with additional access to I-95. MVRTA operates a Ring and Ride service, curb-to-curb, for the residents of West Newbury. Main Street does have sidewalks, though not on both sides of the street. Roads leading to the village center do not have sidewalks. Main Street is recommended as a secondary bicycle route (narrower road, heavier traffic) and Church Street is a recommended bicycle route.

Environmental: There appear to be no environmental issues in the West Newbury Village Center.

Recommended Strategies: As recommended in the towns’ master plan, West Newbury should consider a refinement of the zoning ordinance in order to provide a more specific and detailed list of desirable commercial uses permitted or conditionally allowed within the town center area. The list can also be amended to convey categories of uses that should not be allowed. To manage the scale and character of future development, the town may want to consider adopting a form based code or provide for clear site planning and design standards.



The Merrimack Valley region is blessed with an abundance of ecologically rich and visually stunning natural resources. These range from vast, interconnected salt marsh, barrier beaches, and inter-tidal zones along the coast to an intricate tapestry of forests, fields, farms, hilltops, and fresh water resources (lakes, ponds, aquifers, wetlands) in bordering and upland areas. Together, these rich resources provide outstanding and diverse:

- **habitat and migration corridors** for numerous wildlife species, birds, fish and shellfish, and plants;
- **surface and ground water sources** for drinking water supply, irrigation, hydropower generation, wastewater assimilation, and recreation;
- **productive soils** for agriculture, horticulture, and tree farming; and
- **natural buffers** for protection against flooding, high winds, coastal storm surges, and sea level rise.



Plum Island Barrier Beach

They also serve as a major draw for tourists and vacationers, attracting thousands of visitors each year to enjoy beachcombing, swimming and boating, hiking, nature observation, and sight-seeing. Regardless of their geographic setting or function, the Merrimack Valley’s prime natural resources are critically important to the overall character, economic vitality, and quality of life in the Merrimack Valley region, and as such warrant our vigilant protection and sustainable use.

Toward this end, the Merrimack Valley Planning Commission has worked closely with our member communities and partner organizations (open space committees, watershed associations, land trusts) through the years to help identify, map, and protect some of the region’s most important land and water resources. Our regional Priority Growth Strategy recognizes the need to continue this important work and presents a series of strategies to help accomplish this. The goal is not to slow or stop growth, nor to preserve all remaining open space, but rather to help direct new development toward those areas best able to accommodate it, in the process protecting our region’s most critical natural resources.

In the spring of 2012 the Commonwealth of Massachusetts through the Executive Office of Housing and Economic Development (EOHED) began working with MVPC to expand the State “Planning Ahead for Growth” strategy into the Merrimack Valley. The EOHED had begun to work in various regions of the State with regional planning agencies to identify promising areas of new growth. In addition to identifying areas for growth, EOHED partnered with the Executive Office of Energy and Environmental Affairs (EOEEA) to ensure that regional plans reflect a well-balanced analysis of future land use objectives for the region by also identifying appropriate areas to prioritize for preservation. These areas have been designated Priority Preservation Areas (PPA)

As with the State Priority Development Areas the State Preservation Areas reflected a process which started with local and regional priority areas. Priority Preservation Areas are places within a city or town that deserve special protection due to the presence of significant environmental factors and natural features, such as endangered species habitats, areas critical to water supply, scenic vistas, prime agricultural land, or areas of historic significance. Like PDAs, the protection areas can vary greatly in size.

The PPAs in the Merrimack Valley “Planning Ahead for Growth” Plan include land or environmental resources that are not permanently protected but are worthy of increased levels of protection through planning, regulation or acquisition. PPAs include farmland, sensitive habitat and environmental resource areas, potential linkages between existing open space resources, and places of cultural or historic significance.

In the fall of 2010, Governor Deval Patrick issued Executive Order (E.O.) 525. The Executive Order calls for state investments to be consistent with Corridor Plan recommendations to the maximum extent feasible. Based upon the issuance of E.O. 525, state agencies must now consider plan consistency when making funding decisions. State agencies are now evaluating all of their investments for consistency with the Merrimack Valley “Planning Ahead for Growth” Plan. While state funding will not be limited only to projects within state PDA and PPAs, projects within those areas will be prioritized for funding. State agencies may also ask municipalities to explain why their project should be funded if the project is not consistent with any priority areas identified in the plan.

In addition to investment, E.O. 525 directs agencies to work with municipalities to advance the appropriate development of priority development areas and conservation of lands identified as priority protection areas.

It is EOHED and EOEEA’s goal that the regional planning efforts conducted with the Merrimack Valley Planning Commission pave the way for future development in the region which meets local, regional and state goals and is consistent with goals to preserve the region’s natural resources.

Existing Protected Open Space

In developing the Priority Growth Strategy, MVPC mapped existing protected open space in the region, using data derived from both the MassGIS Office and from local sources, including local open space and recreation plans and conversations with knowledgeable conservation officials. These existing protected lands range from several large, multi-community federal and state wildlife management areas, to non-profit land trust holdings, to individual town forests, watershed areas, and conservation lands. A description of some of the most prominent and noteworthy of these protected areas follows. While this list is by no means exhaustive, it reveals the diversity and richness of the Merrimack Valley region’s natural resources.

- **Parker River National Wildlife Refuge.** The federally-protected Parker River National Wildlife Refuge is the region’s largest and most ecologically-rich natural area. Spanning parts of Newburyport, Newbury, Rowley, and Ipswich, it was established in 1942 and is managed by the U.S. Fish and Wildlife Service. The Refuge occupies the southern three-fourths of Plum Island, an 8-mile barrier beach, and contains 4,662 acres of scenic tidal marsh, fresh water impoundments, bogs, and sand dunes. It is one of the few barrier beach-dune-salt marsh complexes remaining in the Northeast. The Refuge is home to over 800 species of plants and animals, and is considered one of the top ten bird-watching sanctuaries in the United States.
- **Martin H. Burns Wildlife Management Area.** This state-protected wildlife management area spans the towns of Newbury and West Newbury. It consists of 1,555 acres of small rocky hills, forest, meadows, and low-lying wetlands. Historically this area was clear-cut, but a second growth forest composed primarily of pole sized hardwoods has returned. A series of openings connected by smaller openings or trails have been cut and are maintained to increase habitat diversity. Except for three small fire ponds, there is little standing water on the area, although much of the lower terrain is poorly drained and seasonally wet. The Little River, a major tributary of the Parker River, has its headwaters within this area.

- **Old Town Hill Reservation.** This scenic 531-acre “half-upland, half-marine” landscape is owned and managed by The Trustees of Reservations, the oldest private non-profit land trust in the nation. Old Town Hill is a glacial drumlin that rises prominently from the surrounding lowland and tidal marsh. The Reservation’s upland consists of second growth forest and fields that provide habitat for nesting birds and hunting grounds for hawks and owls. The bordering salt marsh and tidal creeks are home to a variety of estuarine invertebrates, such as mussels and snails that provide food for egrets and other wading birds. Old Town Hill features 3 miles of hiking trails, and is a vital link in Metro-Boston’s circumferential Bay Circuit Trail and Greenway.
- **William Forward Wildlife Management Area.** This state-protected wildlife management area spans the towns of Newbury and Rowley. It consists of 2,083 acres of scenic salt marsh and upland habitat. The uplands are predominantly mixed oak and white pine woodlands. There are approximately 60 acres of open fields that are maintained under cooperative agreements with local farmers, and another 20 acres are maintained in an early successional stage for purposes of wildlife diversity. Portions of the Parker River and two of its major tributaries – the Little River and the Mill River – run through or border this area. Public trails provide access to two of the area’s most prominent landforms: Kent’s Island and Ox Pasture Hill.
- **Georgetown-Rowley State Forest.** This large, 1,112-acre state forest spans the towns of Georgetown and Rowley to the west and east of Route I-95. It contains a mix of dense woodland, wetlands, and streams, and is a key headwater for Penn Brook, Mill River, and Muddy Brook. Miles of multi-use trails traverse the area, which support a variety of year-round public recreation activities including hiking, horseback riding, cross-country skiing, and nature observation.
- **Crane Pond Wildlife Management Area.** This 2,123-acre state wildlife area spans the towns of Groveland, Georgetown, Newbury, and West Newbury. It consists of a series of low rolling hills and marshland varying approximately 120 feet in elevation. The hills were once cleared for use as pasture, but the fields were abandoned some 60 years ago, and pines and mixed hardwoods have since reclaimed the land. A series of openings have been maintained by forestry operations, and a high-tension line provides additional open cover and easy access for hunters and hikers. The Parker River, a stocked trout water, flows through the southern portion of the area.
- **Harold Parker State Forest & Wildlife Management Area.** This 3,000-acre natural area spans the towns of Andover, North Andover, North Reading, and Middleton. It consists of mixed hardwood-hemlock-white pine forest, and features over 35 miles of logging roads and trails. Recreational opportunities abound here, and include hiking, mountain biking, horseback riding, fishing, hunting, non-motorized boating, picnicking, and camping. There are 11 ponds within the area, including scenic Berry Pond which sports a sandy beach and is stocked with trout. The remaining ponds are shallow, warm water impoundments constructed by the Civilian Conservation Corps during the 1930s.

- Charles Ward Reservation.** The 695-acre Ward Reservation is owned and managed by the Trustees of Reservation. This visually-stunning property represents the union of more than 40 separate parcels of farm and pasture land whose stone walls, when combined, extend more than 17 miles. These parcels encompass all or parts of three hills – Shrub Hill, Boston Hill, and Holt Hill – and are connected by many miles of recreational trails, segments of which are part of the Bay Circuit Trail. The focal point of the Ward Reservation is Holt Hill, whose 420-foot summit is the highest point in Essex County. From this summit, visitors can view the Boston skyline and the Blue Hills to the south. At the foot of Holt Hill lies Pine Hole Bog, a rare “quaking” bog that features concentric rings of distinct vegetation resulting from different growing conditions.

Together, the above-listed properties comprise almost 14,700 acres of protected open space, or about 40% of all of the protected open space in the region. The remaining protected open space acreage is divided among numerous smaller parcels that are dispersed throughout the region. A breakdown of each community’s current protected open space acreage follows.

Protected Open Space By Community			
Municipality	Total Area (Acres)	Protected Open Space	
		Acreage	Percent of Community
Amesbury	8,784	1,075	12.2
Andover	20,578	4,268	20.7
Boxford	15,619	2,531	16.2
Georgetown	8,415	2,211	26.3
Groveland	6,014	1,909	31.8
Haverhill	22,852	2,556	11.2
Lawrence	4,753	291	6.1
Merrimac	5,692	764	13.4
Methuen	14,717	972	6.6
Newbury	16,529	7,020	42.5
Newburyport	6,966	1,402	20.1
North Andover	17,739	3,939	22.2
Rowley	12,783	3,227	25.2
Salisbury	11,007	1,945	17.7
West Newbury	9,424	1,847	19.6
MVPC REGION	181,872	35,957	19.8

Priority Lands Proposed for Preservation

In addition to those lands already under some form of protection, the region’s municipalities have identified selected other parcels that by virtue of their special natural resource significance should also be preserved from development. Most of these parcels are currently in private ownership and have been targeted for possible future preservation (resources permitting) by the local conservation commissions and open space committees. In most cases, the property owners have not been approached in advance, and community conservation officials are reluctant to publicize their interest in the properties out of concern that this could artificially drive up the sale price and thus compromise the communities’ ability to purchase the properties at fair market value.

Given the high cost of developable land – an increasingly rare commodity in the Merrimack Valley region – this is a legitimate concern and should be respected. Accordingly, the regional Priority Growth Strategy does not identify or describe with any specificity these prospective acquisition lands. Instead, to the extent granted permission to do so, MVPC has merely mapped such sites in a general way as part of our sub-regional growth area mapping and analyses. No individual, property-specific identifiers (assessors map/lot number, owner name, acreage, etc.) have been included or are disclosed.

Also mapped as prospective priority preservation areas are the region’s undeveloped **primary water supply recharge areas** (Zone A for surface water supplies and Zone II for groundwater supplies), as well as **active prime farmlands** (Chapter 61A lands) that are not permanently protected by deed restriction, such as through a Commonwealth Agricultural Preservation Restriction (APR). (Note: the Priority Preservation Area Map is based on **criteria** that includes threshold of 5 acres minimum for priority acquisition regarding Chapter 61A farmland or Chapter 61B recreation properties.) Farmland and Water Supply Protection natural resource categories in particular are deemed to be of priority importance to the region’s public health, economy, community character, and quality of life. Therefore, to the maximum extent practicable, these areas should remain undeveloped for the benefit of the present and future generations.



Lake Cochichewick, North

Primary Water Supply Areas. The Merrimack Valley region has a wide variety of municipal water supply sources. These range from the Merrimack River, which supplies all of the drinking water to the cities of Lawrence and Methuen, to smaller tributary rivers and streams, surface water reservoirs, and groundwater aquifers. Together, these sources meet the daily water supply needs of residents, institutions, and businesses throughout the Valley region, and are critically important to the region’s present and future growth and prosperity. Thus, it is essential that we protect both the quantity and quality of our existing and potential water supply sources through effective land use controls. Toward

this end, most communities have adopted water supply protection district regulations consistent with Massachusetts DEP drinking water source protection requirements. These regulations prohibit high-risk commercial and industrial uses, such as gasoline stations and dry-cleaning establishments, and in some cases impose limited residential restrictions, such as amount of impervious surface cover.

The following table provides a community-by-community breakdown of the region’s primary water supply lands (Zone A and Zone II), as classified and mapped by the Water Supply Division of the Massachusetts Department of Environmental Protection. **Zone A** lands are lands that are hydrologically connected with and contribute recharge to *surface water* supplies. They consist of: (a) the land area between the surface water source and the upper boundary of the bank; (b) the land area within a 400 foot lateral distance from the upper boundary of the bank; and c) the land area within a 200 foot lateral distance from the upper boundary of the bank of a tributary stream or associated surface water body.

Zone II lands are hydrologically connected with and contribute recharge to *groundwater* supplies. They include the areas of an aquifer which contribute water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (i.e., 180 days of pumping at a DEP-approved yield without benefit of recharge from precipitation). Zone IIs are bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes act as recharge boundaries. In all cases, the Zone II extends upgradient to its point of intersection with prevailing hydrogeologic boundaries (for example, a groundwater flow divide, a contact with till or bedrock, or a recharge boundary).

As the acreage figures in the table indicate, only about one-third (1/3) of the region’s total Zone A and Zone II land area is currently considered “permanently protected” – that is, preserved from development in a largely natural state by virtue of fee simple ownership or conservation/deed restriction by a government entity or nonprofit land trust. The remaining two-thirds (2/3), although regulated, is still potentially vulnerable to impacts from some level of land disturbance and/or development activity. While strict enforcement of these regulations can (and often does) go a long way toward protecting the water supplies from inappropriate land uses, the regulations are not a substitute for the communities’ acquiring and managing these sensitive watershed and aquifer areas in a natural, undisturbed state.

Municipal Drinking Water Supplies – Primary Protection Zones

	Water Supply Zone	Total Acres	Protected Acres	% Protected
Amesbury	Zone A	641.3	111.1	17.3
	Zone II	510.5	139.8	27.4
Andover	Zone A	796.4	225.0	28.3
	Zone II	1,595.9	477.1	29.9
Boxford	Zone A	18.9	0.1	0.5
	Zone II	2,357.7	376.7	16.0
Georgetown	Zone A	0.0	0.0	0.0
	Zone II	1,731.3	975.6	56.4
Groveland	Zone A	0.0	0.0	0.0
	Zone II	1,574.6	554.9	35.2
Haverhill	Zone A	1,504.1	899.5	59.8
	Zone II	0.0	0.0	0.0
Lawrence*	Zone A	0.0	0.0	0.0
	Zone II	0.0	0.0	0.0
Merrimac	Zone A	565.8	70.2	12.4
	Zone II	160.4	103.0	64.2
Methuen*	Zone A	0.0	0.0	0.0
	Zone II	0.0	0.0	0.0
Newbury	Zone A	1.3	0.2	15.4
	Zone II	757.4	237.5	31.4
Newburyport	Zone A	127.0	46.4	36.5
	Zone II	227.4	105.5	46.4
North Andover	Zone A	1,311.5	328.9	25.1
	Zone II	0.0	0.0	0.0
Rowley	Zone A	1.2	0.0	0.0
	Zone II	1,277.8	651.4	51.0
Salisbury	Zone A	0.0	0.0	0.0
	Zone II	528.7	75.4	14.3
West Newbury	Zone A	924.4	254.8	27.6
	Zone II	51.3	18.9	36.8
MVPC REGION	Zone A	5,891.9	1,936.2	32.9
	Zone II	10,772.5	3,715.8	34.5

*The cities of Lawrence and Methuen derive their municipal drinking water solely from the Merrimack River, for which the MA DEP has not designated or mapped any Zone A surface water protection areas.

Prime Farmland. Since its heyday in the 19th century, farming in the Merrimack Valley and throughout Essex County has steadily declined as a business and a way-of-life. According to the U.S. Department of Agriculture, in 1870, **47%** (151,809 acres) of all land in Essex County was in agriculture. By 1950, this figure had fallen to **31.2%** (99,840 acres). Nevertheless, nearly one-third of County land was still being farmed.



However, in the high growth decades following 1950, the loss of farmland – much of it to low-density sprawl development – greatly accelerated. By 2007, the total number of farms in the County had declined from 2,288 to 531 (-77%), and total farm acreage decreased from 99,840 acres to 27,834 acres (-72%). As a result, only **8.7%** of Essex County land has remained in agricultural use. In the Merrimack Valley region, just over 13,000 acres was being farmed when statewide land use survey was conducted (1999).

The Valley's shrinking farmland continues to be imperiled. Open, productive farm tracts are typically the most easily developed land because their deeper soils make excavation easier, their drainage is good, and they lack wooded cover. As a result, they are ideal for most commercial and residential development projects and can often command top dollar. In the face of this constant development pressure, local farmers are finding it increasingly difficult to hold on to their coveted lands indefinitely. If the Merrimack Valley is to preserve its agricultural heritage, we must implement strategies that both strengthen the economic viability of farming and protect farmland in perpetuity.

Open Space and Natural Resource Protection Strategies

Preserving and protecting the Merrimack Valley's water supplies, farms, and other high priority natural resources in the face of continued development pressure presents a number of challenges to our region's municipalities, both individually and collectively. This section of the Priority Growth Strategy offers a series of resource protection strategies that communities can implement, where appropriate, to help meet these challenges. The strategies are organized around seven broad goals, as follows:

1. Preserve and protect municipal water supply sources
2. Preserve prime agricultural land and working farms
3. Protect and enhance critical upland, water resource, and wetland habitats to sustain biodiversity
4. Protect and enhance inland, estuarine, and coastal water quality
5. Preserve natural stream courses, floodplains, and flow regimes
6. Manage future land development/redevelopment in an environmentally-sensitive manner
7. Preserve scenic landscapes and rural character

GOAL 1: Preserve and Protect Municipal Water Supply Sources

Abundant, high quality water supply sources are essential to our communities' and region's long term growth and economic viability. The effective protection of these water sources requires, to the maximum extent practicable, the preservation in perpetuity of our primary surface water and groundwater recharge areas.



Kenoza Lake, Haverhill

Preserving these critical areas in a natural, undisturbed state maximizes their ability to filter out pollutants (e.g., urban runoff, septic effluent, lawn chemicals) and replenish our water supplies on a sustaining basis. As a complement to this land preservation effort, there is a companion need to better *conserve* water, through aggressive local leak detection and repair programs and less-consumptive residential landscaping practices.

Recommended Strategies:

The following water supply protection strategies are recommended for the region:

1.1 Acquire and Protect Primary Surface and Groundwater Recharge Areas

As opportunities arise and as financial resources permit, communities, in partnership with other government entities and land trusts, should continue to target water supply recharge areas as priority lands for acquisition and protection. In particular, to the extent possible, those parcels designated as surface water Zone A or groundwater Zone II should be protected from development, either through outright purchase or via a conservation restriction or easement. By keeping these sensitive watershed areas free from human disturbance, their natural filtration and recharge capabilities will be maximized and the threat of drinking water quality impairment minimized.

1.2 Practice and Promote Water Conservation to Limit Water Supply Withdrawals

The region's municipalities, property owners, businesses, and developers should incorporate water conservation measures in their development plans and operating practices. This will reduce wasteful consumption of drinking water, lower water treatment costs, and ensure the sustainability of our finite water supply resources over the long term. Through such measures as aggressive leak detection and repair, broader use of low flow/flow restriction devices, and replacement of expansive manicured lawns with drought-tolerant native plants, our water consumption rates can be significantly reduced. At the household level, major water savings can be realized through the use of time-tested "greenscaping" practices. These practices emphasize the capture and retention of rainwater on-site, for use in meeting the occasional (minimal) irrigation needs of drought-resistant native plant species. Without a large swath of lawn to have to water regularly by sprinkler, home owners can dramatically reduce drinking water use during the growing season, when municipal water supplies are at their lowest and are most stressed.

GOAL 2: Preserve Prime Agricultural Land and Working Farms

For generations, agriculture has been an integral part of the Merrimack Valley region's history, culture, and economy, and a defining element of its landscape and character. In the region's suburban and semi-rural communities in particular, swaths of cultivated fields and livestock pasture, flanked by woods and wetlands, have been a dominant and treasured visual image. However, this image is changing, the result of population growth and development pressure. As the demand for housing intensifies and the real estate market continues to place a premium on flat, open land for new development, more and more farmland is likely to be lost unless a concerted, collaborative effort is made by our municipalities and farmers to improve the economic viability of agriculture.



Recommended Strategies:

The following agriculture preservation strategies are recommended for the region:

2.1 Streamline the Local Regulatory Process for Farmers

The region's communities where farming still has a presence can facilitate the economic sustainability of their farming enterprises by minimizing the number of municipally-imposed regulatory and bureaucratic hurdles that farmers must overcome. Agriculture currently enjoys certain exemptions under the Massachusetts Wetlands Protection Act, and local Conservation Commissions can and do waive fees in some cases. Streamlined communication and cooperation between farmers and town officials can ease regulatory impediments that adversely affect farmers.

