

TRANSPORTATION

Data collected from the EO418 plan (2004) and the Open Space and Recreation Plan (2004)

FACTS

As of January 1, 2007, there were 13,620 autos and light trucks registered in Easthampton, a drop of 5% from five years ago. This is approximately 0.85 vehicles per resident (2000 US Census) or 1.8 vehicles per household. The public transit system is run by the Pioneer Valley Transit Authority (PVTA). Peter Pan Bus Lines provides private regional bus transportation out of Northampton and Springfield. Paratransit transportation is provided by the Council on Aging and the PVTA.

The mean travel time to work of Easthampton residents increased from 18 minutes to 21 minutes (18%) from 1990 to 2000,. Eighty-four percent of residents drive alone to work, higher than the regional average of 80%. Nine percent carpool and only 0.4% of the residents reported using public transportation to get to work. Three percent worked at home and 3% walked to work. Early analysis of the 2007 community survey indicates that over 8% of Easthampton residents use public transportation, though only 2% use it regularly.

1. EXISTING TRANSPORTATION CONDITIONS

This section provides a technical evaluation of the transportation components throughout the study area. It includes a presentation of the data collected, analysis of traffic operations, and a series of short term recommendations to improve overall performance and safety.

DAILY VEHICLE VOLUME

Vehicle volume data was collected for use in the transportation analysis in order to measure the travel demands on an average weekday. Average Daily Traffic (ADT) volumes were compiled for typical weekday 48-hour periods at various mid-block locations within the study area using Automatic Traffic Recorders (ATRs). All ADT volumes were factored to represent Average Annual

Daily Traffic (AADT) levels. However, the following two locations were counted on two separate occasions and found to be in error due to malfunctioning in the counting equipment: Route 10 south of Union Street and Union Street east of Main Street. The ADT volumes for these two locations are derived from actual ADT counts taken in 1997 with an average growth rate of 2.5% applied.

VEHICLE CLASSIFICATION

Vehicle classification data is used to identify the percentage of heavy vehicles and passenger cars on the roadway. Heavy vehicles include trucks, recreational vehicles and buses. The percent of heavy vehicles in the traffic flow is an important component in calculating the serviceability of a corridor or intersection. Trucks impact traffic flow because they occupy more roadway space than passenger cars and have poorer operating capabilities with respect to acceleration, deceleration and maneuverability.

Classification counts were conducted at all of the daily traffic count locations. Vehicles are classified based on the number of axles and the distance between each axle. Two axle, six tire vehicles, and vehicles with three or more axles are classified as a "truck" or heavy vehicle. The percentage of heavy vehicle traffic on a roadway is important as large vehicles have different operating characteristics than normal passenger vehicles. This information is also an important factor in the pavement design of a roadway. This information is shown in the next table.

		Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	>3 Axles	% Heavy Vehicles
Pleasant Street east of Main Street	Eastbound	0.4%	86.3%	6.5%	1.1%	1.4%	0.6%	3.6%	6.7%
	Westbound	0.4%	74.1%	14.9%	1.7%	2.4%	1.1%	5.4%	10.1%
Route 141 at Holyoke City Line	Northbound	1.0%	75.4%	14.6%	1.4%	1.5%	0.2%	5.9%	7.7%
	Southbound	0.8%	82.3%	9.7%	1.2%	1.3%	0.3%	4.4%	6.0%
Route 10 south of Union Street	Northbound	1.3%	64.9%	14.4%	2.5%	1.6%	0.5%	14.8%	16.8%
	Southbound	1.3%	72.5%	10.8%	2.5%	1.6%	0.3%	11.0%	12.9%
Main St. between Union and Pleasant Street	Northbound	0.8%	58.5%	26.4%	0.8%	4.1%	1.1%	8.3%	14.3%
	Southbound	0.2%	60.5%	25.2%	0.6%	3.6%	0.6%	9.4%	14.2%
East Street north of Ferry Street	Eastbound	0.5%	78.3%	14.5%	1.1%	1.5%	0.8%	3.4%	6.73%
	Westbound	0.6%	69.7%	19.5%	1.0%	1.8%	0.8%	6.7%	10.2%
Union Street east of Main Street	Northbound	0.7%	56.1%	22.4%	2.5%	3.6%	0.3%	14.7%	22.0%
	Southbound	0.6%	73.1%	9.5%	3.5%	1.1%	0.3%	12.2%	17.0%

