
Peabody-Salem Corridor Concept Action Plan

Funding provided by the
District Local Technical Assistance program



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Acknowledgements

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This project was undertaken with funds from the District Local Technical Assistance program. MAPC wishes to express our thanks to the Governor and the members of the Legislature for their continued support and funding of this program.

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Executive Summary

The Peabody-Salem Corridor Concept Action Plan is collaboration between the City of Salem, the City of Peabody and MAPC. The project focused on a shared roadway corridor that connects the two communities and is the first experience for the two cities in planning across their shared boundary. Working with the planning staff from the cities of Salem and Peabody as well as with residents, property owners and other stakeholders, MAPC has developed a set of recommendations that are designed to make Main Street and Boston Street a more vibrant, livable and attractive community corridor.

Key recommendations in the Action Plan include:

- Zoning- Conduct a zoning use and dimensional conformance analysis for parcels zoned for Business Highway in the Boston Street section of the Corridor. Use the results to help inform a Boston Street Neighborhood Visioning Charrette that would identify neighborhood character and development issues, potential future land uses and zoning for Boston Street. Consider creating a new Boston Corridor Street Overlay District rezoned to a modified Business Neighborhood District that would now allow residential uses above first floor businesses in buildings up to 3.5 stories tall.
- Economic Development - Create an inventory and status report of all known Brownfield sites and develop a strategy to reach out to Brownfield owners within the North River with the latest policy updates and financial redevelopment options available to them.
- Create a Corridor Economic Development Committee and draft an Economic Development Plan for Main and Boston Streets. Elements of the plan should include conducting a survey of Corridor business and residential needs, crafting a comprehensive market analysis of the Corridor and surrounding residential neighborhoods and developing a shared marketing strategy.
- Roadway Redesign - Advance a two lane cross-section for corridor, with a center left turn lane/median and on-street parking. Explore opportunities for reducing the size of intersections and for the use of roundabouts.
- Bicycle and Pedestrian Enhancements - Update pedestrian signals and push buttons, install pedestrian refuge island, install shared lane markings and bicycle lanes, and provide more bicycle parking opportunities.
- Transit Stop Amenities - Improve visibility of bus stops of the corridor and add amenities such as benches, shelters and schedules to improve the passenger experience at stops
- Green Infrastructure - Plant trees along to corridor to fill in the existing canopy and explore opportunities for use of bioretention in proposed curb extensions.

The project was initiated by the Cities of Peabody and Salem. MAPC performed the project with funding it received under the District Local Technical Assistance Program operated by the Department of Revenue. More information about the project can be found at: <http://www.mapc.org/subregions/nstf/salem-peabody-corridor>. This document further details the study process, existing conditions and the proposed recommendations for the Main Street and Boston Street Corridor.

Chapter One: Introduction and Background

Introduction

The cities of Salem and Peabody have collaborated on the development of a Corridor Concept Action Plan to guide the redevelopment of Boston and Main Streets. This shared corridor is a key roadway connecting the two communities, specifically connecting Salem to downtown Peabody. The plan will be the two cities' first experience in planning across their shared boundary. Municipal collaboration and planning across boundaries are key components of the District Local Technical Assistance (DLTA) funding supporting the corridor project, as provided by the Metropolitan Area Planning Council (MAPC), the regional planning agency for the Boston metropolitan area. The project also reflects implementation of MAPC's MetroFuture, a regional development plan for the Boston metropolitan area.

Study Area

The boundaries of the project are from the intersection of Boston Street and Essex Street in Salem to the intersection Main Street and Foster Street/Central Street at Peabody Square. The figures below illustrate the location of the Study Area within the Boston region.



Figure 1-Regional Map

Study Goals

The goals of the project include the analysis of various land use issues and the development of a shared action plan for revitalization of the corridor that will focus on recommendations for the following elements:

- Zoning consistency within the corridor;
- Identification of economic development opportunities and strategies;
- Context sensitive roadway improvements;
- Bike and pedestrian access on the corridor.

Local Coordination and Public Outreach

Throughout the study, MAPC staff actively coordinated with the planning staff from the cities of Salem and Peabody. From the project initiation through development of recommendations, the city planners played an essential role in guiding project work and public outreach.

The project included several corridor walks and meetings with residents, property owners and other stakeholders. Corridor walks were held on August 17, September 28 and October 12 to discuss existing conditions along Boston and Main Streets with those who live, work and travel on the corridor. The first public meeting was held on June 29 to present initial findings and observations from the project. A final public meeting was held on December 14, 2010 to present draft recommendations.