2.2 Facilitate Purchase of Development Rights to Preserve Farmland

As local matching funds permit, communities can partner with area land trusts and the state's Agricultural Preservation Restriction (APR) Program to facilitate the purchase of development rights to active farms. Farmers whose land is accepted into the state APR Program are able to realize equity from their land without being forced to sell their farms for development purposes. This equity is often reinvested back into the farm by way of the purchase of additional land or modernized equipment, or in the design and installation of agricultural best management practices (BMPs) to better protect water quality and the environment. By providing farmers with money up-front, they can continue to own and work their land while preserving the land from development in perpetuity.

2.3 Consider Establishing a Local Agricultural Commission

An Agricultural Commission is a municipal body (appointed by the Selectmen) whose mandate is to promote farming and farm-related businesses within the community. In a growing number of Massachusetts communities (Rowley, Falmouth, Westport among others), agricultural commissions help provide farmers with a voice in local government; connect farmers to agricultural business assistance (such as business planning and capital); network farmers to educational opportunities, available farmland, and bulk purchasing; facilitate the sale and marketing of farm products; communicate directly with other town boards and departments; and serve as an advocate for farming interests. The membership of the agricultural commission would typically include several active farmers in the community as well as individuals with an interest in farming and expertise in support areas such as finance, marketing, engineering, or environmental science. The work of an agricultural commission can be furthered through the staff support suggested in the following strategy:

2.4 Provide Community Support to Local Farmers

As local resources permit, communities can provide planning and conservation staff support toward the following farming-related initiatives:

- Creating promotional materials (both website and hard copy fact sheets, brochures, maps) that advertise the local farms and describe to residents and tourists what products the farms offer, and during which seasons;
- Educating town officials and the general public about the financial, environmental, and other public benefits of retaining the town's working farms;
- Assisting farmers in accessing state assistance programs, including technical assistance in developing business plans, moving into more profitable sectors of agriculture, conducting advertising and marketing, or locating needed support services.

2.5 Support Right-To-Farm Policy

Local right-to-farm laws protect farmers against lawsuits arising from residents who move into a farming area and then subsequently complain about farm-related nuisances such as odors or noise. Communities can reinforce the state's right-to-farm law (M.G.L. Chapter 243, Section 6) locally by asking property owners and realtors who are selling land or new homes in farming areas to provide information to prospective buyers about living near farms. Some communities even require the buyers to sign a form indicating that they are aware of the potential nuisances, or, if the buyer will not sign, the seller must attest that he or she has explained the potential nuisances. In addition, communities can pass a resolution declaring farmers' value to the community and right to continue their operations free from nuisance lawsuits and complaints arising from ordinary agricultural operations. Such a resolution would establish the community as a pro-farming community and foster an atmosphere of cooperation and understanding among farmers, town government, and local residents.



GOAL 3: Protect and Enhance Critical Upland, Water Resource, and Wetland Habitats to Sustain Biodiversity

3.1 Maintain Up-to-Date Local Open Space Plans

The region's communities should maintain updated local Open Space Plans, consistent with state Division of Conservation Services (DCS) guidelines, to reflect and respond to current natural resources opportunities and needs in the communities, and to maintain the communities' eligibility for state land acquisition grant assistance. A community's Open Space Plan is the principal document guiding open space and natural resource protection efforts in the community, and should incorporate by reference other relevant local natural resource plans, such as the municipal Master Plan and local natural hazards pre-disaster mitigation plan.



To update the Open Space Plan, and to monitor and facilitate progress toward implementing the Plan’s 5-year action plan recommendations, communities should establish a local Open Space Committee that is a *standing committee* in the community. Too often, in many communities, the open space committees exist as temporary, ad hoc committees that convene solely for the purpose of updating the open space plan, and then disband soon thereafter. It is important that the Open Space Committee be an *active committee*, one that: 1) maintains some level of continuity (and institutional memory) from year to year, 2) assumes “ownership” of the Plan to oversee its

implementation, 3) charts the Plan’s progress on an ongoing basis, and 4) periodically reports to municipal boards and residents to keep the public informed and ensure that priority implementation activities remain in the spotlight.

1.2 Create a Comprehensive Open Space and Natural Resources Inventory and Map

As part of the Open Space Plan updating process, communities should create and maintain a comprehensive digital inventory and map that identifies all existing and proposed open space and natural resource areas of special conservation interest to the community. The inventory should be created through a public participation and consensus-building process, and should focus on those critical habitats that are not permanently protected but are vulnerable to destruction or fragmentation by development or other human activity. These would include, among others, water supply recharge areas, prime farmland, habitats designated and mapped by the state Natural Heritage and Endangered Species Program (NHESP) as BioMap “core” and “supporting natural landscape” areas, as well as those additional areas identified by knowledgeable local residents. The latter areas would be of particular significance because they would reflect the direct field observations of local property owners, hunters, fishermen, and other outdoor enthusiasts who are most familiar with the municipality’s wildlife populations and natural communities.

During the development of the local comprehensive lands inventory and map, each municipality should confer and work with neighboring communities and regional entities (MVPC, land trusts, watershed groups, and trails organizations) in order to identify potential open space linkages within and among communities. By doing this, the communities can maximize the ecological value and protection level of their own individual (sometimes fragmented) land holdings by creating larger linear units – greenways – of greater ecological and recreational significance. Once these potential open space connections are identified, the same partner groups can work collaboratively to establish and protect these resource areas, whether through a conservation restriction, a Division of Conservation Services land acquisition grant, or other funding mechanism.

1.3 Increase Financial Capacity to Acquire Priority Open Space

To the extent financially and politically feasible, communities should consider enhancing their capacity to acquire and protect high priority open space by: 1) creating a local conservation land fund (or open space bond), and/or 2) adopting the Community Preservation Act (CPA). When open space parcels are offered for sale, communities typically have only a limited period of time in which to make an offer to purchase a site. Therefore, it is extremely important to create a local land acquisition capacity and to continue to build a reserve *before a crisis occurs and a golden acquisition opportunity is lost forever*. Small but systematic annual appropriations into a land conservation fund or a one-time referendum to borrow acquisition funds and finance the debt with property taxes can provide communities with some ready capital to purchase selected high priority parcels facing development.

Adopting the Community Preservation Act would add another, potentially larger revenue source. The CPA is an innovative financing tool that allows communities to create a local Community Preservation Fund through a surcharge of up to 3% of the real estate tax levy on real property. Matching funds are provided by the State. This local preservation fund can be used for open space acquisition, as well as historic preservation and creation of affordable housing. In most communities, the CPA enjoys wide appeal, based on its flexibility and strong *local* control options:

- all decisions are local;
- local residents must vote by ballot to adopt the Act;
- the local legislative body must appoint a committee of local residents to draw up plans for use of the funds;
- the plans are subject to local comment and approval;
- if residents do not feel the CPA is working as intended, they can repeal it.

To date, over 100 Massachusetts municipalities have adopted the CPA to help finance local open space protection, historic preservation, and affordable housing initiatives. There are seven Merrimack Valley communities that have adopted the CPA: Boxford, Georgetown, Groveland, Newburyport, North Andover, Rowley and West Newbury.

1.4 Partner with Non-Profit Land Trusts to Extend Municipal Buying Power

The region's municipalities are encouraged to forge strong working partnerships with the Essex County Greenbelt Association, The Trustees of Reservations, Massachusetts Audubon Society/North Shore Advocacy Office, and other land trusts to maximize the available resources – technical and financial – for local land preservation. Nearly every community that has established and maintains an effective open space agenda works with one or more non-profit land trusts to realize their objectives. The reality is that many real estate transactions are not only expensive (and thus beyond the means of most municipalities alone), but are also legally complicated and time-consuming. Depending on a landowner's particular circumstances, the process of negotiating and executing a preservation plan may require specialized knowledge and the ability to act quickly – i.e., within a tight timeframe that may preclude a community's scheduling a special town meeting.

Tools for Land Preservation

A. Outright Acquisition

Outright (or "free simple") acquisition provides the highest amount of protection for a piece of property. It also affords the purchaser of the property the ability to control how it is used and managed. However, outright acquisition is generally the most expensive technique as well. Funding mechanisms for outright acquisition include:

1. Municipal funding from a one-time appropriation, an annual contribution to a land protection fund, or the Community Preservation Act;
2. Grant funding: for example, through the State's LAND (Local Acquisitions for Natural Diversity) Program, administered by the Division of Conservation Services;
3. Private conservation organizations such as The Trustees of Reservations or the Essex County Greenbelt Association;
4. Donations or "bargain sales" from landowners seeking to conserve their land or gain income tax benefits.

B. Conservation Restrictions and Easements

Conservation Restrictions ("CRs") and easements limit the future use of land by restricting or prohibiting development. However, the land continues to be owned and operated by a private owner. If the restriction on development is in perpetuity, this mechanism provides as much protection for land as outright acquisition. In addition, it can cost less than outright acquisition and offers more flexibility to meet the needs of the landowner. For example, a restriction could be negotiated that allows a landowner to continue to farm or log the land, live on the land, or even build another house on the property.

Funding can come from the same mechanisms as for outright acquisition. In addition, grant funding is available from various State programs including the Agricultural Preservation Restriction (APR) Program, which purchases development rights from farmers to preserve the land as farmland.

C. Temporary Protections

The State's Chapter 61, 61A, and 61B programs offer tax incentives for landowners to keep their property in active forestry, agricultural, and recreation use, respectively. However, these programs do not guarantee long-term protection of the land.

D. Other Tools

Other land conservation tools take advantage of the economics of land development to protect open space as part of new development projects (usually residential). As long as the open space is protected with a suitable conservation restriction, this form of open space protection can be as effective as outright acquisition. These additional tools include:

1. **Zoning Tools:** Open Space Residential Development, Scenic Overlay District, reduced frontage lot provisions, and a Density of Development Bylaw can be effective zoning tools to increase the amount of open space in new developments, even if the overall development density remains the same.
2. **Limited Development:** In limited development projects, a conservation group (usually a nonprofit but sometimes a government body) first purchases a piece of land they would like to conserve as open space. Then, a portion of the site that is least important for conservation purposes is carved off and sold as high-end real estate such as a "country estate." The proceeds from this sale, which can sometimes equal 50% of the purchase price or more, are used to repay money borrowed for the land purchase or to fund future conservation efforts.

1.5 Adopt a Strong, Community-wide Local Wetlands Protection Ordinance/Bylaw

The region’s communities, through the initiative of their local Conservation Commission, can supplement the Massachusetts Wetlands Protection Act (WPA) and Regulations by adopting a local wetlands protection ordinance or bylaw, aimed at providing uniform protection for all wetlands, both inland and estuarine, in the community. While the state WPA provides significant protection for wetlands in Massachusetts, it does not cover certain important resources such as isolated wetlands, buffer zones, vernal pools, and historic and archaeological resources. As a consequence, a growing number of communities have chosen to supplement the WPA with local wetlands regulations that provide additional protection, as well as greater control over the review of projects proposed in or near wetlands. A local wetlands bylaw would typically include the following provisions:

- **Isolated Wetlands.** The local wetlands bylaw should apply to **all** wetlands, even isolated wetlands not covered under the Wetlands Protection Act.
- **Buffer Zones.** Some communities have chosen to adopt a 25-foot “no disturbance” buffer zone and a 50-foot “no habitable structure” buffer zone around the edge of wetlands. These are stricter than the WPA, which ordinarily allows activities within the wetland buffer zone subject to an Order of Conditions.
- **Vernal Pools.** Vernal pools are a particular type of isolated wetland that provides the only breeding habitat for several rare amphibian species, as well as habitat for other animals. Ideally, a minimum 75-foot to 100-foot buffer zone should be established around vernal pools, since the amphibian species that breed in these pools also require adjacent upland habitat to survive during the adult stage of their life cycle.
- **Historic and Archaeological Resources.** Some communities have adopted provisions specifically to protect the historic and archaeological resources that are sometimes found adjacent to wetlands and water bodies.
- **Filing and Review Fees.** One of the strengths of a local bylaw is that it allows the Conservation Commission to charge additional application fees to help defray the cost of reviewing projects that fall under the bylaw’s jurisdiction. In addition, the bylaw can require the applicant to pay for the reasonable cost of a technical expert (consultant) to review the applicant’s wetland flagging and/or project plans.



1.6 Partner with Local, State, and Federal Entities to Inventory and Restore Degraded Inland and Estuarine Wetland Habitats

The region’s communities should work cooperatively with property owners, inland and coastal marsh researchers (especially Marine Biological Laboratory biologists), state and federal agencies (CZM Wetland Restoration Program, U.S. Fish and Wildlife Service), Essex County Mosquito Control District, and nonprofit environmental groups (e.g., Great Marsh Coalition, Eight Towns & The Bay) to inventory, prioritize, and restore degraded wetland habitats. In the short term, special consideration should be given to those impaired sites that are already well documented, including tidal flow restrictions described and mapped by the Parker River Clean Water Association and degraded anadromous fish passageways documented by the Division of Marine Fisheries. CZM’s “Great Marsh Coastal Restoration Plan” can serve as a baseline for the estuarine marsh restoration project inventory, and this can be augmented with local data and priorities. Longer term, the communities should support efforts to understand and respond to the processes and impacts of long term wetlands degradation, including those relating to nonpoint source pollution (runoff, erosion) and relative sea level rise.

GOAL 4: Protect and Enhance Inland, Estuarine, and Coastal Water Quality

The greatest collective threat to the health of the region’s inland, estuarine, and coastal water resources is from nonpoint source pollution. By definition, nonpoint source pollution derives from a wide range of diffuse sources including runoff from roads, lawns and gardens, farms, parking lots, golf courses, and other developed areas. It also includes insufficiently treated sewage effluent from septic systems. Unchecked, nonpoint source pollution can significantly impair rivers, streams, ponds, wetlands, aquifers, and coastal waters through the introduction of a “witch’s brew” of contaminants (sediment, nutrients, bacteria, and toxic substances among others) and from the accelerated growth of weeds and algae. Because it is diffuse and often the accumulated result of many small actions whose origins are difficult to trace, nonpoint source pollution is usually best controlled through several strategies applied in combination. While some of these strategies are primarily the responsibility of municipal boards and departments to act on, others will require the active participation of the region’s residents and business owners.

Recommended Strategies:

The following nonpoint source pollution control strategies are recommended for the region:

4.1 Adequately Fund and Aggressively Implement Municipal Stormwater Management Programs

As federally-designated “Urbanized Area” communities operating municipal storm drainage systems, the region’s 15 municipalities are required to comply with the Environmental Protection Agency’s Phase II stormwater management regulations. Compliance with these regulations requires the communities to apply for and obtain a discharge permit which is issued jointly by EPA and the Massachusetts Department of Environmental Protection. The first permit was issued in 2003 and remains in effect until the next “5-year” permit is issued. As a requirement of the permit, the region’s communities each prepared a Storm Water Management Plan (SWMP) that describes a series of best management practices (BMPs) the community is committed to implementing. Together, these management practices are intended to prevent or significantly reduce stormwater pollution through a combination of heightened local regulation and public education. When the initial 5-year permit expires, the communities will be required to obtain a new permit. Issuance of the new permit will require the communities to: 1) demonstrate significant progress toward addressing its stormwater problems, and 2) commit to implementing a new 5-year management plan, with enhanced pollution control measures as warranted.



4.2 Explore Dedicated Revenue Source for Future SWMP Development and Implementation The degree to which our region’s municipal Storm Water Management Plans are ultimately successful will depend on the amount of public support provided. As our communities continue to grow and develop, the existing municipal drainage infrastructure will also grow, resulting in higher operation and maintenance costs and increased demands on local public works personnel. In the case of several communities in other areas of the Commonwealth (Chicopee, Newton, Reading), increasing the property tax burden to cover these added costs proved to be undesirable or untenable, and the communities opted to establish a local **stormwater utility** to raise the needed revenue. The revenue for a stormwater utility is typically derived from a fee assessed to each property based on the property’s total impervious surface area. For residential property owners, the average annual fee is generally modest (\$25 - \$50). For large commercial and industrial properties, which often contribute significantly more stormwater runoff due to larger building footprints and paved parking and loading surfaces, the fee is proportionately higher. Abatement incentives can be offered for properties that incorporate proven on-site stormwater reduction strategies, such as pervious pavement, “green” roofs, rain gardens, or rain barrels.

As our communities’ future stormwater management costs inevitably increase, it is recommended that they explore the feasibility of establishing a stormwater utility or other dedicated funding mechanism to ensure a reliable revenue stream for maintaining the municipal storm drainage system and for carrying out an effective municipal stormwater management program. Among other mandates, such a program will soon be required by EPA to include *periodic water quality testing of storm drain discharges* in order to gauge the program’s success in mitigating polluted stormwater discharges, especially discharges into impaired, threatened, or highly sensitive receiving waters. A dedicated funding source can provide the additional revenue needed to pay for this and other stormwater program requirements. MVPC can assist communities in evaluating SWMP financing options, and in performing GIS analyses for impervious surface cover determinations in support of a stormwater utility fee schedule.



4.3 Develop and Implement Community-wide Stormwater Management Standards

As part of the Phase II Stormwater Management Program activities described above, communities should adopt minimum stormwater management standards that would apply to all new development and redevelopment projects requiring engineered drainage systems. The stormwater standards should be applicable *community-wide* (not just within regulated Wetland Resource Areas), and should address suspended solids removal, stormwater infiltration, and peak discharge rates. The Massachusetts Stormwater Management Policy adopted by the Department of Environmental Protection (DEP) can serve as a useful starting point for the local ordinance or bylaw. In addition, various model stormwater bylaws have been developed and were evaluated by the state Low Impact Development (LID) Task Force for their consistency with state and federal stormwater standards and for their suitability for local adoption and implementation. The DEP, Massachusetts Coastal Zone Management Office, and MVPC can be consulted for further information and assistance.

4.4 Integrate Low Impact Development (LID) Techniques in New Development, Redevelopment, and Municipal Infrastructure Improvement Projects

The region's communities, acting primarily through their Planning Board, Conservation Commission, and Public Works/Highway Department, should work to maximize the integration of Low Impact Development (LID) techniques in all public and private development and redevelopment projects, including the construction/reconstruction of municipal buildings, roads, and drainage infrastructure.



Until recently, the standard approach to site development in Massachusetts and across the country has been “clear it, grade it, and pave it”; then collect the resultant stormwater and “dispose” of it through a centralized system of pipes and detention ponds. Low Impact Development presents another, more ecologically-sensitive option. Rather than collecting stormwater en masse from across an entire subdivision, LID employs multiple small stormwater management techniques in series *on each individual property parcel* in the subdivision in order to take full advantage of the parcel's own rainfall retention, infiltration, and treatment capabilities. By keeping stormwater on site, downstream flooding is averted or minimized and groundwater recharge is maximized, thereby helping to sustain

well yields and streamflows during periods of drought. Depending on the nature of a development site, LID techniques may or may not eliminate entirely the need for some sort of centralized stormwater collection facility. However, they can go a long way toward minimizing the size (and thus cost) of such a facility and extending its operating life and efficiency.

The principles of Low Impact Development are simple and straightforward:

- **Work with the landscape.** Identify environmentally-sensitive areas and features, and then outline a development envelope that protects those areas. Maintain existing slopes and flow paths. Minimize grading and tree clearing.
- **Focus on prevention.** Minimize runoff by building narrower roadways and smaller parking areas. Use permeable surfaces (gravel, cobble, pavers) on driveways, sidewalks, and parking overflow areas. Where feasible on commercial buildings, use “green” rooftops to store and evaporate rainfall before it even leaves the roof.
- **Micromanage stormwater.** Design the site to create numerous sub-watersheds, and “micromanage” stormwater close to where it is generated using small, decentralized facilities (rain barrels, cisterns, vegetated swales, etc.). Employ a “treatment train” of multiple techniques to maximize infiltration and recharge.
- **Keep it simple.** Before resorting to expensive piped drainage systems that can carry high maintenance costs, maximize the use of less costly, non-structural practices such as bioretention areas (rain gardens).
- **Practice multi-tasking.** Create a multi-functional landscape with integrated stormwater management components that simultaneously provide stormwater collection, filtration, *and* infiltration. In doing so, create features that are aesthetically pleasing and function as open space, wildlife habitat, and rain and snow storage areas.

A description of some common LID techniques follows.

<u>Common LID Techniques</u>	
<u>LID Technique</u>	<u>General Description</u>
Low Impact Roadways	Narrower roadways and cul-de-sac alternatives that reduce runoff
Permeable Driveways/Parking Surfaces	Vehicular surfaces that allow rainwater to percolate into the ground
Bioretention Areas/Rain Gardens	Vegetated areas that collect, treat, and infiltrate rainwater
Vegetated Swales	Shallow vegetated drainage channels that slow and filter runoff
Cisterns and Rain Barrels	50-50,000-gallon tanks that capture and store rainwater for landscape watering
Green Roofs	Vegetated roof systems that intercept rainfall and return it to the atmosphere via evapotranspiration

Helpful information and technical assistance to facilitate this recommendation is available from MVPC, CZM, and other member organizations of the state’s Low Impact Development Task Force.

4.5 Conduct Regular Household Hazardous Waste Collection Events

Funds permitting, the region’s communities, acting primarily through their Boards of Health, Public Works Departments, or Wastewater Departments, should plan, broadly publicize, and conduct household hazardous waste collection events on a regular (annual or biennial) basis to aid residents in the disposal of harmful household products. Many common household, yard, and automotive products – oil-base paints, wood preservatives, cleaning and degreasing agents, pesticides, used motor oil, and car batteries – pose a risk to public health and the environment if not disposed of properly. Hazardous chemicals poured down the drain, onto the ground, or into street catch basins can contaminate the groundwater, streams, and ponds.



One of the best pollution prevention services any community can offer its residents is a regular Household Hazardous Waste Collection Day. This event gives residents a safe, low-cost opportunity to rid their homes, basements, and garages of numerous unwanted hazardous materials. The discarded materials are collected by a licensed hazardous waste contractor and are either recycled or disposed of at an approved hazardous waste management facility. MVPC environmental planners can help communities plan and organize an effective household hazardous waste collection program.