VEHICLE TRAVEL SPEEDS

Travel Speed data was also collected through the ADT counters to establish the ranges or “bins” in which vehicles were measured to be traveling. The “Pace Speed” consists of the range in which most vehicles were recorded to travel. Speed data was also used to calculate the “85th Percentile Speed” for each direction on the roadway. The 85th Percentile Speed is defined as the speed that 85 percent of all traffic is traveling at or below. This method is typically used to establish the posted speed limit on a roadway. By comparing the 85th Percentile Speed to the posted speed limit a community can determine how well traffic is complying with the current posted speed limits and if increased enforcement of the posted speed limits is necessary.

Based on the speed data, most vehicles appear to be driving at or below the posted speed limit. However, the speed measurements on Pleasant Street east of Main Street indicate a higher travel speed in both the east and westbound directions. This can be attributed to the lack of development in that area compared to the other count locations.

CRASH EXPERIENCE

Crash history was used to estimate the safety conditions throughout the City of Easthampton. Crash information was gathered for the entire community based on information provided by the Massachusetts Highway Department.

An average of 255 crashes, were reported over the three year period within the City of Easthampton approximately 32% of these accidents occurring along the Route 10 corridor. Nearly 24% of all crashes resulted in a personal injury and almost 35% involved property damage. A significant number of these accidents involved Angle and Rear End collisions. This information could be lower than actual conditions as many minor crashes are often not reported and as a result are not logged into the MassHighway crash database.

Based on this information an increasing number of accidents are occurring along the Route 10 corridor. A further study is required to identify the cause and address any safety concerns.

BRIDGES

Location	Year Built	Condition
Glendale St.	1938	FO
Northampton St	1951	SD
Park Street	1940	FO
Torrey Street	1940	FO
Ferry Street	1880/1984	FO
Hendrick Street	1956	SD
I-91 N/ East Street	1965	SD
I-91S/ East Street	1965	SD
I-91N/ Rail Trail	1963	SD
I-91S/ Rail Trail	1963	SD

FO=Functionally Obsolete; SD =Structurally Deficient

Easthampton has nineteen bridges in the MA Highway Department system. Of these, four are functionally obsolete, and five are structurally deficient.

Plans to repair the four I-91 bridges and the Hendrick Street Bridge are moving forward with construction to begin in 2007. Planning and design of repairs to the Route 10 bridge over the Manhan

River will begin in 2007 with construction anticipated in 2009-2010. There is strong local concern about the closing, even partially, of the Route 10 bridge for construction due to the impact it will have on commerce.

BICYCLE ACCOMMODATIONS

The Manhan Rail Trail is a planned bicycle and pedestrian facility along the abandoned Penn Central Railroad. The 10 foot wide paved trail is designed for use by bicyclists, walkers, joggers, rollerbladers, cross-country skiers, baby strollers, and wheelchairs. The first 4.2 mile segment of the Easthampton Manhan Rail Trail was officially opened in 2004. When completed, the project will include an additional 4 miles of trail extending to Northampton and a 1 mile connection south to Coleman Road in Southampton. The two extensions are in the final design stage, with construction scheduled to begin toward Southampton and Northampton in federal fiscal years 2007 and 2010, respectively.

The Manhan Rail Trail is a key component of a regional network of bikepath projects. Ultimately, the bikepath will link with the Norwottuck Trail, to the University of Massachusetts and Belchertown to the east and extend south via the Farmington Canal system to Yale University in New Haven. The project will establish a safe transportation alternative linking local schools, open space and residential areas to Easthampton's central business district. The project enjoys overwhelming local support and addresses key local issues regarding transportation and mobility for a large cross section of the population.