The project also built public awareness about the corridor through Web 2.0 techniques. [A project blog](#) was developed and updated with project materials, [videos of residents discussing the corridor](#) and notes from MAPC staff. In addition, a [tour of the corridor](#) was developed in Google Earth to provide a virtual overview of Boston and Main Streets.

Historical Development

Constructed in the 17th century, the Boston/Main Street Corridor served as the main road to Lynn and Boston until the construction of Highland Avenue in 1802. For its first two hundred years, the Corridor was bounded to the east by the tidal basin of the North River.

With an increase in area population, the development of the leather industry beginning around 1800, and the separation from Salem by Danvers (1757) and Peabody from Danvers in 1855, the road was constructed into a wide boulevard. The Salem and Peabody neighborhoods alongside Boston and Main Streets became either residential or downtown-business oriented in character, but the wetlands at the head of the North River tidal basin were filled by the 1850s to become Blubber Hollow, home to factories and tanneries. Downtown Peabody grew into a strong commercial center along Main Street, featuring two and three-story brick and stone buildings with minimal setbacks, and many civic uses.

By the late nineteenth century, much of Boston Street in Salem, apart from Blubber Hollow, was a broad, tree lined, residential street with a street railway running down its center, with a mix of commercial and residential uses beyond Goodhue Street in Salem to Essex Street. The Salem fire of 1914 burned down both sides of Boston Street from Procter Street east to Essex Street. This area was rebuilt with a combination of commercial uses and brick apartment buildings.

Automobile use in the 20th saw the Corridor evolve into the primary connecting route between Salem and Peabody, and as a thoroughfare connection from Route 128 to Salem and Peabody beginning in the 1950s. In addition to its long heritage as a single-family neighborhood area, Boston Street gained additional auto-related commercial uses such as gas stations and drive-in restaurants. More multi-family structures were also created from existing single-family homes, sometimes with retail uses on the first floor. In Peabody, the central business district declined as malls along Route 128 drained business away from downtown. Main Street began to assume more characteristics of a high speed thoroughfare, culminating in the removal of the Peabody Square rotary in 1992 and the conversion of Main Street from a two-lane street to a four-lane highway designed to move an increasing number of cars, and especially trucks, as quickly as possible through downtown Peabody. Since then, Peabody has taken steps to revitalize Main Street through proposed new downtown zoning that emphasizes pedestrian-friendly, mixed use concepts designed to re-energize the Peabody Square area. In addition, the city is moving forward with a conceptual plan to transform Main Street to a three lane road that will incorporate a center turning lane and improved bike and pedestrian measures.

Chapter Two: Community Form and Mobility Context

Community Form

To better understand the nature of the Boston/ Main Street Corridor and make recommendations to create a revitalized Corridor, it is necessary to have an accurate understanding of the overall community form of the Corridor, including its land uses and demographics-its people and its places.

Land Use and Character

Existing land uses in the corridor can be described in terms of several distinct types of character zones:

- Business Highway- these are parcels with direct access to the Corridor between Caller Street and Bridge Street.



Land Use: Business Highway

- Downtown Business- this section of the corridor, west of Howley Street on Main Street, mostly contains multi-story commercial buildings.



Land Use: Downtown Business

- Single/Two Family Residential- These are found east of Howley Street on Boston Street, sometimes multi-story structures with residential above first-floor commercial uses and some

single family homes, often period architecture homes. The neighborhoods surrounding the Corridor are primarily older single-family homes with some duplexes and apartments.



Land Use: Single Family Residential

- Higher Density Residential- Found along Boston Street, with turn of the 20th century brick apartment houses closer to the Essex Street end of the Corridor.



Land Use: Higher Density Residential

All of the character zones are in close proximity to each other and contain some compatible land uses, resulting in an area that could become more conducive to walking and bicycling.

As part of developing the Action Plan, MAPC staff polled meeting attendees at the June 29, 2010 project kick-off meeting held in Peabody. Approximately 40 participants identified and voted on Corridor Strengths, Weaknesses and Opportunities. Overall, voters indicated that the Boston and Main Street neighborhood has a strong historic and cultural foundation to build on; that the physical layout of Main and Boston Streets lends itself to safety and mobility improvements and that most of the Corridor suffers from lack of good building design and landscaping. See [Meeting Results](#) for a full summary of the meeting.

During the two site Boston and Main Street site walks conducted during the project, two area residents weighed in with their impressions of the Corridor—what they like and what could be

improved. You can view the videos at the [Salem Peabody Corridor web page](#) on the MAPC web site.