GOAL 5: Preserve Natural Stream Courses, Floodplains, and Flow Regimes

In addition to their great natural beauty and recreational value, the region's riparian corridors (rivers, streams, and adjacent lands) provide diverse habitat for numerous flora and fauna. This includes a number of what are ordinarily considered "upland" species as well as wetland species. For example, many upland animals need ready access to rivers and streams for foraging and drinking, particularly in winter when ponds and other water sources may be frozen over. Streamside vegetation (whether living, decaying, or dead) plays a key role in the health and function of riparian areas as wildlife habitat. Vegetation offers essential shade, shelter, and food for many species, including fish and other aquatic organisms. It also helps to regulate streamflow and water quality by stabilizing streambanks, preventing erosion, and filtering runoff pollutants.

Another important characteristic of naturally vegetated riparian areas is their *connectivity* function. Undeveloped lands along river and stream corridors provide vital connective lifelines that enable wildlife movement necessary to sustain healthy wildlife populations. Loss of these connective corridors results in habitat fragmentation, a major cause of wildlife decline and even extinction. For example, many species of reptiles, amphibians, and mammals need to be able to migrate freely to new habitat for successful feeding and breeding. This allows for the continuous exchange of genetic material between species populations, a critical factor in maintaining species' resilience to disease and environmental changes. It is key, therefore, to maintain undeveloped and naturally vegetated corridors between habitats of a sufficient width to enable animals to travel safely from one habitat to another. Allowing habitats to become isolated "islands" surrounded by development will cause them to lose much of their ecological value even though the habitats themselves may not be directly impacted.



Communities should strive to save habitat linkages that are still intact, and to take advantage of opportunities to restore connectivity through the reestablishment of natural vegetation along previously denuded riparian areas wherever possible. At the same time, communities should strictly enforce floodplain regulations to ensure that stream corridors and the adjoining lands subject to flooding are protected against improper development.

Recommended Action Strategies:

The following river corridor and floodplain management strategies are recommended for the region:

5.1 Maintain Riparian Corridors in a Natural, Undisturbed State

The best way to protect wildlife habitat functions and species diversity within riparian areas is to maintain these areas in an undisturbed, naturally vegetated condition. Numerous studies have shown the superior value of natural vegetation over manicured lawns, cropland, and other actively "managed" landscapes for wildlife diversity and productivity. These studies have also found that, in general, significantly larger streamside forest buffer widths are needed for wildlife habitat purposes than for water quality purposes.

While the state Rivers Protection Act (administered by the local Conservation Commission) establishes a 200-foot wide protective buffer along perennial stream courses, in fact, **300 feet** is the generally accepted minimum width needed to provide adequate habitat and migration corridors for many wildlife species. For example, surveys of songbird use of riparian areas recommend that riparian forests be at least 100 meters (330 feet) wide to provide nesting habitat for neotropical migrants, such as the Indigo Bunting, Northern Oriole, and Wood Thrush.

To respond to this resource need, communities, acting primarily through their Planning Board and Conservation Commission, should encourage current landowners and prospective real estate developers to maximize the retention of riparian corridors, including those of smaller brooks and streams, in a natural undisturbed state. In general, the farther away a building site or other land disturbance is from a streambank, the lesser the adverse impact on wildlife habitat and movement. Where some alteration within a riparian area is unavoidable, it should be designed and implemented in a manner that *minimizes any loss of function within the site itself as well as any loss of connectivity with adjacent vegetated lands*. In addition, any natural features within a riparian area that are of particular value to wildlife, such as large trees with nesting cavities, should be identified and protected from disturbance.

Natural Features Important to Wildlife	
<u>Natural Feature</u>	<u>Wildlife Habitat Value</u>
Large dead standing trees	Nesting and roosting sites for hawks and eagles
Large trees with cavities	Nesting sites and shelter for owls, wood ducks, and other animals
Large dying trees	Roosting sites (under the loose bark) for bats
Stone walls and rock piles	Cover for snakes and small mammals
Seasonal pools	Breeding sites for amphibians
Understory tangles	Cover for many birds and wildlife species
Woody debris in streams	Basking areas for turtles and snakes
Streambank burrows	Habitat for weasels, otters, and muskrats
Sandy soils with sun exposure	Nesting areas for turtles
Large stands of conifer trees	Wintering areas for deer
Hollow trees and logs	Dens for some mammal species
Fallen shaded logs	Preferred habitat for some salamander species

5.2 Encourage Municipal and Private Property Owners to Restore Disturbed Riparian Areas

Previously disturbed riparian areas that remain in a degraded condition may present opportunities for restoring important wildlife habitat functions. For example, any work that removes pavement or lawn near the water's edge and replaces them with a vegetated buffer of native trees and shrubs is likely to benefit fish and wildlife by filtering polluted runoff and by providing shade, cover, and food sources. The state Division of Fisheries and Wildlife and local land trusts, such as the Massachusetts Audubon/North Shore and Essex County Greenbelt Association, have special expertise in this area and can offer guidance to Conservation Commissions and homeowners on designing and incorporating effective riparian corridor restoration measures.

5.3 Work with Federal and State Officials to Modernize Floodplain Maps

The effective local regulation and management of floodplains – for the purpose of protecting public safety and property, natural streamflows, and riparian wildlife habitat – requires up-to-date floodplain maps that reflect current hydrologic and land use conditions in the community. Many of this region's existing Flood Insurance Rate Maps (FIRMs) were developed years ago based on topographic and landscape characteristics of the time. Since then, the region's communities have experienced significant growth and development, resulting in an increase in impervious surface cover and a corresponding loss of infiltration capacity. The net effect of these changes is increased surface runoff and the likely expansion of areas subject to flooding.



Salisbury Beach Erosion

The Federal Emergency Management Agency (FEMA) has been tasked with updating Flood Insurance Rate Maps for over 19,000 communities nationwide, and in 2012 and 2014 completed updates for Merrimack Valley communities. Significant changes to flood insurance rate maps were made, particularly in coastal communities. The updating process included more detailed hydrologic, hydraulic, and land use modeling to simulate present-day rainfall/runoff conditions. The resultant floodplain maps are, for the first time, presented in an electronic format on highly detailed and accurate digital orthophoto base maps. (All previous floodplain maps were offered in a paper

format only and generally lacked sufficient landscape detail to permit reliable flood boundary determinations.)

For *non*-priority communities, the map updating process did not include any new hydrologic and hydraulic modeling analyses. Instead, FEMA and its technical consultant took the communities' existing FIRM information (supplemented by more reliable local data where available) and reproduced it in an electronic format on a digital orthophoto base map. While this digital product will still be much more useful than the earlier FIRMs for establishing and enforcing the local floodplain regulations, they will not redefine the floodplain boundaries based on current, more accurate topographic, hydrologic, and land use information.

As opportunities arise, Merrimack Valley community officials should continue to participate in the FEMA Flood Map Modernization Program for Essex County by contacting and conferring with FEMA's technical consultant (currently, Camp, Dresser & McKee, Inc., 50 Hampshire Street, Cambridge, MA 02139; Tel. (617) 452-6317; Fax (617) 452-8088) and by providing the following information where available:

- identification of any areas subject to flooding which are outside of the existing FIRM floodplain boundaries;
- identification of areas where new or planned development may further impact flooding;
- future land use plans;
- copy of current floodplain bylaw and regulations;
- other relevant information as requested.

Depending on its reliability and relevance, such information will be used by FEMA in the future to prepare updated and more accurate digital floodplain maps.

GOAL 6: Manage Future Land Development and Redevelopment in an environmentally Sensitive and Sustainable Manner

While every effort should be made to preserve and protect the region’s sensitive drinking water sources, prime farmland, and other critical natural resource areas, some additional growth and development is inevitable and even desirable. If such growth continues to occur primarily as traditional (grid) subdivisions with single-family homes on large manicured lots, local capital and operating budgets will continue to climb, open space will dwindle, natural resources will be impaired, traffic will change the character of our roadways, and the region will come face-to-face with the reality of suburban buildout. In order to minimize sprawl and preserve the region’s treasured natural resources, it is important that future construction be sensitively designed and sited in harmony with the natural landscape. By taking better advantage of the creative development/redevelopment options available to us today, our region can positively shape the kind of place it will become tomorrow.

Recommended Action Strategies:

The following land development and redevelopment action strategies are recommended for the region:

6.1 Concentrate New Development in Existing Developed Areas Served by Infrastructure

Communities can preserve open space and natural resources by concentrating new development in their downtowns and other neighborhoods already served by public infrastructure. Through the reclamation and reuse of vacant mill buildings and Brownfields sites, infill development, transit-oriented development, mixed housing-over-retail development, and other concentrated development strategies, sensitive greenspace in fringe and outlying areas can be preserved. This development approach has the added benefit of curtailing both the need for and the costs of new infrastructure.

6.2 Promote the Use of Open Space Residential Design Over Conventional Subdivision Development

Communities can also use Open Space Residential Design (OSRD) as a means to achieve more compact, neighborhood-scale development while preserving vital open space and natural resources. OSRD allows the same number of homes as would be permissible in a conventionally-zoned subdivision, but offers greater flexibility and creativity in siting the homes and in conserving open space. It accomplishes this by employing a four step planning process that reverses the typical subdivision planning process. First – and this is key – the open space to be conserved is designated; second, the houses are sited; third, the roads and trails are planned; and fourth, the lot lines are drawn.



Caldwell Farm, Newbury

A growing number of Merrimack Valley communities have adopted OSRD as an effective open space preservation strategy. By way of example, the Town of Newbury has permitted three OSRD developments (49-acre Scotland Woods, 13-acre Colby Village, and 125-acre Caldwell Farm) which together provide 87 new housing units while preserving almost 140 acres of upland area as permanently protected open space. The Newbury OSRD bylaw promotes OSRD as the “preferred” residential development option over conventional, grid-style subdivision development. It does this by offering prospective developers “density bonuses” for setting aside additional open space, creating affordable housing units, and preserving a site’s historic structures (subject to a historic preservation restriction).

6.3 Encourage the Incorporation of “Green Building” Techniques in All Municipal, Residential, and Commercial/Industrial Development and Redevelopment Projects.

The region’s communities should encourage the incorporation of “green building” techniques in all new construction and reconstruction projects, including interior remodeling projects, in order to conserve natural resources and energy and to safeguard public and environmental health.


According to Environmental Protection Agency (EPA) estimates, buildings and homes in the U.S. account for: 68% of total national energy consumption, 12% of total water consumption, and 38% of carbon dioxide emissions. A standard wood frame house can require as much as an acre of forest, and may create as much as 12 tons of waste. Through improved facility siting, design, construction, operation, and maintenance practices, resource consumption can be significantly reduced, and adverse development impacts on the natural environment and the community can be minimized.

Green Building Practices

Definition of a Green Building: *A Green Building is carefully sited, designed, constructed, and operated so as to enhance the well-being of its occupants while minimizing negative impacts on the community and the natural environment.*

Green Buildings:

- Incorporate energy and water efficient technologies
- Use recycled materials in their construction
- Minimize construction and demolition waste
- Are sited and landscaped for energy and water efficiency
- Employ renewable energy technologies
- Improve indoor air circulation and air quality
- Provide a healthier and more comfortable environment
- Enhance long term economic performance
- Are built to last



GOAL 7: Preserve the Region’s Scenic Landscapes and Rural Character

The Merrimack Valley region’s scenic roads and associated landscapes are an important contributor to the regional character, rural ambiance, and quality of life. Meandering country roads, bordering and overarching trees, and vistas of historic homes, farm fields, woods, and salt marsh all play a role in defining the region’s unique sense of place. Yet these roads must also accommodate modern transportation needs, and decisions regarding roadway structural improvements and maintenance can sometimes be made without sufficient

regard for preserving visual amenities. While traffic flow and safety requirements must, of necessity, be the preeminent consideration, they need not be the *sole* consideration. Without compromising public safety, the region’s officials should work to ensure that activities conducted in scenic corridors – i.e., vegetation clearing, construction/reconstruction, signage placement, etc. – preserve, to the maximum extent practicable, the scenic and historic integrity of these corridors.

At the present time, there is no single comprehensive inventory that documents and maps all of the region’s scenic roads and their special landscape features. Nor are there adequate regulatory mechanisms or design standards in place in all communities to help safeguard these locally and regionally important resources.

To address these needs, the following actions are recommended for the region:

7.1 Compile a Comprehensive Inventory of All Scenic Roads in the Region

A comprehensive inventory and companion digital map of all scenic roads and associated landscapes in the region, together with a description and photo documentation of each road’s special attributes and amenities, would be a valuable resource for local and regional scenic preservation efforts. The *Essex County Landscape Inventory - Reconnaissance Report* series, completed as part of the Massachusetts Heritage Landscape Inventory Program, is an outstanding reference and starting point for this work. Prepared by a landscape consultant team with broad input from Local Heritage Landscape Committees, this report series provides important information on many of the region’s scenic roads and their landscapes. One effort currently underway by the Essex National Heritage Commission involves the designation of Route 1A as a scenic road. This effort includes the Merrimack Valley communities of Newburyport, Newbury and Rowley.

7.2 Adopt a Scenic Roads Bylaw or Ordinance

The region’s communities can adopt a Scenic Roads Bylaw pursuant to Massachusetts General Laws, Chapter 40, Section 15C, and can designate worthy roads as scenic roads. A Scenic Roads Bylaw applies only to activities occurring within the road right-of-way, such as tree cutting and brush removal, road maintenance, and curb cuts. It does not affect the use of adjacent private or public property that is outside of the right-of-way.

Scenic Roads Bylaw

A **Scenic Roads Bylaw** provides a process for reviewing work proposed within the right-of-way of any designated Scenic Road. Rural roads are often meandering roads with historic stone walls, large shade trees, tight curves, and limited visibility. Projects to alter these roads—whether routine maintenance, installing a new driveway, or reconstructing a section of the road to improve safety—can significantly affect the roads’ character by removing these visually defining features. The Scenic Roads Bylaw could include design criteria to be considered in the removal or alteration of specimen trees or stone walls. It might also contain a provision allowing only one driveway curb cut per property, unless the frontage along the scenic road is over a certain length (for example, to accommodate large farms with a residence, a driveway, and a separate farmyard entrance(s)).

Massachusetts General Laws, Chapter 40, Section 15C allows communities to designate roads in a community as scenic. This section of the M.G.L. requires the Planning Board to hold a public hearing and review all work proposed within the right-of-way of a designated Scenic Road. State roads cannot be designated as Scenic Roads, although they may be included in a **Scenic Overlay District**, which is a local zoning designation.

Municipal adoption of a Scenic Overlay District Bylaw would provide additional design and development procedures and guidelines for projects in designated scenic areas. Without adequate regulatory controls in place, new development or redevelopment that is not sensitively designed and sited could spoil these scenic resources. As an overlay district, the Scenic designation would be superimposed over the underlying zoning districts and provide additional protections to scenic areas. Areas so designated might include those within 500 feet of the edge of a Scenic Road or prominent hilltops or ridgelines. Through site plan review, new construction would be directed away from the line of view and blend with the natural landscape. This can be achieved through tools such as height restrictions, setback requirements, design review, sign controls, and landscaping and environmental impact standards. A Scenic Overlay District Bylaw could be written to apply not just to the scenic “back roads” in a community, but also to numbered routes, which are not protected under a Scenic Roads Bylaw. Since scenic areas and corridors often span several or more municipalities, the region’s communities should work collaboratively through MVPC, the Essex National Heritage Commission, and other appropriate entities to share planning expertise and resources, and to institute complementary scenic area protections.

LAWRENCE STATION

← HAVERHILL

BOSTON →



SCHEDULE

A blurred image of a schedule board, likely for the Lawrence Station, showing train times and destinations. The board is partially obscured by a 'T' icon and the word 'Lawrence'.

There is a direct link between the transportation system and the land use decisions made by communities. The amount and type of development will vary depending on the suitability of the transportation system. The regional transportation system needs to be developed to support these land use decisions. MVPC evaluated each PDA to determine if adequate transportation infrastructure was available to support new development. MVPC then prepared an inventory of the existing transportation infrastructure, roads, transit and bike/pedestrian connections.

Each community was consulted in the identification and prioritization of improvements to the transportation system as it relates to these PDAs. With limited available funds, transportation investment decisions require prioritization. As investment are made by local, state and federal official's projects that support the development of PDAs can be prioritized. The criteria used by the MVMPO to advance the programming of funds for projects are consistent with the Merrimack Valley Priority Growth Strategy and will allow targeted investments. The following are evaluations and program investments strategies for each community's PDA:

AMESBURY

Cedar Street

Cedar Street is proximate to Amesbury’s downtown. and could be another attractive pedestrian area. If the R Street Bridge is replaced, it will reconnect this section of town to the downtown and Lower Millyard. Improved sidewalks and bicycle access would enhance this area as well as provide better bike/ped connections to the Costello Transportation Center and the Powow Riverwalk, both of which are located in the Lower Millyard.

I-495/Hunt Road

As zoned for industrial use, this site does not require any major transportation improvements. It has no safety issues and only seasonal traffic congestion. The site is conveniently situated near I-495 interchange, off of Route 150 and near to Route 110. Just south, Pleasant Valley Road is a recommended bicycle Route. Though there are currently no sidewalks, the area could easily be updated to include them.

Golden Triangle

Access to the Golden Triangle is presently a challenge, however the Elm Street reconstruction project (2018) will include a new intersection with traffic lights that will provide direct access into the Golden Triangle. Further, MassDOT is currently designing a trail connection from the terminus of the Ghost Trail at Rabbit Road in Salisbury under I-95 to Elm Street. When Amesbury develops the final, middle, section of the Powow Trail, it will provide prime non-motorized connections between downtown and the Golden Triangle. Finally, the Whittier Bridge Trail, currently under construction, will provide easy non-motorized connections between Newburyport and the Golden Triangle. MVRTA’s bus Route 54 provides service to Elm Street.

Village Center/Lower Millyard

The Downtown/Lower Millyard are two sites that sit adjacent to each other and are impacted by similar transportation issues. Route 150 and Elm Street are the gateway roads leading people to downtown. Both roads are being reconstructed (Route 150 in 2015 and Elm in 2018). Pedestrian access is vital to these sites and the City of Amesbury has prioritized improvements that increase accessibility. The Costello Transportation Center was recently completed in the Lower Millyard just off the downtown. The Powow Riverwalk connects into the Lower Millyard and when complete, it will provide non-motorized access not only to Amesbury’s downtown, but for Amesbury residents wanting to go to Salisbury and Newburyport.

Route 150 Gateway Village

If developed for residential use, the transportation infrastructure would need to be updated to be more pedestrian and bicycle friendly. There are no crosswalks and no sidewalks on Route 150 south of Rt. 110, however the shoulders are wide enough to support bicycle traffic. The walk from Hillside Avenue/Haverhill Road intersection to City Hall, approximately one mile, is enjoyable. Route 150 is being reconstructed.

Highlights:

Current Access

- I-495
- I-95
- Routes 110, 150 and Elm St.
- Intermittent Transit/ Intermodal Center
- Powow Riverwalk

Planned Improvements

- Elm Street
- Powow Riverwalk – Ext
- Whittier Bridge Trail and Access points.

Proposed Improvements

- Powow Riverwalk - Ext
- R Street Bridge

ANDOVER

Andover Village Center

Andover's Village Center has good pedestrian access. To increase bicycle access, the Town of Andover mapped out proposed primary bicycle routes, which lead to the downtown. The town plans to implement this plan over time. To create a safer bicycle connection between Phillips Andover and the downtown, bicycle sharrows were painted on Bartlett Street. Commuter Rail service is available just off of the downtown. Covered bicycle parking is popular at the station. The MVRTA provides fixed bus service to the downtown.

The Town has proposed developing the Shawsheen River Trail, which would provide important connections through town and make it much easier for residents and workers to get to downtown via bicycle.

Brickstone Square

Brickstone Square is located just off of I-495. The Town of Andover has discussed improvements to Shawsheen Square that would enhance the pedestrian environment and address traffic congestion. In addition, the proposed Shawsheen River Trail would connect this section of town to the village center. The Town is currently working on the design for the reconstruction of Route 133, which will include increased pedestrian and bicycle access

Double tracking of the Haverhill line through Andover will soon be completed, opening up the possibility of increased train scheduling. The resulting demand could lead to opening additional stations. Reopening and improving the old commuter rail station (Shawsheen Village) located at Brickstone Square is a potential site.

I-93/Osgood Street

Located on Route 133 just west of I-93, this site has adequate road access. The MVMPO's I-93 Corridor Study recommended improvements along the highway that will indirectly impact this area by alleviating highway congestion on I-93 and addressing highway safety concerns. No additional improvements are recommended for this site.

Lowell Junction

The Lowell Junction site is in the southwest corner of Andover along I-93 and currently does not have good road, transit or bicycle/pedestrian access. However, I-93 is expected to be widened in this area and a new I-93 interchange is planned for this site. In addition, the extension of Burt Road has been approved, which will provide better access to the site.

The idea of building a commuter rail station at the Lowell Junction site has been discussed, but it would only be approximately half mile from the existing Ballardvale Station, thus slowing the service. It is recommended that only one station be located in this part of Andover and the location of that station should be evaluated. The I-93 Corridor Study recommended bus on shoulder to enhance commuting into Boston, which may have a positive impact on this site.

Highlights :

Current Access

- I-495
- I-95
- Routes 28, 125, 133
- MBTA & MVRTA Transit

Planned Improvements

- Route 28 Bridge
- Route 133
- On-road bike network

Proposed Improvements

- I-93 improvements/interchange
- I-93 "Bus On Shoulder"
- Shawsheen River Trail

Bicycle and pedestrian access is due to be dramatically improved. The Town of Andover is planning to build the Shawsheen River Trail, which essentially will connect Shawsheen Village, Andover Center, Ballardvale and Lowell Junction. This multi-use trail will be essential for improving and promoting bicycle and pedestrian access to the commuter rail stations and to Lowell Junction.

River Road

River Road has good road access with congestion at peak periods and some safety concerns at the I-93 interchange. I-93 also experiences congestion during peak periods. However, much of the congestion in this area would be alleviated by the widening of I-93.

The Merrimack Valley Transportation Management Association (TMA) works with area businesses to increase options for commuting in this area, including promoting bicycling. Bicycle commuters would like to see improved and safer bicycle routes to access River Road. The Town of Andover has included bicycle routes to River Road in its bicycle plan. The TMA has also voiced the desire to see additional bicycle access across the Merrimack River, such as is happening on the Whittier Bridge. Development of the M&L branch trail in Methuen and Lawrence will help create a faster, safer commuting route north of the river, but connections to both the Lawrence and Andover industrial parks could be improved.