In addition to bikepath projects, Easthampton has been an active partner in the annual Bike Commute Week. Through the work of local businesses and volunteers, Easthampton has sponsored five consecutive commuter breakfasts with participation growing each year. In 2003 the Department of Public Works began installing 50 bike racks in the downtown business district. The city is also linked to the Pioneer Valley Transit Authority's "Rack and Roll" program providing bike racks on PVTA routes.

2. TRANSIT

Door-to-door accessible van service (paratransit) for elderly and disabled residents and fixed route transit service Pioneer Valley Transit Authority (PVTA) is provided in the City of Easthampton.

PARATRANSIT VAN SERVICE

PVTA has two types of van service, dial-a-ride service and ADA service. The dial-a-ride service is

available to all seniors over 60 on a space available basis Monday - Friday from 9:00 AM to 4:30 PM. The ADA service, which is required under the Americans with Disabilities Act, is available for people with disabilities that limit them from being able to use the fixed route bus service. The hours that the ADA service is available follows the fixed route service hours of operation.

PVTA ROUTE RED 41: NORTHAMPTON / EASTHAMPTON / HOLYOKE COMMUNITY COLLEGE

The route serves the communities of Northampton, Easthampton, and Holyoke. It operates Monday through Friday. The service begins at 6:15 AM at the Northampton Academy of Music proceeding on Route 10 to Easthampton serving Ferry Street and Parsons on a limited bases continuing on Holyoke Street (Route 141) to Holyoke Community College. Weekday service ends at 7:00 PM. During the summer this route does not serve Holyoke Community College and operates on a modified schedule. This route is operated by Valley Area Transit (VATCo). In FY 2003, ridership of this route averaged 3,382 passengers. Passengers per hour averaged (PPH) 13.5.

PVTA ROUTE NE NASHAWANNUCK EXPRESS EASTHAMPTON

In October of 2000, Easthampton used a Transportation Demand Management grant to establish a flex bus service. The bus, named the "Nashawannuck Express," brings residents to downtown Easthampton for connections to Northampton and Holyoke. In addition, it provides increased service to Northampton, particularly in the evening. Ridership on the Express has grown rapidly in the past four years. Ridership averages between 1500 to 2000 passengers per month, each year the total number of riders continues to increase.

3. FUTURE BUILD-OUT

It is important to consider the impact of zoning regulations and future growth in employment, population and residential development on the existing transportation system. Zoning regulations may permit large developments with high trip generation rates in primarily residential areas. Site specific developments can be expected to impact the existing flow of traffic and add to delay throughout the study area. Growth in surrounding communities can also result in an increase in commuter traffic through the City of Easthampton. Many potential future deficiencies and problem areas can be eliminated by identifying the problem before it happens.

FUTURE FORECASTS

The Bureau of Transportation Planning and Development (MassHighway Planning) developed the future forecasts of population, households and employment for the state of Massachusetts and regional planning agency. Their procedures and preliminary estimates were reviewed by the Pioneer Valley Planning Commission and modifications were made based on PVPC's comments.

MassHighway Planning utilized several sources, such as the Massachusetts Institute for Social and Economic Research (MISER), Woods & Poole Economics (WPE), and the U.S. Census to forecast population for the state. To determine the number of households at the state and regional level, population in households is divided by average household size. This data was estimated for the City of Easthampton based on past trends.

Both population and households are projected to steadily increase in the City of Easthampton from 2000 to 2025. The total population increases by 7% from 2000 to 2025 and the total number of households increases by 18% over the same time period. The average occupancy per household is expected to decrease slightly from 2.33 residents in 2000 to 2.12 residents in 2025.

Total employment is defined as the number of employed residents plus non-residents who commute into the community to work minus residents who commute out of the community to work. Employed residents are forecast by multiplying persons 16 years and over by the labor force participation rate. Employment was allocated at the community level by regressing past decades with a non-linear growth function, then the proportion of jobs to population is examined as a check for reasonableness.