Community Facilities

Community facilities in the Corridor emphasize the need for safe and easy access for these uses that exist for the good of the community. There are several community facilities within one or two blocks of the Boston and Main Street Corridor including schools, parks, fraternal organizations, churches, and two libraries.



Peabody City Hall



Salem Public Library

Table 1: Corridor Community Facilities Located within 1,500 feet

Peabody	Salem
Tabernacle Baptist Church	Harmony Grove Cemetery
First Unitarian Church	Old South Cemetery
Peabody City Hall	Endicott School
Peabody Institute Library	Ancient Order of Hibernians
Congregation of Sons of Israel	Loyal Order of the Moose
Saint Paul's Preschool	Congin School
Wallis School	Saint James School
Portuguese Brotherhood Club	Saint Joseph's School
Tabernacle Baptist Church	Bowditch School
First Unitarian Church	Grace Church
Peabody City Hall	First Spiritual Church

Peabody**Salem**

Peabody Institute Library

Splaine Park

Congregation of Sons of Israel

Mack Park

Saint Paul's Preschool

Gallows Hill Park

Wallis School

Salem Public Library

Portuguese Brotherhood Club

Collins Middle School

Salem High School

Harmony Grove Cemetery

Old South Cemetery

Endicott School

Ancient Order of Hibernians

Loyal Order of the Moose

Source: MAPC Data Lab

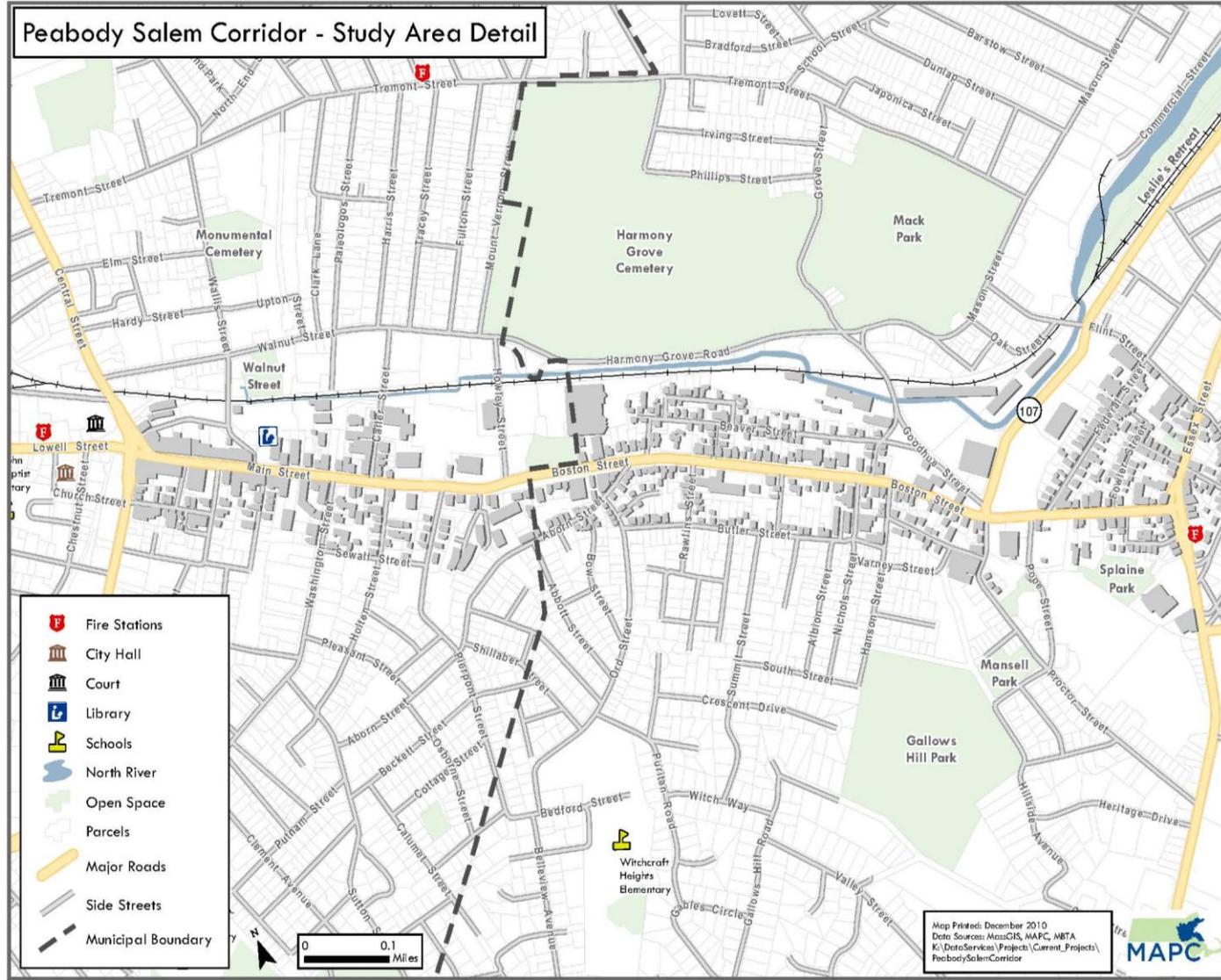


Figure 2- Study Area Detail

Zoning

Based on staff visual surveys and interviews of residents of the Corridor, existing zoning designations are somewhat accurate in depicting actual land use within the Boston and Main Street Corridor. The Main Street section, zoned as Business Central, is quite consistent with the uses found including a wide range retail businesses ranging from restaurants to hobby shops and hairdressers, multi-family housing, restaurants, professional offices and civic uses such as the Peabody Institute Library.

The Boston Street section of the Corridor exhibits a number of pre-existing non-conforming uses such as older, single family period homes that have been used for retail uses on the first floor with apartments on the upper floors. It is also not uncommon to discover an allowed Business Highway use next to or across Boston Street from a restored 18th century home, more evidence of the street's old and varied land use patterns. Multi-family housing in the older brick apartment buildings located near the intersection of Federal and Boston Street also pre-date the current zoning. Going east beyond Fowler Street to Essex Street, Boston Street begins to feel much more like the Business Neighborhood district that it is zoned as, with smaller neighborhood businesses mixing with single, two-family and multi-family housing types.