The MVRTA initiated fixed route service to the River Road area (Route 76). There is no direct service from the Lawrence or Andover train stations to the River Road area for reverse commutes.

Rolling Green

Located on Route 133 adjacent to I-93, this site has good road access, but no bicycle or pedestrian access and little transit access (Routes 72 and 73). There are no other planned or recommended transportation improvements for this area.

BOXFORD

West Boxford Village Center

West Boxford's Village Center is located along Route 133 at the intersection of Main Street. Main Street is a recommended bicycle route. Currently, crosswalks are clearly marked in the Village Center and sidewalks may be built between the library and Main Street as part of the Route 133 road project. Reconstruction of Route 133 is under preliminary design, but it is not yet programmed in the MVMPO TIP.

Old Village Center

Boxford's Village Center is at the center of a road network that connects to neighboring towns and to two I-95 interchanges. All roads in this area are recommended bicycle routes.

With three schools and a library located in the Village Center, this is a prime location for sidewalks and a possible candidate for a Safe Routes to School program. The only crosswalk is located at the library.

Highlights :

Current Access

- I-95
- Route 133 & 97

Planned Improvements

- Route 133
- Route 97

GEORGETOWN

Georgetown Square Village Center

The bustling Georgetown Square sits at the busy intersection of Routes 133 and 97. Traffic congestion and safety have always been an issue and will remain so as this is a primary commuting Route through this part of the region.

Promoting and enhancing bicycling and pedestrian opportunities is one of the Town's goals. The development of the rail-trail (part of the Border to Boston Trail) will certainly provide a significant facility in the community as well as provide a connection to nearby Byfield. Additional bicycle and pedestrian connections could be made, especially to the rail-trail and other open spaces. A future possibility exists for building a second rail-trail that would provide a connection to Groveland and Haverhill.

Route 133/Chestnut Street

Located just east of downtown Georgetown along Route 133, this site is easy to get to via I-95 without having to navigate the traffic congestion of downtown. There are no planned or recommended transportation improvements for this area.

Norino Way

The Norino Way site is located near Exit 54 on I-95. National Avenue is a wide road that provides access from Route 133 to Norino Way and was built to accommodate truck traffic.

There are no planned improvements for this site. Depending on full build out of these areas, traffic related to I-95 and potentially increases commuter-related traffic it may be necessary to place a light at the intersection of National Avenue and Route 133.

National Avenue

The CDC is located adjacent to I-95 and along National Avenue, a connector road built for industrial uses. It does not have good transit access and there is no pedestrian access.

Highlights :

Current Access

- I-95
- Routes 133 & 97

Planned Improvements

- Border to Boston Trail

Proposed Improvements

- I-95 Exit 54
TSM Improvement
- Route 97
- Route 133
- Georgetown Branch Trail

GROVELAND

Groveland Village Center

Replacement of the Bates Bridge was recently completed, which included the reconfiguration of the Route 97/113 intersection. Reconstructing Route 97 throughout Groveland is one of the community's transportation priorities.

The Town is pursuing the development of the Groveland Community Trail, which includes the old rail corridor as well as on-road connections on Main Street and Route 113 up to the recreation area.

Route 97 Light Industrial Park

Located on Route 97 at the Georgetown line this site has adequate automobile access. Route 97 in this area is under design for reconstruction, which will include the sidewalks. To address the safety concerns at the intersection of Salem and School Streets, traffic signal utilities will be installed as part of the Route 97 reconstruction so that the capability for traffic signal will exist when desired.

Bicycling opportunities will be enhanced along Route 97, especially since it connects Groveland's town center with Georgetown's town center.

Highlights :

Current Access

- Route 97
- Route 113

Planned Improvements

- Route 97
- Groveland Community Trail

Proposed Improvements

- Route 97

HAVERHILL

Ward Hill

Located off Exit I-495 at Exit 47, Ward Hill is a light industrial area that has been rezoned in recent years to also accommodate commercial activities (BJ’s Wholesale Club), the Whittier Rehabilitation Hospital and recreational uses (Haverhill Valley Forum Ice Skating Rink). Access is easy for automobile traffic from both I-495 and the Route 125 Connector. However, it is not easily accessible via other modes of transportation. Bus transit service is not frequent in Haverhill.

South Main Street (Route 125) in Haverhill was reconstructed and includes sidewalks and wide shoulders.

Transportation access improvements for the Ward Hill site should prioritize on bicycle, pedestrian and transit modes. Route 125 is considered a preferred bicycle Route by the Massachusetts Department of Transportation and a connection from this road to the site would be beneficial. While speeds along the Route 125 Connector may be too fast and dangerous to allow bicycle access, an alternate Route using Ferry Road and S. Riverview Street may provide a safer and more attractive alternative. Sidewalks leading to and between the businesses should be installed as well as along Ferry Road and S. Riverview Street.

Downtown Haverhill

At the heart of the city is the downtown district, a hub of activity with many transportation choices. Washington Square is the transfer point for MVRTA Haverhill based buses and a short walk from the MBTA commuter rail station. Proposals to move the MVRTA’s transit station closer to the commuter rail station have been discussed, but it is not preferred by bus users. Improved commuter rail service has been requested now that the double tracking of the line is nearly complete. The railroad bridge over the Merrimack River rehabilitation project is due to be complete by 2017.

Primary roads include Merrimack and Washington Streets, Main Street (Route 125) and Route 97, all of which connect to I-495 within two to three miles of downtown. Roadway improvements include reconfiguration of three intersections on Main Street (2016) that will address congestion and safety concerns. The Basiliere Bridge is structurally deficient and due to be replaced or rehabilitated in 2020.

Pedestrian traffic is at its height in the downtown district and the City has sidewalks and painted crosswalks throughout the area. Washington Square is a high crash area and will be the subject of a walkability audit and potential pedestrian infrastructure improvements.

The City of Haverhill is developing a loop trail including the Riverwalk on the downtown river bank and the Bradford Rail Trail (2014 TIP) on the opposite side of the river. The City intends to continue to trail project to the Groveland Town line, making it a regional non-motorized commuting corridor that connects to two train stations.

Highlights :

Current Access

- I-495
- I-125 Connector
- Routes 97, 110, 125
- MVRTA, MBTA, Downeaster
- Riverwalk
- Double tracking
- Water Street Bike Lane

Planned Improvements

- Route 97 reconstruction w/ sidewalks, bike lane
- I-495
- On-road bicycle network
- Water Street Sidewalk expansion

Proposed Improvements

- Riverwalk Extensions
- Route 125 TSM Improvements
- Increased/Improved Transit Access
- Intermodal Center

The City is also developing an on-road bicycle network. The first bike lane was painted on Water Street. The City plans to further improve pedestrian access by widening sidewalks with overlooks.

Upper Hilldale

Hilldale Avenue is a narrow two lane road. The site is located on Hilldale Avenue, approximately two miles from the I-495/Route 125 Interchange near Plaistow, N.H. (identified as a congested roadway as part of the MVPC Congested Management Process). The site is not accessible by rail (for industrial uses) or transit, nor does it accommodate bicycle or pedestrians transportation.

One of three proposed sites for the MBTA layover site (if moved from Bradford) is located at the northern end of this site. Depending on the mix of uses for the site, both bicycle and pedestrian accommodations would need to be made and the MVRTA/MBTA would need to consider extending transit service to the area. The site access issue will limit the development potential of this CDC.

Lifestyle Center

Located conveniently (for automobiles) on Route 97 off of I-495, the Lifestyle Center consists of big box stores such as Target. Improvements already made to the area include new lights along Route 97 at Computer Drive and at the I-495 interchange, which addressed some of the safety issues at this location. Reconstruction of Route 97 between Computer Drive and Silverbirch Lane is on the 2017 TIP and will include new sidewalks and on-road bicycle access.

LA WRENCE

Lawrence Industrial Park

This site has fairly good access for industrial purposes. It is located roughly one mile from I-93 and has rail access. Pedestrian access could be improved with the construction of sidewalks and crosswalks. Bicycle access should also be improved. Transit access could be improved along Andover Street, especially at the Lawrence Regional Vocational School (technically located in Andover).

Malden Mills

This 100-year old industrial mill site is located on the border with Methuen along Route 28. Interstates 93 and 495 are accessed via the congested Route 28 (Broadway). The site does have transit service. Sidewalks exist along all streets providing easy pedestrian access to the site, but no sidewalks exist on the industrial site itself. The site also has exceptional multi-use path access with the recently completed Spicket River Greenway and the developing M&L Branch both in Methuen and Lawrence.

Merrimack Street

This site along the southern bank of the Merrimack River, this site has already benefited from transportation improvements with the construction of the McGovern Transportation Center 2005. Merrimack Street is under design for reconstruction that will include increased bicycle and pedestrian access, bus loading areas, as well as a traffic light. Double tracking of the Haverhill commuter line is nearly complete and service could be improved. Bus transit service is provided to this area. Pedestrians can easily access the area, though some of the sidewalks need to be repaired. A pedestrian trail along the Merrimack River is in preliminary design and would provide additional pedestrian connections for this site. Merrimack Street improvements were awarded a \$3.9 million MassWorks Grant in October, 2014.

Lawrence Gateway & Downtown

Many transportation improvements have been made and are being planned that will improve the accessibility of this section of Lawrence, including: 2-way traffic on Essex Street; parking/transit access at the Gateway; reconstruction of Marston St/Canal St. intersection, and construction of Oxford Park at the mouth of the Spicket River. Bicycle access should be improved in Lawrence. The downtown/Gateway site is bookended by two major multi-use trails, the proposed M&L Branch to the west and the Spicket River Greenway on the east. The City of Lawrence should undertake a bicycle and pedestrian plan to provide greater connectivity within the city.

The MVRTA provides ample service in this area, especially with the implementation of the downtown circulator in July 2014.

The downtown site is also the location of crash clusters. An analysis should be conducted in this area to address these safety concerns.

Highlights :

Current Access

- I-495
- Routes 28, 97, 110, 114, 125
- MVRTA, MBTA
- Spicket River Trail

Planned Improvements

- HSIP intersection improvements

Proposed Improvements

- Route 114
- Merrimack River Trail
- Spicket River Trail
- M&L Branch

MERRIMAC

Merrimac Square

Merrimac Square is the Town's key activity node. Reconstruction of the Square is now underway. Additional pedestrian and bicycle improvements include a much needed trailhead for the MacLaren Trail and signs directing cyclists and pedestrians to the trail from downtown. Bicycle access along Route 110 should be improved.

Merrimac Route 110

This site has easy access to I-495 and to downtown Merrimac via Broad Street. Sidewalks exist and the road is wide enough to easily accommodate bicycles. No improvements need to be made.

Highlights :

Current Access

- I-495
- Route 110

Proposed Improvements

- Merrimac Square
- Bicycle access on Route 110

METHUEN

Griffin Brook Industrial Park

Located along the Merrimack River on Route 110, this site is impacted by the congestion and safety concerns involving the I-93 rotary, which is now being replaced with a new interchange. The MVRTA provides bus access to this site via Route 41. Pedestrian and bicycle access should be improved along Route 110 as a primary connecting corridor between Lawrence and Lowell.

Branch Street

This site is proximate to the Route 110/113/I-93 rotary and improvements currently underway should have a positive impact on congestion and safety in the area. Chief among these improvements is the construction of a traffic signal at the intersection of Branch Street and Route 113.

Lindberg Avenue

The Lindberg Avenue site, accessible from Mystic Avenue, currently has poor access to Pelham Street and I-93. Recent road improvements in the area include a new turning lane on Pelham Street onto the I-93 southbound ramp. If developed as planned, Lindberg Avenue would need to be widened and upgraded. A traffic analysis of Lindberg Avenue from its intersection with Pelham Street would be helpful to better understand the development capacity of this area.

Transit service (Route 40 out of Lawrence along Broadway and Pelham Street), operates on Mystic Avenue, but not on Lindberg Avenue. In addition, Route 42 Ring & Ride service also connects to this site and provides east-west connections within Methuen. Finally, Boston commuter bus service is accessible at the Pelham Street Park & Ride just east of I-93.

Bicycle and pedestrian improvements need to be made in the area. In addition, sidewalks should be built along Lindberg Avenue.

Aegean Park

Aegean Park, accessible from the Pelham Street Exit on I-93 has fairly good road access. Sidewalks and shoulders exist on Pelham Street east of the I-93 interchange, but disappear on the west side of the interchange, making this site inaccessible to walkers and cyclists. Transit service runs to Mystic Street, but pedestrians would then need to walk to Aegean Park.

Downtown Methuen

Methuen's downtown has very good road access for local travel as well as access to Route 213, which connects to both I-93 and I-495. Bus transit service is provided to the downtown via Route 40, which has 30-minute headways. Pedestrian accommodations are good and will be increasingly improved with the completion of Riverwalk Park and the Methuen Rail Trail.

Highlights :

Current Access

- I-93
- I-495
- Route 28
- Route 110
- Route 113
- Route 213
- MVRTA

Planned Improvements

- Methuen Rail Trail

Proposed Improvements

- I-93 "Bus on Shoulder"
- Riverwalk Extension
- Route 110 bike/ped access
- Bike/ped access on Pelham St.

The Loop

Located off of Route 213 with connections to both I-495 and I-93, the Loop is accessible for automobiles. Safety and congestion concerns at the intersection of Howe, Prospect, Jackson and Pleasant Valley Streets (Marston Corners) should be addressed.

The Loop is designed for convenient vehicle access. Consequently, it is less functional or attractive for bicyclists or pedestrians. Sidewalks do exist, but businesses are set back from the road leaving pedestrians to make their way through expansive parking lots. Bus transit service is provided to this site, though there is public desire for extended hours of service for people working at the site and those going to the movies. This is a primary cross-town bicycle route in Methuen and access should be improved.

NEWBURY

Byfield Village Center

With such a strong village center feel, it is surprising that pedestrian access is nearly non-existent. Sidewalks are absent; though a few unremarkable crosswalks have been painted at key intersections. However, the Town has initiated a project to improve pedestrian accommodation and traffic flow in the area. The layout of Byfield presents a wonderful opportunity for bicycle and pedestrian transportation, because it is compact, has low traffic volumes and provides important connections to places such as the library. The Town is also developing its section of the Border to Boston Trail, which goes right through Byfield.

Central Street at Fruit Street

Set on the north side of Central Street just east of Exit 55 on I-95, this site includes the redevelopment of a commercial plaza. There are no major transportation infrastructure needs here except potentially for sidewalks and crosswalks at the interchange.

Central Street at Kent Way

Located less than a quarter of a mile from Byfield Village Center and the Border to Boston multi-use trail, this site sits just west of I-95's Exit 55. Sidewalks exist on Central Street, but need to be rebuilt. Bicycling access needs to be improved, especially with the future development of the Border to Boston trail.

Route One

This CDC has good access to the commuter rail station, Route 1 and to downtown Newburyport via the existing Clipper City Rail Trail.

Improvements would need to be made in the vicinity to make it safer for cyclists and pedestrians, such as: 1) a redesign of the Route 1 rotary, 2) a connection to the City Branch Line trail across Route 1 (completing the downtown Newburyport trail loop through Joppa Flats), and 3) bicycle and pedestrian improvements recommended in the Parker River National Wildlife Refuge Access Report. In addition, the planned Border-to-Boston multi-use trail, which hooks up with Newburyport's Clipper City Rail Trail at the train station, will create an in-town connection between the northern end of town (close to the village center) and Byfield Village Center.

MBTA commuter Rail service to/from Boston is available at Newburyport Station. MVRTA's Route 51 provides service to the commuter rail station, though current service levels are inadequate for commuting purposes or for use by potential residents at this site.

The feasibility of a seasonal bus service connecting the MBTA, Downtown Newburyport, Salisbury and Amesbury should be analyzed. The intent would be to examine the possibility of relieving traffic congestion and parking challenges (by encouraging the use of the commuter rail lot) while encouraging economic growth. Such a service would also benefit Newbury.

Highlights :

Current Access

- I-95
- Route 1, 1A
- MBTA
- Minimal MVRTA Service

Planned Improvements

- Border to Boston Trail

Proposed Improvements

- Sidewalks, crosswalks and on-road bicycle access

NEWBURYPORT

Downtown Newburyport

The City of Newburyport has planned and implemented a variety of bicycle and pedestrian infrastructure projects. Bicycle lanes were installed on High Street, Water Street and Plum Island Turnpike. Bicycle parking has been installed at various locations downtown. The first phase of the Clipper City Rail Trail was completed and the second section is due to be under construction in 2015. Sidewalks need to be updated throughout the downtown area.

Road infrastructure is adequate for downtown accessing, though there is seasonal traffic congestion and truck deliveries on State Street can cause expected traffic congestion. However, parking is inadequate during the summer months.

The MVRTA implemented the Route 54, which now allows better connections between Newburyport and Salisbury. The City is interested in implementing a seasonal circulator bus in Newburyport. The feasibility of a seasonal bike share program should also be investigated.

Newburyport Industrial Park

Newburyport's Industrial Park has good highway and road access. The redesign of the Low Street and Storey Avenue intersection has reduced both congestion and the number of collisions, but more improvements have been recommended. The City has proposed excluding trucks from on Low Street between Route 1 and Graf Street with the preferred access being provided farther south along Route 1.

Transit service is provided via MVRTA's bus Route 54 as well as by commuter rail. The commuter rail station is situated in the southeastern section of this site.

The Clipper City Rail Trail provides limited access to the industrial park, but no on-road bicycle access is provided. Separated bicycle access would be ideal to allow people to access jobs without interfering with truck traffic. Pedestrian safety would be significantly enhanced with the inclusion of sidewalks on area roads. Sidewalks and crosswalks need to be included all along Low Street.

Highlights :

Current Access

- I-95
- Routes 1, 1A, 113
- MBTA, MVRTA

Planned Improvements

- Gillis Bridge
- Clipper City Rail Trail – Phase II

Proposed Improvements

- Downtown Parking
- Bike share
- Seasonal transit

NORTH ANDOVER

Osgood Landing

Current road capacity at Osgood Landing and the development area along Route 125 is acceptable. However, according to a 2009 MVPC traffic study of the area, road capacity problems will arise if the site is redeveloped and additional development occurs on the opposite side of Route 125. Improvements to Route 125 will need to be made depending on the uses that locate in this CDC.

Bus transit service is limited and cannot be accessed from Lawrence. A proposal to locate a new commuter rail station at Osgood Landing has been developed.

Bicycle and pedestrian access is very limited with neither sidewalks nor recommended bicycle Routes. Route 125 is a primary regional connecting corridor and bicycle and pedestrian infrastructure is needed to create a safe connection for all users.

Route 114 Corridor

Improvements to Route 114 are a regional priority for addressing congestion and safety, as well as supporting economic development. At the northern end near Waverly Road, there is a bottleneck that needs to be removed and pedestrian access at the North Andover Mall/Den Rock Park is needed. A Road Safety Audit was conducted in 2014 near Merrimack College. Intersection reconfigurations and lane changes were proposed to address pedestrian safety, road speed and high crash locations. Sidewalks and lighting are needed along Route 114 and bicycle access should be provided separate from the road where possible near Merrimack College heading east.

Currently, the MVRTA does not provide transit service beyond the Route 125/114 intersection. As a result, people must walk along this busy road to access doctors' offices and jobs. Bus service in this area should be investigated.

Machine Shop Village

The Town of North Andover implemented pedestrian improvements to Machine Shop Village and is planning to develop a short section of the rail-trail from downtown to a Trustees of Reservation property. Improving on-road bicycle access to this site would make this mode a more viable option.

Road access to this site is adequate with no major improvements are required. Transit service is provided in this area via MVRTA Route 33, which also stops at the McGovern Transportation Center in Lawrence.

Highlights :

Current Access

- I-495
- Routes 114, 125, 133
- MVRTA

Planned Improvements

- Route 114
- Rail Trail

Proposed Improvements

- Train Station

ROWLEY

Route 1

This CDC, at the intersection of Routes 1 and 133, is automobile-oriented. This intersection was analyzed and recommendations provided.

There is no transit service to this site. There are no bicycle or pedestrian accommodations in this area. However, MVPC is looking at improving bicycle and pedestrian travel on Route 133 east of Route 1. No transportation improvements are recommended to this area.

Rowley Village Center

A quintessential New England village center, Rowley's downtown needs only enhancements to its pedestrian infrastructure. Road access is adequate as is bicycle access. The town does receive bus transit service, but it does have an MBTA commuter rail station.

Highlights :

Current Access

- Route 133, 1A

Proposed Improvements

- Route 133

SALISBURY

Salisbury Village

Salisbury's Village Center sits at the apex of the Routes 1, 110 and Beach Road intersection – a very busy traffic node. This area continues to be congested during the summer months and is the location of a crash cluster.

Bicycle and pedestrian improvement projects are underway. The Salisbury Point Ghost Trail is complete, missing only the final link to Amesbury and the connection to the Old Eastern Marsh Trail. The remaining section of the Old Eastern Marsh Trail is on the 2017 TIP for construction. Additional planned improvements include reconstruction, including sidewalks, of Route 1. Bicycle and pedestrian access on Beach Road should be improved to ensure that it users of all ages can ride to the beach. This would help to support a mode switch to non-motorized forms of travel.

With the implementation of the fixed bus Route 54, transit service has been improved. In addition, the Beach Bus (83) now stops in Salisbury so that people have better access to Elm Street.

To encourage a mode shift, parking fee strategies, satellite parking, transit coordination, bike share and more should be investigated.

Salisbury Beach Center

With only two primary access roads in and out of the beach area, Salisbury Beach can become a virtual parking lot at times during the summer months. Cyclists may access the beach on the signed Beach Road. Bicycle and pedestrian access exists at the beach, but infrastructure conditions vary. Bicycle and pedestrian infrastructure should be updated both along Beach Road and along the beach to encourage more people to switch modes. To encourage a mode shift, parking fee strategies, satellite parking, transit coordination, bike share and more should be investigated.

Business Park

The Business Park is adjacent to I-95 and is accessible by Route 110. The site is accessible via the Ghost Trail and the Whittier Bridge Trail, both of which intersect with Rabbit Road. The Town may want to reexamine bicycle access on Rabbit Road.

Redevelopment Zone

This site is located near the complex web of intersections along Route 286 near the I-95 interchange. Improvements to address congestion were recently implemented at several of these intersections. Site access from points south is via Rabbit Road and Route 110. Non-motorized users could access this site via the Ghost Trail and the Whittier Bridge Trail, both which intersect with Rabbit Road.