Employment has been forecast to decrease slightly in the City of Easthampton over the next 25 years. This is due in part to past trends reflected in the 1990 and 2000 Census data and the projected retirement of the "baby-boomer" generation.

MAXIMUM BUILD-OUT

In 1999, The Executive Office of Environmental Affairs (EOEA) commissioned a build-out analysis for every community in Massachusetts. The build-out analysis provided a preview of the type and location of the maximum future development that could be expected under current zoning. While it is unlikely that maximum build-out will ever be attained, this information is useful to analyze the

impact of developing every piece of available land under current regulations on population, demands on public services, and consumption of resources.

The complete build-out of every piece of currently undeveloped or underutilized land has an impact on population, household and a significant increase in employment. This is due to current zoning for the City of Easthampton. It should be noted that this Maximum Build-Out scenario assumes complete development of all available land regardless of existing constraints. This exercise is important to show the need for controls on development and to protect open space and conservation land. The effect of this increase on traffic will be documented in a later section of this report.

TRAVEL DEMAND MODEL

Travel demand models are developed to simulate actual travel patterns and existing transportation conditions. Traffic is generated using socioeconomic data such as household size, automobile availability and employment data. Once the existing conditions are evaluated and adjusted to satisfactorily replicate actual travel patterns and vehicle roadway volumes, the model is then altered to project future year conditions. The preparation of a future year socioeconomic database is the last step in the travel demand forecast process. Forecasts of population and socioeconomic data are used to determine the number of trips that will be made in the future

Travel demand forecasting is a major step in the transportation planning process. By simulating the current roadway conditions and the travel demand on those roadways, deficiencies in the system are identified. This is an important tool in planning future network enhancements and analyzing currently proposed projects. The Pioneer Valley Planning Commission uses the TransCAD software to perform transportation forecasts for its base year of 2000 and analysis years of 2010, 2020, and 2025. All 43 communities within the boundaries of Hampden and Hampshire Counties are included in the PVPC regional transportation model. Roadway networks are constructed using current information for the higher classified roads. Most local streets are not included in the travel demand model and are represented by centroid connectors that link the major routes to areas of traffic activity.

FUTURE VOLUMES

Traffic volumes are expected to continue to steadily increase as based upon the forecasted increases in population for the City of Easthampton. Traffic

volumes along Route 141 and Route 10 steadily increase with an overall average growth of 31% to 34% by the 2025 analysis year. Pleasant Street east of Main Street experiences nearly 46% growth over existing traffic volumes. This significant increase can be attributed to projected growth in the surrounding communities. Route 10 and Pleasant Street via East Street may serve as commuter access to Northampton and Interstate 91. As traffic volumes and congestion continue to increase, vehicles will seek alternate routes in order to reduce travel times.

TRAFFIC IMPACTS

The results of the maximum build out scenario were input into the regional transportation model to determine the effect on future traffic.

As expected, traffic volumes increased significantly on all roadways under the maximum build-out scenario. Again it is unlikely that the maximum build-out scenario could ever be realized or that these traffic volumes could be supported by the existing roadway infrastructure. However, it is interesting to see where the largest increases in traffic occur in the City. The roadways located in the northern section of Easthampton experienced the largest increase of traffic volumes. This is mainly due to possible development in these areas, given current zoning as well as direct access to I-91 via the Route 5 corridor as a result the largest increases to occur along Route 10 to the north, Route 141 to the south and East Street to Route 5.

The main purpose of the maximum build-out scenario is to show the importance zoning and development standards can have on how a community develops in the future. It is critical to plan for future growth to balance its impact on the economy, City resources, and the transportation system.

4. REGIONALLY SIGNIFICANT PROJECTS

Major roadway improvement projects such as the widening of an arterial roadway from two lanes to four lanes of travel can have a significant impact on future traffic volumes in the region. Improvements identified in the Short and Long Range Elements of the current Regional Transportation Plan for the Pioneer Valley Metropolitan Planning Organization were incorporated into PVPC's regional transportation model.