Highlights :

Current Access

- I-95
- Route 1, 110, 286

Planned Improvements

- Old Eastern Marsh Trail
- Whittier Bridge Trail
- Route 1

Proposed Improvements

- Beach Road

WEST·NEW·BURY

Village Center

West Newbury's Village Center does have crosswalks and sidewalks, though not on both sides of the street. To be a truly walkable area, the sidewalks should be build consistently on both sides of Main Street and on portions of roads leading to it. Roads should be signed for bicycling and bicycle parking provided.

There is no need for other transportation infrastructure changes beyond those that would improve and enhance walking and bicycling accommodations.

Highlights :

Current Access

- Route 113

Proposed Improvements

- Bike/Pedestrian



AMESBURY

Amesbury Village Center/Lower Millyard

ROAD ACCESS

Amesbury's downtown and lower mill yard sit adjacent to one another. The primary gateway roads are Route 150 and Elm Street, both which connect this area to Route 110, I-495 and I-95. Reconstruction of Route 150 will likely begin in 2015 and funding for the reconstruction of Elm Street is included in the 2018 TIP. A small section of Elm Street was reconstructed during the now completed Route 110 reconstruction project. Replacement of the R Street Bridge would create a better connection with the Cedar Street area.

CONGESTION MANAGEMENT

Amesbury's downtown experiences expected traffic congestion during peak periods. Route 110 between I-495 and I-95 experiences increased congestion during the summer months, but the level of this congestion has been reduced with the completion of the Route 110 reconstruction project.

SAFETY

There are no crash clusters in the downtown or Lower Millyard Areas.

TRANSIT

In 2012, the Nicolas Costello Transportation Center was opened in the Lower Mill Yard. MVRTA Bus Routes 51 (to Haverhill) and 54 (to Newburyport and Salisbury beach) connect at this center. Buses run approximately every 70 minutes.

BICYCLE & PEDESTRIAN

Downtown Amesbury is conducive to walking and bicycling. Sidewalks in Market Square are brick with ramps that vary in construction from brick to newer concrete ramps with ADA compliant truncated dome pads. The City is building the Powow River Walk. Its first phase ends in the Lower Millyard. A second section connecting the trail to Mill and Market Streets has been under design.

I-495/Hunt Road

ROAD ACCESS

This site sits south of I-495 between the Merrimack town line and Route 150. It has easy access to I-495 at Exit 54.

CONGESTION-MANAGEMENT

This section of I-495 does not have noticeable regular traffic congestion, however it does experience seasonal congestion associated with beach and vacation travel.

SAFETY

There are no high-crash intersections located in this area of the City.

TRANSIT

This site is not accessible via the MVRTA fixed bus route system.

BICYCLE & PEDESTRIAN

There are no sidewalks on South Hunt Road nor is this a recommended bicycle route. However, just to the south is Pleasant Valley Road, which is a recommended bicycle route, and cyclists could connect to this site via Route 150.

Route 150 Gateway Village

ROAD ACCESS

This site is easily accessible from Routes 110, 150 and I-495 at Exit 54.

CONGESTION MANAGEMENT

There are no significant congestion issues on the roads in this area; however I-495 does experience seasonal traffic due to beach and vacation travel during the summer months.

SAFETY

The intersection of Route 110 and 150 was identified by MassDOT as being a Crash Cluster for the years 2009-2011. This intersection experienced 40 accidents occurred between 2010 and 2012. MassDOT has initiated a project that is expected to correct the safety issues that exist at this location.

TRANSIT

The MVRTA's Route 51 does pass this area on Route 110.

BICYCLE & PEDESTRIAN

Route 110 has 8' wide shoulders for bicycling and sidewalk on the north side. Sidewalks are also available on the west side of Route 150 north of Route 110. Route 150 south of Route 110 is accessible to pedestrians. Bicyclists must share the travel lane with cars on Route 150.

Golden Triangle

ROAD ACCESS

This site sits snugly between I-495 (Exit 55) and I-95 (Exit 58). Reconstruction of Elm Street is included in the 2018 TIP, which will include a new intersection with a traffic signal that will provide direct access into the Golden Triangle. The intersection of Elm St. and Route 110 was recently improved as part of a larger reconstruction project along Route 110.

CONGESTION MANAGEMENT

This area experiences seasonal congestion.

SAFETY

The section of Route 110 between I-495 and I-95 experienced a high number of crashes overall during the period 2010-2012 with the intersections at Rocky Hill Road and Elm Street both earning a spot on the top regional crash clusters for 2009-2011. However, these numbers do not reflect improvements made to Route 110.

TRANSIT

The MVRTA's fixed bus Route 54 travels down Elm Street to Route 110 providing bus service to this area.

BICYCLE & PEDESTRIAN

Completion of the Powow Riverwalk will connect the Golden Triangle with downtown Amesbury, Newburyport and Salisbury. MassDOT is currently designing a section of the trail linking Rabbit Road to the Golden Triangle and Elm Street. In addition, the Whittier Bridge Trail, currently under construction, will provide access to this site with a quick on-road connection via Rabbit Road. The Elm Street reconstruction project will improve pedestrian access in this area as well.

Cedar Street**ROAD ACCESS**

Cedar Street bisects this site. Cedar Street connects to Route 150 and to other local roads. If the R Street Bridge is rebuilt, there will be additional access to this site from Elm Street, providing additional access to the interstates.

CONGESTION MANAGEMENT

This area does not experience high traffic volumes.

SAFETY

The streets surrounding this site have not experienced a high number of crashes.

TRANSIT

The site is a short walk to the Nicolas Costello Transportation Center where the MVRTA's fixed Routes 51 (to Haverhill) and 54 (to Salisbury) connect.

BICYCLE & PEDESTRIAN

This site sits amidst a more densely settled residential area with sidewalks.

ANDOVER

Downtown Andover

ROAD ACCESS

Andover's bustling Village Center is bisected by Main Street (Route 28) and has fairly easy access to I-495 from Main Street to the north of town and to I-93 from the Route 125 Bypass to the south of town or via Rt. 133 to the west.

CONGESTION MANAGEMENT

Congestion on Main Street and intersecting streets is typical of a downtown area with many traffic signals and pedestrian crossings. Roadways to/from the Village Center are not significantly congested.

SAFETY

Between 2010-2012, 83 accidents occurred on Route 28 between Elm Square and Morton Street. Elm Square was included as a crash cluster for 2009-2011.

TRANSIT

Two MVRTA bus routes provide service to Andover's Village Center. Route 21 is a downtown loop and Route 32 connects to the Buckley Transportation Center in downtown Lawrence. There is no bus service between North Andover and downtown Andover.

The MBTA commuter rail station is at the western edge of the Village Center, approximately a 10 minute walk. While the station is within walking distance from Main Street, there is a steep hill between the two. The MBTA did install a covered bicycle rack at the station, which is often full in good weather.

BICYCLE & PEDESTRIAN ACCESS

The Village Center enjoys a high level of pedestrian use. Pedestrian improvements, including bump outs, were completed in 2009. The Town painted its first bicycle sharrow along Bartlett Street to connect Philips Andover Academy to the downtown. In 2013, the Town of Andover created a map of proposed bicycle routes, most of which will connect into the downtown area. Bicycle access will be greatly improved once the improvements to these bicycle routes are made.

I-93/Osgood Street

ROAD ACCESS

This site is located along Route 133 to the west of the I-93 interchange. This area is developed and has adequate road access to I-93 at the Route 133 interchange in the north, as well as, at the Dascomb Road/Frontage Road interchange to the south. Access to I-495 is located at Exit 39, two miles to the west along Route 133.

CONGESTION MANAGEMENT

Significant congestion occurs during peak traffic hours when the thousands of workers employed in the area travel to and from work. The Merrimack Valley Planning Commission has reviewed the operation of the traffic signal located at the intersection of the Raytheon Driveway and Route 133 to identify measures that can be taken to relieve this congestion.

SAFETY

Crashes do occur at the interchange I-93 interchanges at Route 133 and at Dascomb Road, but neither is noted as a crash cluster.

TRANSIT

The MVRTA operates routes 72 and 73 that originate at either the Buckley Station in Lawrence or the Washington Square station in Haverhill and go to the IRS and Raytheon business sites.

BICYCLE & PEDESTRIAN ACCESS

Sidewalks exist on the south side of Route 133 leading to the Raytheon site. There are no primary or secondary bicycle routes in this area.

Lowell Junction**ROAD ACCESS**

The Lowell Junction area does not have direct access from I-93, the major highway that abuts the area. People traveling from I-93 must get off at the Rt. 125/Bypass Exit to the south or the Dascomb Road Exit to the north and then travel on local roads to access Lowell Junction. The Lowell Junction area is accessible via River and Ballardvale Streets.

CONGESTION MANAGEMENT

Traffic congestion exists along I-93 northbound north of the Route 125 exit, heading toward the Dascomb Road exit. The vehicle-to-capacity ratio is .80. Peak period congestion typical of any arterial providing highway access to thousands of workers occurs on the Route 125 Bypass and at the Dascomb Road interchange with I-93. Atypical congestion occurs on the mile and a half of roads that normally carry only local traffic, but are being used by commuters accessing I-93 at Dascomb Road from Lowell Junction. River Street, Andover Street and Clark Road through the Ballardvale section of Andover would normally be serving only the people living and working in the area, not thousands of commuters from Lowell Junction. River Street is particularly narrow and not designed for these volumes.

SAFETY

Crashes do occur at the I-93 Dascomb Road exit, but it is not a crash cluster.

TRANSIT

There is no transit access to this site.

BICYCLE AND PEDESTRIAN

Bicyclists and pedestrians must generally use roadways. Sidewalks exist on Andover and River Streets leading from the Ballardvale Station for less than .5 miles. However, there are none in the Lowell Junction area, except for those built on business campuses. On-road bicycling is not recommended since the width of the lanes along River Road vary, yet are under 12 feet. There is currently no off-road access, though Andover does have plans to develop a multi-use trail paralleling the Shawsheen River linking Lowell Junction with the Ballardvale train station, village center and Shawsheen Square.

Brickstone Square

ROAD ACCESS

Located in historic Shawsheen Village, Brickstone Square is part of a larger planned neighborhood that is well connected by roadways. It is conveniently located very close to I-495 and moderately close to I-93. The site can be accessed on either Route 133 or during certain times of the day (into the campus in the morning and out of the campus in the afternoon) off of Route 28 using Worth Street to cross the Shawsheen River. The Town of Andover has initiated design to reconstruct Route 133 including Shawsheen Square.

CONGESTION MANAGEMENT

Shawsheen Village is one of Andover's gateways with Route 28 leading drivers directly to the downtown district from the highway. Brickstone Square is impacted by the heavy congestion at the Route 28/133 intersection (Shawsheen Square), which also experiences a high number of accidents. The interstates are also congested with I-495 north of I-93 (toward the Route 28 Exit) having one of the highest volume-to-capacity ratios (measure of congestion) in the region. The section of I-93 northbound toward the Route 133 interchange also has a high volume-to-capacity ratio.

SAFETY

The intersection of Routes 28 and 133 (Shawsheen Square) was the site of 47 accidents between 2010-2012 and was identified as a Crash Cluster by MassDOT for the years 2009-2011.

TRANSIT

The MVRTA operates three local transit routes that service Brickstone Square. Bus Route 21 is an inter-Andover bus Route that runs on the hour on weekdays. The bus time schedule does not consistently coincide with the MBTA commuter rail time schedule. Bus Route 32 runs along Rt. 28 (Main Street) and provides connections between Lawrence and Andover. Bus Route 72 is a special employer service that only runs by Brickstone Square once in the morning, but not in the evening. The MVRTA also operates a commuter bus service between Methuen and Boston that stops at Shawsheen Square.

BICYCLE & PEDESTRIAN

For the most part, sidewalks line the streets in the area surrounding Brickstone Square and extend all the way into downtown Andover. Construction of sidewalks and bicycle access are included as part of the design underway for Route 133.

Currently, there are no off-road options in this area, though Andover does have plans to build a multi-use trail along the Shawsheen River from Shawsheen Square down to Lowell Junction.

River Road

ROAD ACCESS

The River Road area, characterized as a large upscale office park, is nestled around I-93 and the Merrimack River and is largely accessible by car.

CONGESTION MANAGEMENT

I-93 northbound north of I-495 heading toward the River Road interchange and beyond going north over the Merrimack River has a high volume-to-capacity ratio and is extremely congested in the late afternoon and early evening. Traffic is stop-and-go at some point each day during the evening commute. Widening I-93 to provide four travel lanes in each direction that would include modifications to the River Road/I-93 and I-495/I-93 interchanges, coupled with the reconstruction of the Route 110/113 rotary would reduce this congestion problem.

SAFETY

103 crashes occurred between 2010-2012 along River Road near I-93 and the on-ramp to I-93 SB is cited as a crash cluster (2009-2011).

TRANSIT

The MVRTA operates two bus routes: Route 37 provides access only on the eastern side of I-93. Route 76 provides access along Andover Street and to businesses on the western side of the highway. .

BICYCLE & PEDESTRIAN

The Merrimack Valley Transportation Management Association promotes cycling to and from this CDC. Interested cyclists may find a variety of on-road commuting routes on their web site (www.merrimackvalleytma.org). The TMA also organizes and promotes Bike to Work week activities in conjunction with their member companies. Rubel Maps considers High Plain Road and Pleasant St to be primary bicycle routes. The Town of Andover has included North Street, Chandler Road and River Road in their bicycle plan.

Rolling Green**ROAD ACCESS**

Located on Route 133 just east of I-93, this site is well situated for car commuting.

CONGESTION MANAGEMENT

Typical peak period traffic congestion occurs on Route 133 in the morning and the evening as major employers are located here and on the other side of I-93.

SAFETY

There are no significant safety issues in this area.

TRANSIT

The MVRTA operates Routes 72 and 73 which originate at either the Buckley Center in Lawrence or the Washington Square station in Haverhill and go to the IRS and Raytheon business sites.

BICYCLE & PEDESTRIAN

Sidewalks exist on the southern side of Route 133, though they do not extend across the bridge over I-93. There are sidewalks on the north side of Route 133, but only in front of the housing development and there are no sidewalks on Greenwood or Lovejoy Roads. Crosswalks are well marked on Route 133. There are no recommended bicycle routes in this area. The proposed Route 133 Corridor improvement project would improve bicycle and pedestrian accommodations on all approaches to the Route 133/Lovejoy Road/Greenwood Road intersection.

BOXFORD

West Boxford Village Center

ROAD ACCESS

This quaint village center is bisected by Washington Street (Route 133) and Main Street. There is no interstate access.

CONGESTION MANAGEMENT

While Route 133 is a primary route through Boxford, there is presently no significant congestion along this section of the roadway.

SAFETY

There are no records of significant safety problems in this area.

TRANSIT

The MVRTA operates the Ring & Ride in Boxford, a curb-to-curb transportation service for the residents of the community. Residents may use this service to travel anywhere in the other Ring & Ride communities of Georgetown, Groveland, Newbury/Byfield, West Newbury as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service will also allow you to connect to the MVRTA fixed route bus system.

BICYCLE & PEDESTRIAN

There are no sidewalks in this village center, though there are some crosswalks. Route 133 is not a recommended bicycle route, although Main Street is. Boxford is designing for the reconstruction of Route 133, which will include increased bicycle access.

Old Village Center

ROAD ACCESS

Boxford's Village Center is located along the triangle formed by Georgetown Street, Depot Road, Elm Street, Main Street and Middleton Street. The Center is in close proximity to Exit 52 on I-95 via Topsfield Road.

CONGESTION MANAGEMENT

None of the roadways in this area experiences major congestion issues, including I-95 at Exit 52.

SAFETY

There are no significant safety concerns in this area.

TRANSIT

The MVRTA operates the Ring & Ride in Boxford, a curb-to-curb transportation service for the residents of the community. Residents may use this service to travel anywhere in the other Ring & Ride communities of Georgetown, Groveland, Newbury/Byfield, West Newbury as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service will also allow you to connect to the MVRTA fixed route bus system.

BICYCLE & PEDESTRIAN

Though this area has three schools, library, police station and fire station, there are no sidewalks in the Village Center and only one crosswalk located at the library. All area roads are recommended bicycle routes.

GEORGETOWN

Georgetown Square Village Center

ROAD ACCESS

Georgetown's town center is located at the busy crossroads of Routes 97 and 133. I-95 access is provided via Route 133, East Main Street. I-95 can also be accessed on Route 97, Central Street at Exit 52 in Boxford.

CONGESTION MANAGEMENT

Georgetown Square experiences significant traffic congestion. Drivers experience long delays on virtually all approaches to this intersection during AM and PM peak periods. AM Peak congestion is severe on the Route 97 eastbound approach to the Square, while the northbound (Route 97) and westbound (Route 133) approaches back up during the evenings. Much of the traffic traveling through this intersection is commuter traffic from Haverhill, Groveland and southern New Hampshire bound for I-95. The MVPC has previously assisted the Town with this issue by suggesting changes to the timing in the Square and reviewing the synchronization of that signal with the Library Street/Central Street signal located near Town Hall. In 2007, the Town implemented changes to the signal timing at this location to improve traffic flow. However, the magnitude of travel demand through this location and the limited number of approach lanes on the major approaches to this intersection makes it difficult to develop an effective solution to this problem.

SAFETY

43 accidents occurred in the area of Georgetown Square from 2010-2012.

TRANSIT

The MVRTA operates the Ring & Ride in Georgetown, a curb-to-curb transportation service for the residents of the community. Residents may use this service to travel anywhere in the other Ring & Ride communities of Boxford, Groveland, Newbury/Byfield, West Newbury as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service will also allow you to connect to the MVRTA fixed route bus system. Georgetown's Park & Ride is situated right off the Square for people catching the commuter bus to Boston.

BICYCLE & PEDESTRIAN

Bicycle and pedestrian transportation is an important part of Georgetown Square. Sidewalks exist throughout the Square with actuated pedestrian signals. ADA ramps are concrete, but do not include tactile pads. Pedestrian signals do not provide a countdown. No visible on-road bicycle access has been created. Development of the Border to Boston Trail (B2B), which skirts the Square, has been a community priority. Funding to construct the southern section of the B2B is included in the 2018 TIP.

Route 133 & Chestnut Street

ROAD ACCESS

This site is accessible from Route 133, which provides direct access to I-95.

CONGESTION MANAGEMENT

Though this section of Route 133 does not have a high volume-to-capacity ratio, it does experience congestion since it is a primary route to and from I-95. Georgetown Square does experience traffic congestion during peak periods.

SAFETY

There are no significant safety concerns in this area.

TRANSIT

The MVRTA operates the Ring & Ride in Georgetown, a curb-to-curb transportation service for the residents of the community. Residents may use this service to travel anywhere in the other Ring & Ride communities of Boxford, Groveland, Newbury/Byfield, West Newbury as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service will also allow you to connect to the MVRTA fixed route bus system. Georgetown's Park & Ride is situated right off the Square for people catching the commuter bus to Boston.

BICYCLE & PEDESTRIAN

Newer sidewalks exist on both sides of Route 133 up to Elm Street, but east of Elm the sidewalks are only on the north side of the street and are in poor condition. Elm Street is due to be reconstructed with updated sidewalks as well as an updated traffic signal (at Route 133) to provide better access to the Penn Brook School. A connection to Elm Street from the Border to Boston Trail is planned at the southern end of the street. Shoulders vary in width along Route 133.

Norino Way

ROAD ACCESS

This site is accessible from the recently built National Avenue just east of Exit 54, on I-95 by Tenney Street and Long Hill Road.

CONGESTION MANAGEMENT

This area does not appear to have a congestion problem.

SAFETY

There are no significant safety concerns in this area.

TRANSIT

The MVRTA operates the Ring & Ride in Georgetown, a curb-to-curb transportation service for the residents of the community. Residents may use this service to travel anywhere in the other Ring & Ride communities of Boxford, Groveland, Newbury/Byfield, West Newbury as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service will also allow you to connect to the MVRTA fixed route bus system. Georgetown's Park & Ride is situated right off the Square for people catching the commuter bus to Boston.

BICYCLE & PEDESTRIAN

These roads are not recommended bicycle Routes. There are no sidewalks in this area.

National Avenue**ROAD ACCESS**

This site is located off Route 133, adjacent to Exit 54 on I-95.

CONGESTION MANAGEMENT

This area does not appear to have a high volume-to-capacity ratio.

SAFETY

There are no major safety concerns in this area.

TRANSIT

The MVRTA operates the Ring & Ride in Georgetown, a curb-to-curb transportation service for the residents of the community. Residents may use this service to travel anywhere in the other Ring & Ride communities of Boxford, Groveland, Newbury/Byfield, West Newbury as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service will also allow you to connect to the MVRTA fixed route bus system. Georgetown's Park & Ride is situated right off the Square for people catching the commuter bus to Boston.

BICYCLE & PEDESTRIAN

Route 133 has shoulders that can accommodate bicyclists east of the ramps to I-95.

GROVELAND

Groveland Village Center

ROAD ACCESS

Groveland Village Center is at the intersection of Route 97, Main Street (Route 113) and Elm Park. This intersection forms the eastern approach of the Bates Bridge connecting to Haverhill. The village center is not situated near an interstate; however, Route 97 is the most direct route to I-95 from Haverhill and to I-495 from Georgetown. Construction of the new Bates Bridge was recently completed, which included a reconfiguration and signalization of the /Route 97/Route 113 intersection.

CONGESTION MANAGEMENT

To address congestion, a left turn lane was added on Route 97 southbound at its intersection with to Route 113 eastbound.

SAFETY

Post bridge reconstruction accident rates are not yet available.

TRANSIT

The MVRTA operates the Ring & Ride in Groveland, a curb-to-curb transportation service. Residents may use this service to travel anywhere in the other Ring & Ride communities of Boxford, Georgetown, Newbury/Byfield, West Newbury as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service will also allow you to connect to the MVRTA fixed route bus system.

BICYCLE & PEDESTRIAN

The Town of Groveland is beginning design work to develop the Community Trail, which includes the rail-trail and on-street connections via Main Street. Sidewalks are located on one of Rout 113 only and shoulders also exist on this popular bicycle route.

Route 97 Light Industrial Site

ROAD ACCESS

This site is located on Route 97 at the Georgetown boundary providing access to interstates 95 and 495. Route 97 just north of this site is due to be reconstructed in 2015 and will include updating the Salem/School Street intersection.

CONGESTION MANAGEMENT

Route 97 at this site is frequently impacted by traffic congestion caused at Georgetown Square.

SAFETY

While there are not a lot of accidents in this area, a pedestrian was killed at the intersection of Route 97 and Salem Street.

TRANSIT

The MVRTA provides Ring & Ride Service (on demand) for Groveland residents 60 years and older.

BICYCLE & PEDESTRIAN

Sidewalks are located on the southern side of Route 97 near the site. Bicycle and pedestrian access will be improved along Route 97 just north of this site as part of the reconstruction of Route 97 due to begin in 2015.

H.AVERHILL

Ward Hill

ROAD ACCESS

Located off of Exit 48 on I-495, Ward Hill provides easy access for commuters and truck traffic. Local traffic relies on Route 125 and the Route 125 Connector to access this site.

CONGESTION MANAGEMENT

High levels of congestion are experienced on I-495 around Exit 48 and there is a high volume-to-capacity ratio (.80) on this section of the highway. The Route 125 Connector experiences some expected congestion during peak periods for traffic turning into the Ward Hill Industrial Park.

SAFETY

Between 2010-2012, 62 accidents occurred along the Route 125 Connector, including the intersection with Route 125. Few accidents occur in the industrial park itself, but of note, one pedestrian was involved in a crash.

TRANSIT

The MVRTA operates the fixed bus Route 14 that stops at the Ward Hill Industrial park. Buses run service approximately every 1 – 1.5 hours.

BICYCLE & PEDESTRIAN

The Route 125 Connector is not bicycle or pedestrian friendly. There are no sidewalks and the MVRTA will not stop along that road to drop off or pick up passengers due to safety concerns. Route 125 near the intersection is the 125 Connector is not recommended for bicycling. No sidewalks were built in the industrial park, though the bus does pick up passengers.

Upper Hilldale

ROAD ACCESS

This section of Hilldale Avenue is a two-lane road. There is no immediate highway access; however, I-495 is accessible via Monument Street at Exit 50, approximately 2 miles away.

CONGESTION MANAGEMENT

Hilldale Avenue currently does not experience congestion problems.

SAFETY

There are no safety concerns in this area.

TRANSIT

This site is not currently accessible via transit.

BICYCLE & PEDESTRIAN

Part of Hilldale Avenue south of this area is included in the City of Haverhill's on-road bicycle network plan.

Downtown Haverhill

ROAD ACCESS

Haverhill’s downtown is densely developed with an intricate road system. It is flanked on the south side by the Merrimack River. There is no direct highway access to downtown; however, three interchanges with I-495 are approximately two miles from downtown. I-495 Exit 50 accesses downtown via Route 97 (Broadway), Exit 49 may be accessed via Route 110 (River Street) and Exit 51A provides access to downtown via Route 125 (Main Street).

Primary access to the downtown comes via Main Street (Route 125). Three intersections along Route 125 will be reconstructed 2016 to help address traffic congestion and improve pedestrian safety. The Basiliere Bridge (Route 125 over the Merrimack River) is structurally deficient and due to be under construction in 2020.

CONGESTION MANAGEMENT

Typical of a bustling downtown, Haverhill’s downtown experiences traffic congestion. Main Street (Route 125) and Merrimack Street (Route 113) experience high levels of traffic congestion. Reconstruction of three intersections along Route 125 aims to alleviate some traffic congestion.

SAFETY

Haverhill’s downtown experiences frequent traffic accidents. During the period 2010-2012, 723 accidents occurred with 64% along three stretches of roadway (see table below).

<u>Roadway Sections</u>	Number of Accidents	Percentage of Total Accidents in Downtown
Main Street between Winter and Water Sts.	233	32%
Winter Street between the railroad and Main St.	131	18%
Washington St and Merrimack St.	104	14%

The Haverhill Police Department received a grant in 2014 to address bicycle and pedestrian safety concerns in hot spot areas. The program includes public education, enforcement and infrastructure changes recommended during the project. Washington Square and Merrimack Street are both a part of this project.

TRANSIT

The downtown area hosts the Washington Square Transit Station, and the MBTA Haverhill Commuter Rail Station.

BICYCLE & PEDESTRIAN

Haverhill’s downtown is bustling with activity. Washington Street is quaint and pleasant for pedestrians. The infrastructure has been updated to include bump outs for safer pedestrian crossing. The Haverhill Commuter Rail Station sits at the west end, though its location above street level makes it less accessible. Covered bicycle parking is available on the train platform as well as at the MVRTA parking garage (parking is located by the security office). At the other end of Washington Street is Washington Square, a hub of activity anchored by the historic Post Office Building and the MVRTA bus station. The Square is challenging with car traffic coming in at different angles, buses turning in and out of the transportation center and pedestrians crossing at several places. The crosswalk at Washington Square was a focus of a Walkability Audit in the area that was held in October 2014.

Merrimack Street (Route 113) is the continuation of Washington Street. The eastern end of Merrimack Street is being redeveloped by UMass Lowell. Several social service agencies are located along Merrimack Street, attracting many pedestrians. Crosswalk locations need to be reevaluated, especially the one located by the parking garage.

Creating bicycle access through downtown is important and challenging, considering the amount of congestion and width of the streets (Merrimack and Washington Streets). However, many other downtown streets are wide and can easily accommodate bicycling to get people to Washington Square. The City has painted its first bicycle lane on Water Street (an extension of Merrimack/Washington farther east) and has plans to create a bicycle network. The City is interested in creating a safe bicycle route from the Methuen line on Route 110 along the river to the Bates Bridge. The existing bicycle lane is the first step.

The City is also developing a multi-use trail that will loop through the downtown (Riverwalk Trail) across the Comeau Bridge down the Bradford Rail Trail (2015 TIP) and back across the Basiliere River to downtown. It is also seeking to extend the Bradford Rail Trail to Georgetown with both on- and off-road segments. The City is further seeking to improve the pedestrian access along Water Street by designing wider sidewalks with observation bump outs.

Lifestyle Center

ROAD ACCESS

The Lifestyle Center can be accessed via Route 97 just west of Exit 50 on I-495. Reconstruction of the section of Route 97 from this site north to Silver Birch Lane is on the 2017 TIP. Improvements include wider roadway shoulders and the installation of new sidewalks..

CONGESTION MANAGEMENT

Route 97 at this site is not highly congested.

SAFETY

There are no major safety concerns in this area, except the need for improved bicycle and pedestrian access.

TRANSIT

The MVRTA operates fixed bus Route 15 to Target. Service operates hourly on weekdays and less frequently on the weekends.

BICYCLE & PEDESTRIAN

This section of Route 97 is a recommended bicycle route on the Rubel Bike Map. Bicycle and pedestrian access along Route 97 will be improved with the reconstruction of the road beginning in 2017.

LA WRENCE

Lawrence Industrial Park

ROAD ACCESS

The Lawrence Industrial Park has good road access. It is closest to the River Road Exit off I-93 that is located 1.5 miles to the west, but can also be accessed via a variety of local roads.

CONGESTION MANAGEMENT

Congestion exists on River Road around the I-93 on- and-off ramps during peak periods. I-93 also experiences congestion during peak periods.

SAFETY

Between 2010-2012, 57 accidents occurred on Andover Street, including two bicyclists and one pedestrian.

FREIGHT

Pan Am Railways operates rail freight service to the industrial park and recently made improvements to the spur that serves the area.

TRANSIT

MVRTA's fixed bus Route 37 from the Buckley Transportation Center provides bus transportation through the industrial park. It runs on a 30 min peak/60 min off peak schedule. Fixed bus route 76 provides service along Andover Street. It runs on a 30 minute schedule during peak periods only.

BICYCLE & PEDESTRIAN

Sidewalks are present on Beacon Street, where housing exists. Glenn Street does not have sidewalks. Sidewalks do exist on both sides of Andover Street. Bicyclists do ride through this area. The Merrimack Valley TMA works with employers and employees of businesses to promote bicycling. Two bicyclists were involved in accidents on Andover Street.

Malden Mills

ROAD ACCESS

Malden Mills is located on a site that is in both Methuen and Lawrence. It is sandwiched between a few side streets off of Route 28 and the Spicket River/Stevens Pond. Arlington and Park Streets run perpendicular to Route 28 and connect this area with other major roads such as Lawrence and Jackson Streets.

CONGESTION MANAGEMENT

Route 28 (Broadway) experiences expected congestion.

SAFETY

102 accidents occurred along Route 28 in the general area of this site as well as in Methuen, including three involving pedestrians. Route 28 (Broadway) has several crash clusters in Lawrence, include at Daisy Streets at the southern end of this site.

TRANSIT

The MVRTA's Route 40 out of the Buckley Transportation Center passes by the Malden Mills site on its way to Methuen Square and Mystic Street. Service runs frequently with 30 minute headways during peak periods.

BICYCLE & PEDESTRIAN

Sidewalks exist on Route 28 and few side streets leading into this development site. The City of Lawrence and Groundwork Lawrence developed the Spicket River Greenway, which connects to this site and runs through the northern half of the City to Gateway Park. The City of Lawrence is pursuing the development of the unused Manchester and Lawrence Railroad, which is owned by the MBTA, as a bicycle/pedestrian trail. The City had obtained a 99-year lease for the northern section of this corridor between Manchester Street and the Methuen Rail Trail. The City of Methuen has already begun the development of the Methuen Rail Trail.

Merrimack Street**ROAD ACCESS**

This development site is located in the heart of Lawrence along the southern bank of the Merrimack River. The site may be accessed via a variety of local roads as well as from Exit 44 on I-495. The City of Lawrence is moving ahead on the design for reconstructing this street.

CONGESTION MANAGEMENT

I-495 does experience congestion during peak periods; however Merrimack Street does not have congestion issues.

SAFETY

33 crashes occurred on Merrimack Street between I-495 and the Duck Bridge, including one pedestrian. Pedestrian and bicycle safety needs to be improved throughout the corridor including the installation of a traffic signal for the Riverwalk, which would provide a protected pedestrian access to this site where it does not currently exist.

TRANSIT

The MVRTA's bus Route 33 runs along Merrimack Street. This route has frequent service with 30-minute headways during peak periods. The bus stops outside the Riverwalk complex, because the parking lot is ill-suited for transit access. The McGovern Transportation Center is located at Merrimack St. and South Union St. and is served by both MBTA commuter rail and MVRTA fixed bus service.

BICYCLE & PEDESTRIAN

No visible on-road bicycle access is provided, though people do bicycle to the McGovern Transportation Center. Sidewalks do exist on both sides of the street but could be improved on the southern side of the road toward I-495. Pedestrian crossing need to be improved at Riverwalk.

Gateway/Downtown**ROAD ACCESS**

Improved access to this site was recently completed on Marston and Canal Streets. Marston Street provides direct access to I-495. Several of the bridges in the vicinity of the site (East Haverhill Street, Duck Bridge, Canal Street Bridge) have also been were also rehabilitated. In addition, two-way traffic was restored on Essex Street in 2009.

CONGESTION MANAGEMENT

Canal Street does not experience heavy congestion. I-495 does experience heavy congestion during peak periods.

SAFETY

Between 2010-2012, 364 accidents occurred including 16 non-motorists. MassDOT has identified a few crash clusters within this district. A Road Safety Audit was completed at the intersection of Route 28 and Water Street in 2011(?).

TRANSIT

This area is well served by transit. The MVRTA's Buckley Transportation Center on Common Street is the hub for all Lawrence-based bus routes, which operate on a pulse system. Further, in 2014, the MVRTA initiated a downtown Lawrence circular route to provide better in-town service. Generally, there are no bus stops, but the MVRTA does have a limited number of bus route markers, though many of them need replacing.

BICYCLE & PEDESTRIAN

Generally, the City of Lawrence is very walkable, though some sidewalks, ADA ramps and pedestrian signals need to be updated. No visible bicycle access is provided. This site has direct access to the Spicket River Greenway and would have easy access to the proposed rail-trail along the Manchester and Lawrence rail corridor.

MERRIMAC

Merrimac Square

ROAD ACCESS

Merrimac Square is located in the heart of town, bisected by Route 110. Broad Street connects the Square to I-495 at Exit 53. The reconstruction of Merrimac Square is now underway.

CONGESTION MANAGEMENT

None of the roads, including I-495, experience regular high congestion. However, I-495 does experience weekend travel congestion from seasonal beach traffic headed to Salisbury or to New Hampshire and Maine.

SAFETY

There are no safety concerns in this area.

TRANSIT

The MVRTA operates Route 51 along Route 110. This bus stops in Downtown Merrimac.

BICYCLE & PEDESTRIAN

Merrimac Square is at the heart of the town. It is also bisected by Route 110. Upgrades have been made to some of the sidewalks leading to the Square as well as some of the crosswalks. Reconstruction/reconfiguration of the Square will begin shortly. Those interested need only go a short distance from downtown to access the John MacLaren Trail. There are no visible on-road bicycle routes.

Merrimac Route 110

ROAD ACCESS

Situated just east of Merrimac Square between Route 110 and I-495, this site has easy access to both major roads in town via Broad Street.

CONGESTION MANAGEMENT

None of the roads, including I-495, experience recurring, consistent congestion. However, I-495 does experience weekend travel congestion from beach traffic headed to Salisbury or to New Hampshire and Maine during the summer months.

SAFETY

There are no major safety concerns in this area.

TRANSIT

The MVRTA operates fixed bus Route 51 along Route 110 through Merrimac Square.

BICYCLE & PEDESTRIAN

Sidewalks do exist on Route 110 and on Broad Street. There are no visible bicycle routes.

METHUEN

Griffin Brook Industrial Park

ROAD ACCESS

The development site may be accessed only from Route 110, which connects west to Lowell or east to I-93 at the Methuen Rotary. The Methuen Rotary is currently being reconstructed/reconfigured.

CONGESTION MANAGEMENT

Most congestion in this area has been related to the Methuen Rotary, which is currently under construction.

SAFETY

The Methuen Rotary posed the greatest safety concerns. The Rotary is being reconfigured and should address many of the safety problems in the area.

TRANSIT

The MVRTA Lowell to Lawrence Route 41 drives by the Griffin Brook Industrial Park along Route 110. The MVRTA provides frequent service along this route with 25 minute headways during peak periods.

BICYCLE & PEDESTRIAN

Sidewalks do exist on the north side of Route 110, though they seem to be in varying states of disrepair. There are no crosswalks until you get to Albert Street just before the rotary. The rotary is not designed for safe pedestrian or bicycle use; however, this should change with the reconstruction. The road has wide 8-foot shoulders, though the speed limit is 40. Route 110 west of the rotary beginning at the intersection with Riverside Drive is considered to be a primary bicycle route by Rubel Maps.

Branch Street

ROAD ACCESS

This development site is located along Route 113 just before the Route 110/113/I-93 Rotary.

CONGESTION MANAGEMENT

The Methuen Rotary, now under construction, has been the prime cause of congestion in the area. In addition, as part of reconstruction of the Rotary the intersection of Route 113 and Branch Street will be signalized and this will greatly improve egress from the site.

SAFETY

Safety concerns are being addressed through the reconstruction/reconfiguration of the Methuen Rotary.

TRANSIT

There is no transit access to this site at this time.

BICYCLE & PEDESTRIAN

Sidewalks do exist on the north side of Route 113, though there are none once at the campus. There are no crosswalks. The existing rotary is not designed for safe pedestrian or bicycle use, though plans call for improving bicycle and pedestrian access in and around the new interchange. There are no recommended bicycle routes.

Lindberg Avenue**ROAD ACCESS**

This development site is located a short distance from the Pelham Street exit off I-93 using Mystic Avenue to access Lindberg Avenue.

CONGESTION MANAGEMENT

There are no major congestion issues in this area.

SAFETY

Between 2010-2012, there were 128 accidents in the immediate vicinity of the I-93/Pelham St. interchange.

TRANSIT

MVRTA's fixed bus Route 40 takes passengers to Mystic Avenue, though they must then walk down Lindberg Avenue, which is not pedestrian friendly.

BICYCLE & PEDESTRIAN

Sidewalks and shoulders exist on both sides of Pelham Street. Lindberg Street is not pedestrian or bicycle friendly. There are no sidewalks and the road is in varying states of disrepair.

Aegean Park**ROAD ACCESS**

Aegean Drive is located just west of I-93's Pelham Street Exit.

CONGESTION MANAGEMENT

There are no major congestion issues in this area.

SAFETY

128 accidents occurred between 2010-2012 at or near the Pelham Street and I-93 interchange.

TRANSIT

MVRTA's bus Route 42 Ring & Ride does pass by Aegean Drive. This is an on-demand bus Route and does not operate along a regular schedule.

BICYCLE & PEDESTRIAN

There is no pedestrian access Aegean Drive and sidewalks are on the north side of Pelham Street only when west of the I-93 interchange. There are no shoulders for bicycles on Pelham west of I-93.

Downtown Methuen

ROAD ACCESS

Methuen's downtown is easily accessible by local roads and by the highway. People must only drive a short distance to access Route 213, which takes them to either I-495 or I-93. The alternative would be to take Pelham Street directly to I-93. Some of the local roads in the downtown area are in good conditions, while others, such as Gleason Street, are in deplorable condition.

CONGESTION MANAGEMENT

Route 213 has a high volume-to-capacity ratio, showing significant congestion. Congestion on Broadway (Route 28) and intersecting streets is typical of a downtown area with traffic signals. The Merrimack Valley Planning Commission is conducting a study of traffic congestion in the downtown area to identify measures that would reduce congestion in and around Methuen Square.

SAFETY

The intersections of Broadway/Pleasant/Hampshire Streets as well as Broadway/Osgood Streets are multi-year crash cluster locations. The intersection of Lawrence and Park Streets is also the site of multi-year crash clusters.

TRANSIT

The MVRTA operates two bus routes to Methuen's downtown area. Route 40 goes to Methuen Square. The MVRTA provides frequent service along this route with 30 minute headways during peak periods. Route 42 Ring & Ride goes through the downtown area. This is an on-demand bus route and does not operate along a regular schedule.

BICYCLE & PEDESTRIAN

Sidewalks do exist throughout the downtown and some are made of brick. ADA ramps are concrete though they have not been updated to include tactile bumps. Pedestrian crossing lights do not count down. Sidewalk widths vary throughout the downtown area. The city has invested in Riverwalk Park, a pedestrian trail that when completed will connect various destinations downtown. The City has begun development of the Methuen Rail Trail, just off of the downtown area.

The Loop

ROAD ACCESS

This development area is easily accessible by road. The development surrounds Pleasant Valley Road between I-495 to the east and the intersection of Prospect/Howe/Jackson Streets. It has easy access to Route 213, which connects with I-495 or I-93.

CONGESTION MANAGEMENT

The intersection Howe St. and Jackson St. is highly congested as well as the intersection of Howe St. and the Route 213 ramps. Route 213 does experience congestion going both east and west.

SAFETY

There are multiple crash clusters along Pleasant Valley. A Road Safety Audit was conducted at Marston's Corner (Pleasant Valley/Howe/Prospect Street) in 2013 and another was completed in 2011 for the Pleasant Valley Road/Milk Street/East Loop Driveway intersection.

TRANSIT

The MVRTA operates one fixed route (Route 01) that connects to the Loop. This route does have frequent service with 25 minute headways during peak periods. Methuen residents may also use the Route 42 Ring & Ride, which is an on-demand service that follows a specific route. During the summer, the Salisbury Beach route also connects to the Loop.

BICYCLE & PEDESTRIAN

Sidewalks do exist on both sides of Pleasant Valley Street and continue into one entrance of the shopping plaza. Bicyclists do use Pleasant Valley Street for commuting, though there is no visible bicycle accommodation.

NEWBURY

Byfield Village Center

ROAD ACCESS

Easily accessible from I-95 at Exit 55, Byfield is situated in the southeast corner of Newbury. Central Street leads out of Byfield center to I-95 and eventually to Route 1. Main Street connects this section of Newbury to Georgetown and West Newbury.

CONGESTION MANAGEMENT

There are no major congestion issues in this area.

SAFETY

There are no major safety concerns in this area. .

TRANSIT

The MVRTA operates the Ring & Ride in Newbury, a curb-to-curb transportation service. Residents may use this service to travel anywhere in the other Ring & Ride communities of Boxford, Georgetown, Groveland, and West Newbury as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service will also allow you to connect to the MVRTA fixed route bus system.

BICYCLE & PEDESTRIAN

Pedestrian and bicycle access is poor in Byfield. The Town of Newbury, working in cooperation with MassDOT, is developing a section of the Border to Boston trail, which includes an off-road section that ends in Byfield and begins as an on-road section. The Town is also designing improvements to sidewalks and crosswalks in and around the Village.

Central at Fruit Street

ROAD ACCESS

The Wayside Avenue site is just east to the I-95 interchange. It can also be accessed from Route 1.

CONGESTION MANAGEMENT

There are no congestion issues in this area.

SAFETY

There are no major safety concerns in this area.

TRANSIT

The MVRTA operates the Ring & Ride in Newbury, a curb-to-curb transportation service. Residents may use this service to travel anywhere in the other Ring & Ride communities of Boxford, Georgetown, Groveland, and West Newbury as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service will also allow you to connect to the MVRTA fixed route bus system.

BICYCLE & PEDESTRIAN

There are no sidewalks on Wayside Avenue; however there are some sidewalks on Central Street and one crosswalk. There are no crosswalks across the Entrance/Exit ramps for the interstate. Neither Central Street nor Wayside Avenue is recommended bicycle routes.

Central Street at Kent Way**ROAD ACCESS**

Located just west of the I-95 interchange at Exit 55, the Central Street site has easy access to the highway. It is also within close proximity of the Byfield Village Center. The site is tucked back from the road and can be accessed from Kent Way.

CONGESTION MANAGEMENT

There are no major congestion issues in this area.

SAFETY

Thirteen accidents occurred at the intersection of I-95 (Exit 55) and Central Street.

TRANSIT

The MVRTA operates the Ring & Ride in Newbury, a curb-to-curb transportation service. Residents may use this service to travel anywhere in the other Ring & Ride communities of Boxford, Georgetown, Groveland, and West Newbury as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service will also allow you to connect to the MVRTA fixed route bus system.