No site specific major improvement projects in the City of Easthampton have been included in the regional transportation model. Current and proposed projects such as the rehabilitation and

widening of Route 9 and the Calvin Coolidge Bridge in Hadley, road widening and signal coordination along Route 9 in Northampton and the construction of the Route 10 to Route 66 connector located in Northampton could have regional impacts and could influence current travel patterns for commuter traffic in the City of Easthampton.

ROUTE 141 SAFETY STUDY

The goal of the Route 141 Transportation and Safety study is to provide a detailed analysis about existing transportation and safety conditions along a section of Route 141 also known as Mountain Road. Route 141 was built as a quick, convenient roadway to access Interstate 91 from Easthampton and neighboring cities and towns. This corridor is well known for its steep grade and various curves that lead motorists into Easthampton and Holyoke. In the event of inclement weather, Route 141 can be closed by the City of Easthampton requiring detours via Southampton Road and East Street. In 2005, two crashes occurred along the roadway that had each resulted in fatalities. A combination of high profile crashes, high traffic volumes and the non-standard roadway geometry have contributed to the perception of safety problems in this area.

Based on the results of the analysis, there are significant delays in the study area. The longest delays occur at the intersection of Route 141 with Hendrick Street particularly during the morning peak hour. Vehicles attempting to exit from Hendrick Street were calculated to operate at Level of Service (LOS) "F" during the morning peak hour period.

In addition, Southampton Road suffers more delay during the morning peak hour but improves to LOS "C" in the afternoon. These intersections may be suffering in the morning due to the high volume of motorists that travel on Route 141 reducing the number of gaps for the minor approaches to exit. Route 141 with Interstate 91 operates at LOS "F" at some approaches during the morning and afternoon peak hour. The Interstate 91 On/Off ramp experiences the most delay due to the lack of enough green time and need for additional capacity.

Based on the results of the transportation study, a series of recommendations were developed to address existing traffic deficiencies and improve safety in the study area. These are being reviewed by the Public Works departments of Easthampton and Holyoke.

ROUTE 141 WITH INTERSTATE 91 ON/OFF RAMP

The intersection of Route 141 with the Interstate 91 On/Off ramp currently operates at Level of Service "E" (scale of "A" to "F", best to worst) during the morning and afternoon peak hour due to the high level of traffic and long delays at the intersection. Traffic from the westbound approach experiences long delays due to a short amount of green time allotted for this approach. PVPC conducted an additional study to determine possible alternatives to improve traffic flow at this intersection.

The short term improvements consisted of a simple change in the signal timing plan. The long term improvements consisted of changing the exclusive left-turn lane into a through and left-turn lane at the northbound approach of Route 141. An exclusive left-turn lane was also added to the westbound approach. The long term changes dramatically improve delay for the intersection during the morning and afternoon peak hours. The additional lane at each approach of Route 141 drastically improves the Level of Service for this intersection because it allows motorists on Route 141 to exit the intersection in much less time. The motorists exiting from the minor approaches improve as well due to less delay from Route 141.

It is recommended that the City of Holyoke consider consulting with MassHighway District 2 to modify the existing signal timing plan at this intersection to make any possible improvements. In the long term, if the permitted and protected phase for the exclusive left-turn lane at the southbound approach becomes a factor to in contributing to angle-type crashes, it is recommended that this phase be changed to a protected phase. When vehicles are permitted to turn left on a green light while the opposite approach also has a green light, this can cause confusion for motorists and negatively impact safety. It is also recommended that the City of Holyoke hire a licensed professional engineer to determine the feasibility of converting the exclusive left-turn lanes at the northbound and southbound approaches to a combined through and left-turn lane. This will require that the two lanes merge back into one lane just past the intersection and may require the acquisition of private property. PVPC was notified by the City of Holyoke of their desire to install a traffic signal at the intersection of Route 141 with Jarvis Avenue. Due to its close proximity to the intersection of Route 141 with Interstate 91, it is recommended that the City of Holyoke consider the feasibility of coordinating the two signal timing plans.