BICYCLE & PEDESTRIAN

There are no sidewalks on Kent Way; however there are sidewalks and crosswalks on Central Street leading to the Byfield Village Center. Central Street is not a recommended bicycle route by Rubel Maps. The Town is developing the Border to Boston Trail with connections through Byfield.

Route 1**ROAD ACCESS**

This site sits adjacent to Route 1 in the extreme northern section of town near the Newburyport border.

CONGESTION MANAGEMENT

There are no known congestion problems in this area.

SAFETY

There are no major safety concerns in this area.

TRANSIT

The MVRTA operates the Ring & Ride in Newbury, a curb-to-curb transportation service. Residents may use this service to travel anywhere in the other Ring & Ride communities of Boxford, Georgetown, Groveland, and West Newbury as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service will also allow you to connect to the MVRTA fixed route bus system. This site is also located adjacent to the Newburyport commuter rail station, which also receives some transit service from the MVRTA's fixed bus Route 54.

BICYCLE & PEDESTRIAN

Route 1 is a high-speed road with no sidewalks. Pedestrian access is not provided through the Route 1/State Street Rotary in Newburyport. Newburyport completed the first phase of the Clipper City Rail Trail connecting the commuter rail station to downtown. A second phase is included in the 2015 TIP that will connect the station with the Waterfront. Newburyport, Newbury, Essex National Heritage Commission, MVPC, the Parker River National Wildlife Refuge (NWR) and the National Park Service partnered to examine bicycle and pedestrian connections between the train station and the NWR. The consulting firm, Vanasse Hangen Brustlin, Inc. (VHB), provided several recommendations for better access around the rotary, across Route 1 for the second phase of the Clipper City Rail Trail and better connections between the properties all the way to the NWR. Further funding is needed to pursue those opportunities.

NEWBURYPORT

Downtown Center

ROAD ACCESS

The downtown may be accessed via Route 1, which connects north to Salisbury and south all the way to Boston along the coast. Alternatively, Route 113, Storey Avenue, connects to I-95 at Exit 57. By traveling north on I-95 one exit across the Merrimack River, a connection can be made with I-495 via Route 110. The I-95 Whittier Bridge over the Merrimack River between Newburyport and Salisbury is currently being replaced.

CONGESTION MANAGEMENT

The intersection of Storey Avenue (Route 113) and Low Street has been is notably congested, though MassHighway has implemented some intersection improvements at this location that have greatly improved congestion. This is not directly located at the downtown area, but it is located on the primary route for accessing downtown Newburyport from I-95. However, the City has recently approved the site plan for a commercial development on Storey Avenue that requires the construction of improvements to this intersection, which should further reduce congestion.

SAFETY

Between 2010-2012, 110 crashes occurred in the downtown district with two involving pedestrians. The Route 1 and Merrimack Street intersection is cited as a 2010 HSIP cluster and a Road Safety Audit was conducted at this site in 2012/2013.

TRANSIT

Newburyport is served by the MVRTA's fixed bus Route 54, which provides connections to the Newburyport commuter rail station. In addition, commuter service into Boston stops downtown and at the Park & Ride on Storey Avenue (Rt. 113) adjacent to I-95.

BICYCLE & PEDESTRIAN

Newburyport is the first community in the Merrimack Valley region to create bicycle lanes, which are on High Street. Beginning at the waterfront, the Clipper City Rail Trail connects the downtown to the train station. A second phase of that project is included in the 2015 TIP. The new Whittier Bridge will also include a multi-use trail that will end at the Storey Avenue Park & Ride in Newburyport. In addition, Newburyport, Newbury, Essex National Heritage Commission, MVPC, the Parker River NWR and the National Park Service partnered to examine bicycle and pedestrian connections between the train station and the National Wildlife Refuge. The consulting firm, VHB, provided several recommendations for better access around the rotary, a safe crossing at Route 1 for the second phase of the Clipper City Rail Trail and better connections between the train station all the way to the NWR. Further funding is needed to pursue those opportunities. While these improvements would lie farther east, they will connect to the downtown area.

Newburyport Industrial Park

ROAD ACCESS

The primary access roads that flank the Industrial Park are Low Street and Route 1. Parker Street runs through the site and provides access to Route 1. Low Street provides access to Route 113 close to the Exit 57 and I-95 interchange. Scotland Road and Parker Street in Newbury also provide access at the Exit 56 interchange with I-95.

CONGESTION MANAGEMENT

The intersection of Low Street and Route 113 has experienced high volumes of congestion, though MassHighway implemented some intersection improvements at this location that have greatly improved congestion. In addition, the City has recently approved the site plan for a commercial development on Storey Avenue that requires the construction of improvements to this intersection, which should further reduce congestion.

SAFETY

During the period 2010-2012, 68 accidents occurred along Low Street between Storey Avenue (Rt. 113) and Route 1.

TRANSIT

MVRTA's fixed bus Route 54 provides access to this area along Low Street, Henry Graf Junior Road and Parker Street. The train station is situated in the southern section of this site south of Parker Street.

BICYCLE & PEDESTRIAN

The Clipper City Rail Trail is accessible from a portion of the Industrial site and provides easy access to the train station and downtown. Crosswalks and older style pedestrian lights are present at the intersection of Pond and Route 1. Sidewalks exist on one side of both Pond and Low Streets. There are no sidewalks on Graf Road or Parker Street.

NORTH ANDOVER

Osgood Landing

ROAD ACCESS

Located along Route 125, Osgood Landing has fairly easy access to I-495 to the north via the Route 125 Connector just north of the Haverhill border, and to the south via Route 125 and then Sutton Street.

CONGESTION MANAGEMENT

Route 125 is a four-lane road that currently does not experience any traffic congestion.

SAFETY

Between 2010-2012, 91 accidents occurred along Osgood Street between Sutton Street and the Haverhill line.

TRANSIT

MVRTA's fixed bus Route 14 provides service to Osgood Landing via the City of Haverhill's Washington Square Transportation Center.

BICYCLE & PEDESTRIAN

Osgood Landing does not have good bicycle or pedestrian access. There is a sidewalk on the west side of Route 125 in front of 1600 Osgood; however it stops once the property ends leaving pedestrians stranded. Route 125 is not a recommended bicycle route by Rubel Maps.

Route 114 Corridor

ROAD ACCESS

Route 114 is one of the primary roads leading out of Lawrence and provides a regional connection to the North Shore. It also provides access to I-495 in Lawrence just before the North Andover town line. The CDC may also be accessed from the Route 125 Bypass, which connects to I-93. Local roads, which cross Route 114, connect North Andover to Andover.

CONGESTION MANAGEMENT

Route 114 from I-495 in Lawrence to Willow Street in North Andover is a very congested corridor with several different individual problem areas. Traffic congestion during peak travel periods occurs between the entrance to the North Andover Mall and the Route 125 Bypass due to heavy conflicting traffic volumes in the corridor, and especially at the Route 125/Route 114 and Route 114/Peters Street intersections. Development of commercial and industrial land along Route 114 south of the Route 125 Bypass to Willow Street has also created pockets of congestion. Southeast of the Route 125 Bypass the roadway narrows again to one travel lane in each direction, thereby creating another choke point.

The Merrimack Valley Planning Commission completed a study of the Route 114 Corridor in Lawrence and North Andover in 2010. This study includes a number of recommended improvements that would remove the existing bottleneck on Route 114 near the North Andover Mall, provide sidewalks on both sides of the corridor between the Mall and Andover Street, and remove the bottleneck that exists at the intersection of Route 114 with the Andover Bypass.

SAFETY

Several intersections along Route 114 pose safety problems. In 2013, MassDOT conducted a Road Safety Audit of the section of Route 114 between Peters Street (Route 133) and Mill Road, including the section adjacent to Merrimack College.

TRANSIT

The MVRTA does not operate fixed bus services along Route 114 within this site. Bus Route 39A ends at Waverly Street; Bus Route 33, which runs along Route 125 ends at Route 114, and the Andover Shuttle ends just short of Route 114.

BICYCLE & PEDESTRIAN

Pedestrian access is poor along this stretch of Route 114. Sidewalks are absent east of the Route 125 and lighting is poor. There is no safe bicycle access. These and other issues were identified in the 2013 Road Safety Audit.

Machine Shop Village**ROAD ACCESS**

Located in North Andover's downtown area, Machine Shop Village is fully developed with a network of roads. I-495 is fairly easy to access via Sutton Street.

CONGESTION MITIGATION

Machine Shop Village does not currently experience high congestion

SAFETY

Machine Shop Village has not been the site of many accidents.

TRANSIT

MVRTA operates Route 33 through North Andover providing service to this area. This route does run frequently with headways of every 30 minutes during peak periods.

BICYCLE & PEDESTRIAN

The Town of North Andover recently updated the pedestrian environment in both the downtown and Machine Shop Village areas. There is no visible bicycle infrastructure.

ROWLEY

Route 1

ROAD ACCESS

This site flanks Route 1 (Newburyport Turnpike). Route 133 (Haverhill Street), bisects the site. Route 133 provides connections to I-95 at Exit 54 in Georgetown.

CONGESTION

The intersection of Routes 1 and 133 has been identified by MVPC as congested. In 2010, MVPC completed a study of traffic and safety conditions at this intersection that identified a number of improvements that would reduce the peak period congestion issues.

MANAGEMENT

SAFETY

Between 2010-2012, 39 accidents occurred at the intersection of Routes 1 and 133 in Rowley.

TRANSIT

There is no transit access to this site.

BICYCLE & PEDESTRIAN

Both Route 1 and Route 133 are recommended as secondary bicycle routes because they have higher speeds. With no sidewalks or crosswalks, this area is not pedestrian friendly.

Rowley Village Center

ROAD ACCESS

Village Center is bisected by Main Street (Route 1A). Route 133 intersects with Main Street at the southern end of Village Center, providing access to Route 1 and I-95 farther west at Exit 54 in Georgetown.

CONGESTION MANAGEMENT

There are no known congestion problems in this area.

SAFETY

Between 2010-2012, 18 accidents occurred at the intersection of Route 1A, Route 133 and Prospect Street. MVPC is completing a traffic and safety analysis of this intersection as part of its ongoing study of the Route 133 Corridor between Routes 1 and 1A.

TRANSIT

There is no bus transit in Rowley. The commuter rail station is located off of Railroad Avenue approximately .75 miles from the northern point of Village Center.

BICYCLE & PEDESTRIAN

Village Center is accessible for pedestrians. Sidewalks and crosswalks exist throughout the area. Main Street is a recommended bicycle route by Rubel Maps.

SA LISBURY

Salisbury Village

ROAD ACCESS

Salisbury Village is at the center of the town, where several major roads converge. Routes 1 (Lafayette Street), 1A (Beach Road) and 110 (Elm Street) all feed into the Square. Both Route 110 and Route 1 North connect with I-95. Route 110 is also the connecting Route between I-495 and I-95 (in Amesbury). Route 1/1A South connects with Newburyport and 1A East leads directly to the ocean, the only beach access through Salisbury.

CONGESTION MANAGEMENT

Salisbury experiences seasonal traffic congestion, because of its popularity as a summer beach destination. Salisbury Square is a known congested intersection. Traffic counts taken over a weekend in July 2006 showed 20,973 automobiles were using Beach Road.

SAFETY

The intersection of Beach Road (Route 1A) and Lafayette Street (Route 1) had 31 accidents.

TRANSIT

The MVRTA fixed bus Route 54 provides service between Amesbury, Newburyport and Salisbury. In addition, during July and August the Route 83 'Beach Bus' provides service along Route 110 to the Salisbury Beach and Hampton Beach as well.

BICYCLE & PEDESTRIAN

Sidewalks and crosswalks exist throughout Salisbury Square. Beach Road (Route 1A) has "Share the Road" signs for bicycling and wide shoulders. Salisbury is developing a network of multi-use trails. The Old Eastern Marsh trail is open between the Merrimack River and Mudnock Road. The remainder of the trail is in design and appears in the 2017 TIP for construction. Just west of the Village Center, it will connect with a westerly route, the Salisbury Point Ghost Trail, which will eventually connect with the Amesbury Powow and Whittier Bridge trails.

Salisbury Beach Center

ROAD ACCESS

The primary Route to get to Salisbury Beach Center is via Beach Road (Route 1A). The road connects to Route 110 in Salisbury Square and continues west to I-95 at Exit 58 at the Salisbury/Amesbury Town Line. Route 1A also runs north to Route 286, which connects to Route I-95 at Exit 60 near the New Hampshire State Line.

CONGESTION MANAGEMENT

Salisbury experiences heavy traffic congestion during the summer months due to beach traffic.

SAFETY

There are no known crash hotspots near Salisbury Beach Center.

TRANSIT

The MVRTA fixed bus Route 54 provides service between Amesbury, Newburyport and Salisbury. In addition, during July and August the Route 83 'Beach Bus' provides service along Route 110 to the Salisbury Beach and Hampton Beach as well.

BICYCLE & PEDESTRIAN

Beach Road is signed for sharing the road with bicycles and has wide shoulders for the most part. It also has sidewalks at parts, including closer to the Salisbury Village and on the approach to the beach. The Salisbury Beach Center area does have some crosswalks and sidewalks that are largely inadequate for an area with high pedestrian use. There is ample bicycle parking at the bus stop.

Gateway Site

ROAD ACCESS

The Gateway site is situated at the intersection of Route 286 and Route 1. It is within close proximity of I-95 and Route 1 in Seabrook, New Hampshire. Route 1 also provides a direct link to Salisbury Center and Newburyport to the South.

CONGESTION MANAGEMENT

Salisbury experiences high traffic volumes during the summer season due to its popularity as a beach destination. Route 286 is one of the two primary Routes to the beach from I-95. MassDOT has recently made improvements to four intersections along this corridor that are intended to reduce the summer season congestion issues and is considering making additional improvements at the Route 1/Route 286 intersection.

SAFETY

Between 2010-2012, 44 crashes occurred between I-95 and Route 1 along the Toll Road and Route 286.

TRANSIT

MVRTA does not provide transit service to this part of Salisbury.

BICYCLE & PEDESTRIAN

This is neither a safe pedestrian area nor a recommended bicycle route. There are no sidewalks or crosswalks.

Business Park

ROAD ACCESS

Salisbury's Business Park sits just East of I-95 along Rabbit Road, which provides access to Route 286, Route 110 and I-95.

CONGESTION MANAGEMENT

While Rabbit Road is not congested, both Route 110 and Route 286 had long histories of experiencing summer congestion, especially on weekends. However, in the past few years MassDOT has completed projects that both increased the capacity of Route 110 between I-95 and I-495 and improved the operation at four intersections along Route 286, which should reduce the magnitude of this problem.

SAFETY

There are no major safety concerns in this area. The intersection of Route 110/Rabbit Road/Merrill Road was recently updated with new pedestrian signals, sidewalks and crosswalks.

TRANSIT

Transit service is not provided along Rabbit Road.

BICYCLE & PEDESTRIAN

Sidewalks run part way up Rabbit Road. Bicycles may use the shoulders along this road.

Redevelopment Zone**ROAD ACCESS**

This site sits adjacent to I-95 and can be accessed via the Rabbit Road.

CONGESTION MANAGEMENT

While Rabbit Road does not experience congestion, Route 110 is impacted by the summertime beach-related traffic.

SAFETY

There are no major safety issues at this site.

TRANSIT

Only the 'Beach Bus', Route 83, provides access along Route 110 at this point.

BICYCLE & PEDESTRIAN

This site has the potential for good bicycle and pedestrian access. It sits adjacent to the Ghost Point Trail, which will provide connections to downtown Amesbury (when the Powow Riverwalk is complete), Salisbury Village Center, Newburyport's downtown via the Eastern Marsh Trail and also to Storey Avenue via the Whittier Bridge Trail (currently under construction). Sidewalks do exist on the western side of Rabbit Road and shoulders have been painted for on-road bicycle access.

WEST NEWBURY

West Newbury Village Center

ROAD ACCESS

The Village Center is located on Route 113 (Main Street) in the area that it connects with Whetstone, Church, and Maple streets. Maple Street heads southeast toward I-95 (Exit 55), located in Newbury. Main Street connects to Newburyport with additional access to I-95 at Exit 57.

CONGESTION MANAGEMENT

There are no major congestion problems in this area.

SAFETY

There are no significant safety problems in this area.

TRANSIT

MVRTA operates a Ring & Ride service, curb-to-curb, for the residents of West Newbury. Residents may use this service to travel anywhere in the other Ring & Ride communities of Boxford, Georgetown, Groveland, Newbury/Byfield as well as anywhere in Amesbury, Haverhill, Lawrence, Methuen, North Andover, as well as to the Rowley Train Station and Market Basket in Rowley. The service will also allow you to connect to the MVRTA fixed route bus system.

BICYCLE & PEDESTRIAN

Main Street does have sidewalks, though not on both sides of the street, and prominently marked cross walks. Roads leading to the village center do not have sidewalks. Main Street is recommended as a secondary bicycle Route (narrower road, heavier traffic) and Church Street is a recommended bicycle route.



The Merrimack Valley Priority Growth Strategy is founded on identifying Priority Development Areas (PDA's) that offer the best locations to encourage growth in the region. Since each growth area is identified at the community level, each PDA differs based on factors such as zoning, capacity, access and constraints. This Strategy attempts to evaluate and classify these PDA's based on these factors. These evaluations and classifications have identified strengths and weaknesses, which each community can use as a guide on how to improve upon their local land use decisions. It is recommended that local decision makers use the "Smart Growth" principles outlined below when making and implementing their decisions.

"Most of the attributes of smart development can be found in older, pre-1950 American neighborhoods, many of which have held their value over decades as preferred places to live. These neighborhoods are laboratories of walkable, compact, mixed-use development."

-The Principles of Smart Growth Development, American Planning Association PAS Report #479, 1998

What is "Smart Growth"?

Smart Growth means different things to different people, and indeed there is no single definition. Its meaning depends on context, perspective, and timeframe. Nevertheless, the common thread among different views of smart growth is development that revitalizes our central cities and older suburbs; provides housing options for people of all ages and income levels; supports and enhances public transit, walking, and biking opportunities; and preserves open space and natural resources.

Smart growth is not "no growth". Rather, it seeks to revitalize the already-built environment and, to the extent necessary, to foster efficient new development in those areas best able to accommodate it, in the process creating more livable and sustainable neighborhoods and communities. By focusing new commercial development and housing within existing developed areas, smart growth can significantly reduce the cost of public investment in new roads, utilities, and amenities. By coordinating job growth with housing growth, and ensuring a good match between income levels and housing prices, smart growth can reverse the trend toward longer commutes. Residents who live within safe and easy walking distance of shops, schools, parks, and public transit have the option to reduce their driving time and therefore pollute less than those living in car-dependent neighborhoods. They also have the opportunity to engage in a more active and healthier lifestyle.

Smart Growth Goals and Principles

Smart growth generally has two overarching goals:

- 1) steer development *toward* existing developed areas served by public infrastructure and lands designated by local communities as appropriate for new growth;
- 2) steer development *away from* designated natural and cultural areas, agricultural lands, and environmentally sensitive zones.

Neither of these goals can be accomplished satisfactorily unless the resulting development is socially friendly and visually appealing to current – and future – residents. In fact, making better neighborhoods and communities that age gracefully is one of the best arguments for applying smart growth concepts. For this reason, much of the innovation now being done under the smart-growth banner is aimed at creating places that are more convenient, affordable, aesthetically pleasing, and safe. The goal is to have neighborhoods that are walkable and complete, with our daily needs being attended to close at hand; and neighborhoods and communities that are both distinctive and distinguishable from one another, rather than having a homogeneous, 'one size-fits-all' look and feel.

The Merrimack Valley Priority Growth Strategy embraces and supports the concept of smart growth, and advocates its local and regional implementation through adherence to the ten Massachusetts Smart Growth Principles listed below.

Massachusetts Smart Growth Principles

- 1) Provide range of housing opportunities for all income levels
- 2) Create walkable neighborhoods as desirable places to live, work, learn, worship, and play
- 3) Encourage community and stakeholder collaboration
- 4) Foster distinctive, attractive communities with a strong sense of place
- 5) Make development decisions open, predictable, fair, and cost effective
- 6) Support Integration of mixed uses
- 7) Preserve open space, farmland, natural beauty, and critical environmental areas
- 8) Provide a variety of transportation choices
- 9) Strengthen and direct development toward existing areas already served by infrastructure
- 10) Promote compact building design

Each of these principles is described below:

1) Provide range of housing opportunities for all income levels

Providing quality housing for people of all income levels is an integral component of any smart growth strategy. Housing is a critical part of the way our communities grow and prosper, as it constitutes a significant share of new construction and development. More importantly, however, it is also a key factor in determining households' access to municipal services and education, transportation facilities and commuting patterns, and recreation and natural resource areas. By using smart growth approaches to create a wider range of housing choices, our communities can mitigate the environmental costs of auto-dependent development and use their infrastructure resources more efficiently.

No single type of housing can serve the varied needs of today's diverse households, as not everyone has the same housing wants or needs. Some singles prefer to rent small apartments, young couples need starter homes, empty nesters may look for a condominium close to the downtown, and retirees need access to care services. Our neighborhoods should offer a range of options: single-family houses of various sizes, duplexes, garden cottages, condominiums, affordable homes for low or fixed-income families, "granny flats" for empty nesters, and accommodations for dependent elders. Also, municipal employees who do important work for the community (policemen, firemen, EMTs, teachers, etc.) should be able find homes they can afford within the community.

Smart growth represents an opportunity for our communities to increase housing choice not only by modifying their land use patterns on newly-developed land, but also by increasing housing supply in existing neighborhoods and on land served by existing infrastructure. Integrating single- and multi-family structures in new housing developments can support a more diverse population and allow more equitable distribution of households of all income levels across the region. Adding housing units – through attached housing, accessory units, or conversion to multi-family dwellings – to existing neighborhoods will create opportunities for our communities to slowly increase density without radically changing the landscape. New housing construction can be an economic stimulus for our existing commercial centers that are currently vibrant during the work day, but that suffer from a lack of foot traffic and consumers during evenings or on weekends.