ROUTE 141 WITH SOUTHAMPTON ROAD

This intersection satisfies the warrant for the installation of an exclusive left turn lane. Such an installation would improve traffic flow and safety allowing motorists to queue in a separate lane from through-moving traffic. It is recommended that the City of Holyoke consider installing an exclusive left-turn lane on the northbound approach of Route 141 at this intersection. Based on the results of the traffic signal warrant analysis, this intersection also satisfies the volume requirements to install a traffic signal. The capacity at this intersection is much lower. However, the high volumes that turn left from the northbound approach of Route 141 would be compromised without a protected phase or an exclusive left-turn lane.

PVPC conducted an additional analysis to determine how the intersection could operate with the installation of a traffic signal and an exclusive left-turn lane with protected phasing. The Level of Service and safety is significantly improved at this intersection with the installation of a traffic signal. With the combination of an exclusive left-turn lane and the intersection under signalized control, the delay significantly increases. The exclusive left-turn lane in combination with the protected phase in the signal timing plan may also improve safety.

ROUTE 141 CORRIDOR SIGNAGE IMPROVEMENTS

While existing warning signs are present to alert motorists of the steep downgrade, it is recommended that the "8 % GRADE" truck signs be supplemented with flashing yellow beacons as well as "TRUCKS USE LOWER GEAR" plaques below the diamond. This would reinforce truck drivers to lower their gear and take caution in this area. Flashing yellow beacons are installed at an intersection or in conjunction with a warning sign in advance of areas requiring greater than normal measures to alert motorists of changing roadway conditions. Flashing beacons are a low cost safety improvement.

A custom warning sign is recommended for northbound traffic on Route 141 to inform motorists of the intersections of Route 141 with East Street and Hendrick Street. The City of Easthampton should also consider installing chevrons at the curve at the bottom of the hill on Route 141. Chevrons serve to guide drivers through the curve and they should be placed on the outside of the curve. Chevrons can potentially reduce speed and increase safety in the vicinity of this curve with two in view at all times.

At the time of the field inventory, it was noted that some motorists parked across the street at the Mount

Tom State Reservation to access both the Log Cabin and the Mount Tom State Reservation. This results in pedestrians crossing Route 141 in an area of restricted vertical sight distance. PVPC recommends an additional study be conducted that will assess the current parking conditions and provide recommendations for the Mount Tom State Reservation. This study will be included as part of the future Unified Planning Work Program.

INTELLIGENT TRANSPORTATION SYSTEM (ITS) IMPROVEMENTS FOR ROUTE 141

The City of Easthampton currently utilizes a series of manually activated signs and barricades to alert motorists that Route 141 is closed. There are a number of strategies that could be employed to assist in the “automation” of this roadway closure which would increase efficiency and ensure that all proper parties are notified in advance of all closures.

• 511 Traveler Information

On July 21, 2000 the Federal Communications Commission (FCC) designated 511 as the single travel information telephone number to be used across the United States. Calls placed to 511 will provide current travel information on weather and road conditions, traffic updates, and ongoing construction projects. There is no charge to utilize 511 services. It is recommended that the City of Easthampton consult with the MassHighway District 2 Office to keep up to date on this deployment. Use of 511 could be an extremely effective way to keep motorists abreast of the status of Route 141 at no cost to the City.

• I-91 ITS Project

The Massachusetts Highway Department is currently in the preliminary design phases to install conduit, fiber and associated ITS devices such as cameras and variable message signs along the I-91 corridor. Upon completion of this project, it will be possible to display messages along the I-91 corridor of any closure of Route 141. This will give motorists the opportunity to detour to alternate routes prior to I-91 Exit 17 in the event of a road closure. The City of Easthampton is encouraged to consult with the Massachusetts Highway Department on the proposed locations for variable message signs along the I-91 corridor to ensure they allow motorists sufficient time to select a suitable detour route. In addition, the City should also work with MassHighway to develop a notification procedure to alert proper personnel at both MassHighway and the Massachusetts State Police prior to the closure of Route 141.

• Weather Sensors

Road Weather Information Systems (RWIS) utilize advancements in technology to detect the levels of water and ice on the road. The RWIS uses an Environmental Sensor System (EES) to collect both weather and roadway surface data. These sensors are generally placed in areas such as mountains and bridges to assist maintenance staff in the decision making process of whether a roadway is safe for use. The system can also be linked with cameras to provide real-time views of existing conditions to maintenance staff. The cities of Easthampton and Holyoke should consider the implementation ITS technology such as a RWIS and fixed message signs (described in the next section) to assist the decision making process to close Route 141 and enhance the process to notify motorists of its closure. It would be the responsibility of the cities of Easthampton and Holyoke to design this ITS system and consult with MassHighway to ensure the system is compatible with the Western Massachusetts ITS Architecture. Upon approval by the Massachusetts Project Review Committee (PRC), the project would be eligible for funding through the Transportation Improvement Program (TIP) for the Pioneer Valley Metropolitan Planning Organization.

• Fixed Message Signs

The installation of fixed message signs in conjunction with RWIS and cameras would greatly improve upon the existing method used to close Route 141. These signs could be located at key locations in the Cities of Holyoke and Easthampton to identify the status of Route 141 for vehicle travel.

• Automated Notification System

The closure of Route 141 during severe weather events is critical to ensure the safety of motorists. It is recommended that the City of Easthampton consider the use of an automated calling system and/or email alert system to automatically notify people prior to the closure of Route 141. Such a system could be utilized to alert the appropriate agencies and people of the closure of Route 141 via one phone call. It is recommended that the Cities of Easthampton and Holyoke convene a meeting to discuss the current procedures used to close the roadway and identify a methodology to enhance this process, expand on the list of agencies notified in advance of the closure and expand on the existing system used to notify motorists of the need to close the roadway.

CHALLENGES & OPPORTUNITIES

(From presentation at MPC Dec meeting)

- PUBLIC TRANSIT – IMPROVE USABILITY AND INCREASE USAGE
- TRANSPORTATION SYSTEMS
- EXTENSION OF THE MANHAN RAIL TRAIL, LINKS TO NORWOTTUCK, WESTFIELD, AND FARMINGTON CANAL
- NORTHAMPTON STREET BRIDGE – ALTERNATIVE ROUTES, MINIMIZE ECONOMIC IMPACT
- ROUTE 10 TRAFFIC PENDING COMMERCIAL GROWTH
- SAFE PEDESTRIAN ACCESS TO EXISTING OR NEW SCHOOLS

New commercial or large residential development should accommodate present or future transit access. Retailers often contribute to the cost of operating new stops as this will increase customer access. Examples: Chicopee medical center, Route 9 development in Hadley

GOALS AND STRATEGIES

TOOLS AND CASE STUDIES

REGULATORY

Suburban scale Transit Oriented Development

Transit-oriented development (TOD) is compact, mixed-use, walkable development centered around transit stations. Generally including a mix of uses such as housing, shopping, employment, and recreational facilities, TOD is designed with transit and pedestrians as high priorities.

Traditional Neighborhood/Village Design

Traditional neighborhood developments promote more compact development and provide a variety of housing types and mixed uses. Thoroughfares are designed to be equitable to the pedestrian, bicyclist and motorist with connections that encourage walking while reducing the number and length of automobile trips. Building facades spatially delineate thoroughfares and civic spaces while masking parking lots. Smaller block sizes and lot sizes affirm community character and reduce consumption of open space.

NON-REGULATORY

Sidewalk Survey

By completing an inventory of sidewalks and pedestrian destinations (schools, parks, retail), communities may plot priorities for new sidewalks as well as maintenance of existing walks. Links to other trail systems may be noted.

Growth linked to transit access