2) Create walkable neighborhoods as desirable places to live, work, learn, worship, and play

Pedestrian friendly neighborhoods and communities are a key ingredient of any smart growth strategy. They offer not just the opportunity to walk – sidewalks are a necessity – but also someplace of interest to walk to. It may be to school, the corner store, the library, or a transit stop. A compact, walkable neighborhood encourages healthier lifestyles (more walking!) and protects the environment and saves energy by reducing our dependence on the automobile. Walkable neighborhoods are also safer for our children, as they are able to walk or bike to the local park without having to dodge traffic; and they are healthier environments for our seniors, who can get their daily exercise by walking to friends' homes or to a nearby restaurant. Walkable neighborhoods also create more opportunities for neighbors to become better acquainted and to converse when they meet on the sidewalk, rather than just casually waving to one another as they pass by in cars.

3) Encourage community and stakeholder collaboration

Successful smart growth requires the active and collaborative participation of municipal officials, developers, and citizens alike, and is best achieved when it responds to a community’s own sense of how and where it wants to grow. Our communities have different needs and will likely emphasize some smart growth principles over others. For example, our cities that have suffered from downtown disinvestment may choose to emphasize Brownfields reclamation and commercial infill development over new housing starts, or may seek poor air quality relief by offering wider transportation choices. Some of our smaller rural-residential communities with separated uses may prefer to focus on establishing a stronger sense of place that is offered by a more accessible, vibrant, mixed-use town center. The common thread, however, is that the needs of each community and the smart growth strategies to address them are best defined by the people who live and work there.

While stakeholder participation in the smart growth planning process can be time-consuming, it can lead to more creative, speedier resolution of challenging development issues. Smart growth plans and projects that are developed without strong citizen involvement may fail to gain the community support they need to be successful. Involving the public early and often in the planning process can greatly improve the public’s understanding and support for smart growth projects and can inspire innovative strategies that fit the unique needs of each community.

4) Foster distinctive, attractive communities with a strong sense of place

Smart growth encourages communities to craft a vision and set standards for development that respond to the communities’ values of architectural distinctiveness, beauty, and sense of place. Well-designed and welcoming focal points such as civic buildings and public places give community residents a greater sense of belonging, of "being home". Smart growth encourages the construction, rehabilitation, and preservation of buildings and public spaces that will be lasting assets to the community, not only because of the utilitarian functions they provide, but also because of the contribution they make to the unique look and feel of the community. By creating inviting, high-quality downtowns and neighborhoods with distinctive architectural and natural elements that reflect the interests of residents, there is a greater likelihood that our communities will retain their attractiveness and economic vitality over time.

“While historic buildings often do not retain their original use, their adaptive renovation and reuse can create unique, interesting, innovative spaces for modern services. When clustered in close proximity, these buildings can create the basis for a specially-designated zone or district that may attract tourism and other economic development activities.”

- Getting to Smart Growth: 100 Policies for Implementation, Smart Growth Network and ICMA

5) Make development decisions open, predictable, fair, and cost effective

For a community to be successful in implementing smart growth, it must be embraced by the private sector. Only the private marketplace can supply the large amounts of capital needed to meet the growing demand for smart growth development. If investors (bankers, developers, builders) cannot earn a reasonable profit on their ventures, few smart growth projects will be built.

Development tends to follow the path of least resistance, so the development project that is the most desirable should be the easiest to do. There should be as few barriers (if not fewer) to restoring historic buildings and creating infill development as to building on greenfields. Projects that fit with a community's smart growth vision should be fast-tracked for approval. Design and construction standards, as well as review and approval processes, should be clear. The longer it takes to win approval for a project, the longer the developer's capital remains tied up in the land and not earning income. For smart growth to flourish in our region, communities will need to be able to make development decisions that are timely, cost-effective, and predictable for developers.

6) Support integration of mixed land uses

Smart growth supports the integration of mixed land uses as a means to create more vibrant, livable communities. By putting different but complementary uses in close proximity to one another, alternatives to driving, such as walking or biking, once again become viable. In appropriate locations, placing stores, offices, and residences next to (or on top of) each other allows residents to work, shop, and enjoy recreation close to where they live.

Mixed land uses also provide a more sizable and diverse population and commercial base for supporting public transit. In addition, mixed uses can enhance the vitality and perceived security of an area by increasing the number and activity of people on the street. Public spaces and pedestrian-oriented retail become places where people gather, and this helps to revitalize community life. In today's service economy, communities find that by mixing land uses, they make their neighborhoods more attractive to workers who are looking to balance salary expectations with quality of life considerations when choosing where to settle.

7) Preserve open space, farmland, natural beauty, and critical environmental areas

Smart growth supports the protection of open space and natural resources by concentrating new development in existing developed areas (including infill sites), and by promoting cluster-style "green neighborhoods" (also known as open space residential or conservation subdivision development) on selected non-urban lands. Protecting the environment – by keeping our air, water, and soils clean, conserving valuable farmland, preserving critical wetlands, floodplains, and barrier beaches - also safeguards our own health and can shield us from severe weather and natural disasters. In addition, preserving open space provides a number of direct and measurable *fiscal* benefits, including increasing local property values (thereby increasing the property tax base), providing jobs in agriculture and horticulture, reducing drinking water treatment costs, reducing flood mitigation and stormwater management costs, and generating tourism dollars.

"The protection of farmland around cities and towns – urban-influenced farmland – contributes to smart growth and the livability of our communities. Farms and farmland are valued as scenic landscapes and a part of our heritage. They demand fewer public services and therefore cost less than sprawling subdivisions. If protected as part of the "green infrastructure" around metropolitan areas, they can help guide suburban growth and promote urban revitalization."

- Agricultural Sustainability and Smart Growth: Saving Urban Influenced Farmland, Funders' Network for Smart growth and Livable Communities and the American Farmland Trust, 2001

8) Provide a variety of transportation choices

In the Merrimack Valley region’s rural and suburban communities in particular, many residents are almost entirely dependent on driving to meet their transportation needs. With few if any *convenient* options, residents must drive their car to the workplace and even to run routine errands. Many neighborhoods do not safely permit even short walks to nearby shops or restaurants because there are no sidewalks. Providing a variety of transportation options – like safe and reliable public transportation, sidewalks, bike paths and walking trails – can promote and improve public health and fitness, mitigate traffic congestion, conserve energy, and safeguard the environment. Communities can only reduce residents’ dependency on the automobile if there are other attractive and convenient ways for people to travel about. Smart growth helps to provide these options. In doing so, it also better serves those members of the community who are not able to drive or do not have access to a car, such as seniors, young people below driving age, and the disabled.

9) Strengthen and direct development toward existing areas already served by infrastructure

Smart growth directs development toward areas already served by infrastructure, taking advantage of the resources and services that existing neighborhoods offer, while conserving open space and irreplaceable natural resources beyond the urban fringe. By encouraging development in those areas best able to handle it, communities benefit from a stronger tax base, closer proximity of a range of jobs and services, increased efficiency of already-developed land and infrastructure, and reduced development pressure in outlying areas (greenfields). We strengthen and revitalize our downtowns and adjoining neighborhoods when we encourage and facilitate infill development, the redevelopment of underutilized or derelict properties, the rehabilitation of Brownfield sites, and the adaptive reuse of older structures.

“The popularity of infill development and redevelopment – building on vacant lots or razing dilapidated properties and building new – has grown rapidly over the past decade as buildable land becomes more scarce... Despite the challenges that confront infill developers – economic realities, ecological contamination, and conventional building codes, to name a few – infill success stories abound. Communities are changing their codes, developing public and private partnerships, and leveling the regulatory playing field to revive and rejuvenate their built environments.”

- Jason Miller, “Following the Path of New Urbanism”, On Common Ground, 2006

Nevertheless, despite the obvious benefits of this development approach, implementing it remains a challenge. The relative ease of greenfields development continues to be an obstacle to encouraging more development in existing neighborhoods. Development in outlying areas remains attractive to developers for a number of reasons, not the least of which are its generally lower land costs, potential to combine larger parcels, and ease of access and construction. Also, zoning requirements in these areas are often easier to comply with, as there are fewer existing building types that new construction must complement, and a relative absence of residents or business owners who may object to the inconvenience or disruption caused by new construction. Despite these obstacles, however, developers can be encouraged to direct their building projects to Brownfield sites, infill properties, and other areas served by infrastructure through the use of tax credits, density bonuses, streamlined permitting, and other development incentives.

10) Promote compact building design

Smart growth provides a means for communities to incorporate more compact building design as an alternative to conventional, land-consumptive development. By constructing buildings in a manner that maximizes the efficient use of land, valuable open space can be preserved. For example, by encouraging buildings to grow vertically rather than horizontally, by clustering buildings, and by incorporating structured rather than surface parking,

communities can reduce the footprint of new construction and preserve more greenspace. Not only is this approach more efficient by requiring less land for construction, it also protects vital resource areas that provide the important functions of absorbing and filtering rain water, reducing flooding, and lowering the amount of pollution entering our rivers, lakes, and wetlands.

Compact building design is necessary to support wider transportation choices, and provides cost savings for communities. Communities seeking to encourage transit use to reduce congestion and air pollution recognize that minimum levels of density are required to make public transit systems viable. Similarly, local governments find that on a per-unit basis, it is cheaper to provide and maintain services like water, sewer, electricity, and other utilities in more compact neighborhoods than in dispersed neighborhoods. Reducing the amount of infrastructure we have to build and maintain translates to lower municipal costs and lower tax rates.

Smart Growth Strategies

A wide array of proven smart growth strategies are available to help the region's municipalities and the development community promote and implement smart growth. These strategies are described in detail in the "Smart Growth/Smart Energy Toolkit" compiled by the MA Executive Office of Energy and Environmental Affairs (2007). They include, among others:

- **Traditional Neighborhood Development (TND):** Traditional Neighborhood Development emphasizes two broad goals: 1) to reduce landscape fragmentation and the destruction of habitat and natural resources, and 2) to reduce dependency on automobiles and their associated impacts, such as polluted emissions. TND is an approach that reflects historic settlement patterns and town planning concepts such as gridded, narrow streets, reduced front and side setbacks, and an orientation of streets and neighborhoods around a pedestrian-oriented "town center." Such an approach usually requires modifications to zoning and subdivision regulations.
- **Transit Oriented Development (TOD):** Transit Oriented Development is the development of housing, commercial space, services, and job opportunities in close proximity to public transportation. This development tool reduces dependency on cars and time spent in traffic, thus easing congestion and protecting the environment. It also increases economic opportunity by linking residents to nearby jobs and services.
- **Transfer of Development Rights (TDR):** Transfer of Development Rights is a market-based mechanism that promotes responsible growth while conserving prime open space, such as working farms and sensitive watershed lands. It is designed to *steer* growth, not to limit or stop development. Through individual, voluntary transactions, development rights are transferred from an open or under-developed area (sending site) to an area that can accommodate additional growth (receiving site). Landowners in sending areas receive compensation for giving up their right to develop, while developers of the receiving areas pay for the right to a development bonus, such as added building height or higher density than would otherwise be allowed. When the development rights are removed from a sending parcel, a conservation restriction is placed on the parcel.
- **Open Space Residential Design (OSRD):** Open Space Residential Design (also known as Conservation Subdivision Design) is a form of residential subdivision development that maximizes resource protection through the use of design strategies that "cluster" building sites, reduce infrastructure and impervious surface cover, and permanently protect open space for conservation purposes. Typically, 50% of the total OSRD area is preserved in a natural, undisturbed state while the remainder contains as many new housing units as would be allowed in a conventional subdivision.

- **Compact Building Design:** Compact Building Design refers to the act of constructing buildings vertically rather than horizontally, and configuring them on a block or neighborhood scale that makes efficient use of land and resources. Compact building design reduces the footprint of new construction, thus preserving greenspace to absorb and filter rain water, reduce flooding and stormwater drainage needs, and lower the amount of pollution washing into our rivers, lakes, and wetlands. Compact building design is necessary to sustain transit ridership at levels necessary to make public transit a viable transportation option.
- **Chapter 40R Smart Growth Zoning Overlay District:** Chapter 40R of the Mass. General Laws encourages cities and towns to establish special zoning overlay districts to promote housing production and smart growth. Under 40R, communities that adopt special zoning districts allowing as-of-right higher density residential development are provided financial rewards. Smart growth zoning districts can be in one of three locations: 1) areas near transit stations, including rapid transit, commuter rail, and bus and ferry terminals; 2) areas of concentrated development, including town and city centers, other existing commercial districts in cities and towns, and existing rural village districts; or 3) areas that by virtue of their infrastructure, transportation access, existing underutilized facilities, and/or location make highly suitable places for residential or mixed use smart growth zoning districts.
- **Business Improvement District (BID):** A BID allows for an assessment on property within a defined geographic area. Revenues from this assessment are directed back into the area to finance a wide range of beneficial services, including security, maintenance, marketing, economic development, parking, and even special events.
- **District Improvement Financing (DIF)/Tax Increment Financing (TIF):** DIF is an economic tool that promotes redevelopment by channeling dollars into targeted redevelopment districts. It enables municipalities to fund public works, infrastructure, and development projects by allocating future, incremental tax revenues collected from a predefined district to pay project costs. TIF is a program designed to leverage private investment for economic development projects in a manner that enhances the benefits accrued to the public interest.
- **Brownfields Reuse and Mill Redevelopment:** This development approach encourages communities and developers to maximize the restoration and reuse of Brownfields sites (properties known or perceived to be contaminated) and vacant or underutilized mill buildings. By returning these now outmoded properties to productive reuse, neighborhood blight and safety risks are removed, the local tax base is increased, construction and energy costs are lowered, and green space in outlying areas is preserved.
- **Inclusionary Zoning:** Inclusionary Zoning is a system that requires a minimum percentage of lower and moderate income housing to be provided in new developments. Inclusionary programs are based on mandatory requirements or development incentives, such as density bonuses. When correctly designed, the inclusion of affordable units in a residential or mixed-use project can add diversity and social value without compromising the quality or market appeal of a development.
- **Form-Based Codes:** A form-based code is a land development regulatory tool that places primary emphasis on the physical form of the built environment with the end goal of producing a specific type of 'place'. A community's physical form—namely, its buildings, streets, and public spaces—signifies its most defining characteristic. By asserting more control over its physical form, a community can achieve improvements in the way it functions. This increased control may include the fostering of pedestrian-friendly, mixed-use developments, as well as a range of housing types.

- **Accessory Dwelling Unit (ADU):** Accessory Dwelling Units are self-contained housing units incorporated within a single-family dwelling (not within accessory structures, except with a Special Permit) that are a subordinate part of the single-family dwelling. Also known as accessory apartments, guest apartments, in-law apartments, family apartments, or secondary units, ADUs provide supplementary housing that can be integrated into existing single family neighborhoods to provide a typically lower priced housing alternative with little or no negative impact on the character of the neighborhood. Because the units are usually small, they are generally more affordable than full-size rentals.
- **Agricultural Preservation Restriction (APR):** APR is a voluntary state program that pays farmers the difference between the "fair market value" and the "agricultural value" of their "prime" or "state important" farmland in exchange for a permanent deed restriction which precludes any use of the property that will have a negative impact on its agricultural viability.
- **Low Impact Development (LID):** LID is an environmentally-friendly approach to stormwater management. It consists of a suite of landscaping and design techniques that are aimed at maintaining the natural, pre-developed capacity of a site to manage rainfall. LID techniques capture rainwater on site, filter it through vegetation, and let it soak into the ground where it can recharge the local water table rather than being lost as surface runoff. An important LID principle is that stormwater is not a waste product to be disposed of, but rather a resource to be retained on-site for landscape watering and groundwater recharge.

Through the effective use of these and other smart growth strategies, our communities and our region can achieve a more progressive approach to development and redevelopment that balances economic progress, environmental protection, and quality of life.

For this strategy to be effective it must influence the decisions of policy makers. It cannot be decreed upon them or it will be discarded or ignored. That is why it is important that the strategy have its foundation based on local decisions. However that does not mean that the local decisions are all correct or that there is no need to modify or improve upon these decisions.

It is recommended that local decision makers use the “Smart Growth” principles outlined in this document when making and implementing their decisions. The strengths and weaknesses identified in this strategy can be used as a guide to decision makers on how to improve upon their local land use decisions. In addition this strategy should be used to influence the decisions of the many policy makers at each level of government as they interact and help the communities of the region develop. The following are suggestions on how the Merrimack Valley Priority Growth Strategy can be integrated into the decision making process.

Local Communities

Outside of using the “Smart Growth” principles to improve and address some of the weaknesses identified in the Strategy there are a number of ways the strategy can be used to influence the local decision making process. Communities can take a comprehensive look at the identified development patterns and see the relationships between development, conservation efforts and transportation improvement priorities.

“Identify the Development Patterns and the Relationship to Conservation and Transportation”

The Strategy identified conflicts between where communities want to concentrate development and their plans to preserve natural resources. In some cases existing farmlands that may be removed from protection and are designated for community acquisition are located in PDAs. Effort should be made to resolve these potentially conflicting priorities and ensure that land use committees and activities are on the “same page”.

“Consider the Regional Impact of Development Patterns on Neighboring Communities and Consider any Conflicts”

Using the GIS mapping generated for this strategy, communities can consider the regional impact of their development patterns on neighboring communities. Communities can evaluate their plans and determine if they are consistent and complementary of the region's surrounding communities. Conversely communities can evaluate if actions contemplated by neighboring communities adversely influence their plans. MVPC can play a role in resolving conflicts between communities.

Regional Partner MVPC

A principle MVPC role is to provide member communities with tools and information for development management. With the development of new methods and the complexity associated with these tools, MVPC has found a niche in conducting workshops to promote the use of these tools. MVPC will continue to offer relevant and useful workshops not only to our member communities but for those interested professionals outside the region.

“Promote Cooperation and Coordination Among Communities”

During the preparation of this strategy MVPC has identified community plans that transcend community boundaries. Goals and objectives shared by more than one community lend themselves to regional solutions. MVPC will use this strategy to promote cooperation and coordination among communities by identifying opportunities and in negotiating and implementing actions of common interest.

“Ensure Proposed Development is Consistent with the Regional Strategy”

As a regional planning agency MVPC routinely functions as a clearinghouse for distribution of State and Federal funds and as an advisor/coordinator for environmental permits. The clearinghouse role is to ensure that governmental actions are consistent with existing regional plans. This Strategy will inform such determinations. MVPC will now be able to refer to this adopted Strategy when commenting on requested grant and finance assistance, and during the Massachusetts Environmental Protection Agency (MEPA) review and the National Environmental Protection Act (NEPA) review.

Commonwealth Capital Investments

The region has a very active and effective State legislative delegation. The regional delegation and the MVPC Commissioners meet regularly to discuss regional priorities. This Strategy contains regional priorities and as such can inform future capital bond bill for transportation, environmental protection, housing and economic development.

“Identify Regional Priorities for Legislative Delegation and for Commonwealth Grant Priorities”

There are several State development assistance programs such as 43D Expedited Permitting, 40R Smart Growth, Compact Neighborhoods, 43D for Housing, MassWorks, and Gateway City initiatives. This Strategy allows the Commonwealth to target grant funds and development programs and incentives to state and regional priorities.

“Targeting Federal Resources”

The Commonwealth, local communities and MVPC pursue federal funds to support local projects. Examples include:

- Economic Development Administration (EDA) Public Works Funds
- U.S. EPA Brownfields Remediation Grants
- U.S. HUD Housing Funds
- FHWA Grants for Transportation Enhancements

For these and many other programs each federal agency attempts to ensure that any federal assistance promotes and is consistent with regional plans. This Strategy can help to confirm that the use of federal funds is consistent with regional strategies and help target funding to promote this Strategy.

“Confirm Use of Federal Resources are Consistent with Regional Strategy”

One of the region's most significant needs for federal funding revolves around transportation improvements. In the 2014 Regional Transportation Plan (RTP) there were over 200 projects with a total construction value of over \$1 billion programmed through 2030. Deciding which projects should be prioritized and advanced on a yearly basis is the responsibility of the Merrimack Valley Metropolitan Planning Organization (MPO). To help prioritize these projects this Strategy can identify projects that will promote and sustain economic development. By promoting economic development more tax funds can be generated and be used to invest more public funding toward needed transportation projects.

“Connect the MPO Process and the Prioritization of Federal Resources to the Land Use Patterns in the Region”

MVPC Priority Growth Strategy

APR – Agriculture Preservation Restriction	MBTA – Massachusetts Bay Transportation Authority
BC – Beach Commercial	MVMPO – Merrimack Valley Metropolitan Planning Organization
BH – Business Highway Zone	MVPC – Merrimack Valley Planning Commission
B&M – Boston & Maine Railroad	MVRTA – Merrimack Valley Regional Transit Authority
CD – Central District Zone	NB - Northbound
CDC – Concentrated Development Center	NHESP – Natural Heritage and Endangered Species Program
CEDS – Comprehensive Economic Development Strategy	NWR – National Wildlife Refuge
CHA – Commercial Highway A zone	OP – Office Park
Chapter 40R – State Designated Smart Growth Zoning and Housing Production	OSRD – Open Space Residential Design
Chapter 43D – Priority Development Site	PDA – Priority Development Area
CMS – Congestion Management System	PPA – Priority Preservation Area
CH – Highway Commercial Zone	RA – Residential/Agriculture Zone
CN – Commercial Neighborhood zone	R&D – Research and Development
CPA – Community Preservation Act	RE – Retail District Zone
DCS – Division of Conservation Services	RGO – Reviviendo Gateway Overlay District
DSGOD – Chapter 40R Downtown Smart Growth Overlay District	PDS – Priority Development Site
EPA – Environmental Protection Agency	PWED – Public Works Economic Development
FAR – Federal Acquisition Regulation	RTP – Regional Transportation Plan
FEMA – Federal Emergency Management Agency	SB – Southbound
GB – General Business Zone	SWMP – Storm Water Management Plan
I – Industrial Zone	TDR – Transfer of Development Rights
IC – Central Industrial Zone	TIP – Transportation Improvement Program
IL – Limited Industrial District Zone	TMA – Transportation Management Association
IP – Industrial Park	TOD – Transit Oriented Development
LAND – Local Acquisition for Natural Diversity	UPWP – Unified Planning Work Program
LID – Low-impact Development	V/c – Volume-to-capacity ratios are an approximation of actual congestion
LS – Limited Service Zone	WIPOD – Waterfront Interim Planning Overlay District
MB – Multi-Family B Zone	WPA – Wetlands Protection Act