Mixed Use, Main Street



Businesses, Main Street



Historic Homes, Boston Street



Mixed Use, Boston Street

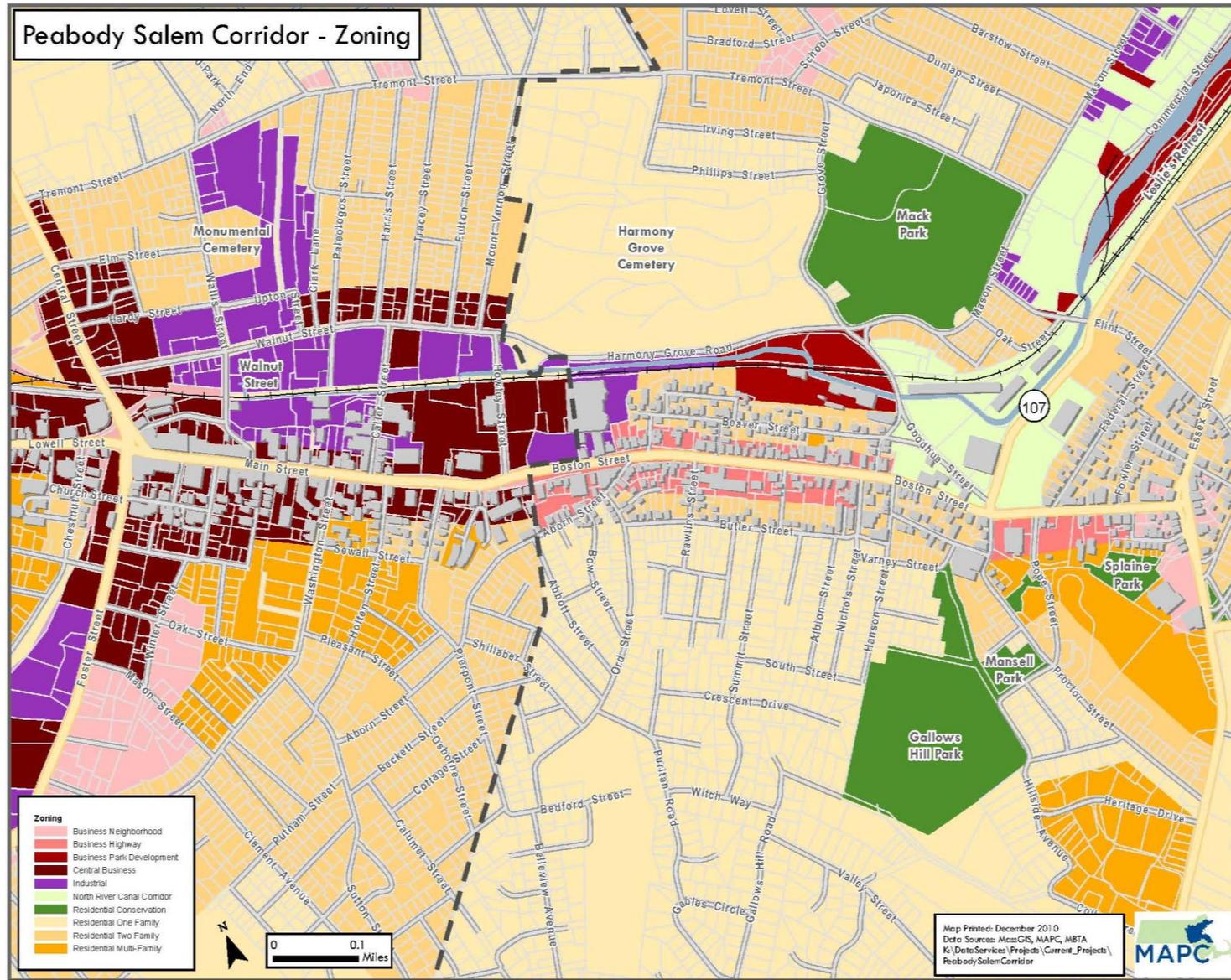


Figure 3- Zoning

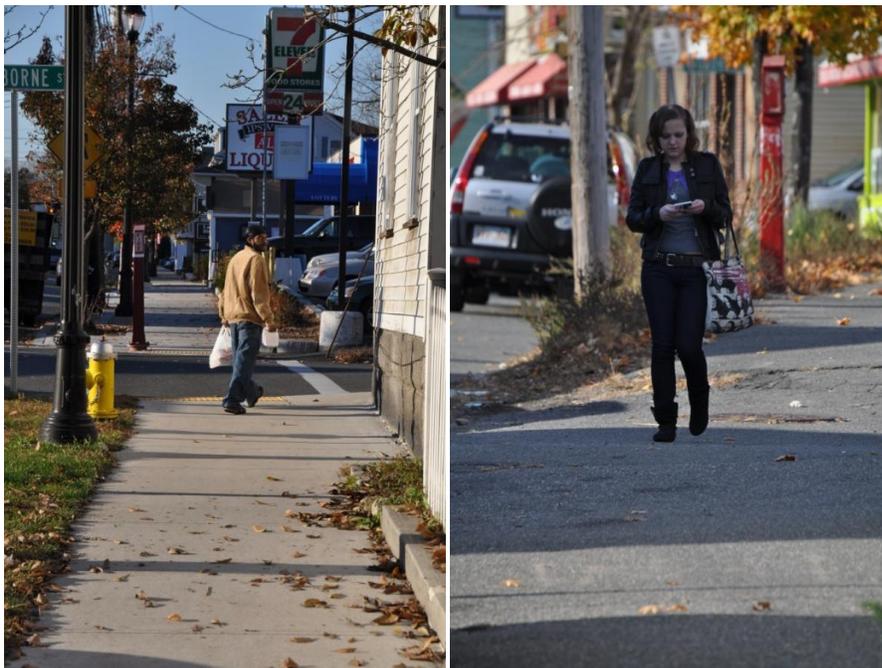
Demographic

Data collected during the most recent US census (¹2000) was analyzed for demographic factors that bear a strong relationship to mobility needs. Key findings include:

- Peabody: Main Street : 19.9 % of residents are under the age of 18;
- Salem: Boston Street: 21.9 % of residents are under the age of 18;
- Peabody: Main Street: 20.8 of residents are over the age of 65;
- Salem: Boston Street: 12.8 % of residents are over the age of 65;
- Peabody: Main Street: 36 % of households have one or no car;
- Salem: Boston Street: 47% of households have one or no car;

Combined, the Boston and Main Street Corridor census tracts have an average median household income equal of \$44,241, about 49% of the Essex County median household income.

These findings suggest that there is a significant demand for alternatives to driving, either because of age, income or lack of access to an automobile.



Pedestrian Uses: Boston Street

¹ 2010 US Census results not yet available for this report

Mobility Context

Land use and circulation are not separate elements within a corridor or in a community. These two elements interact and affect the perceptions, experience and appearance of areas. To complement the review of the built environment on the corridor, a review was performed to identify issues and opportunities for enhancing travel on the corridor. This review included field observations of existing conditions, collection of local planning studies and documents, and input from public participants. Particular attention was paid to context of their community form adjacent to the corridor and opportunities for multi-modal travel. The follow sections describe findings from this review.

Roadway Characteristics

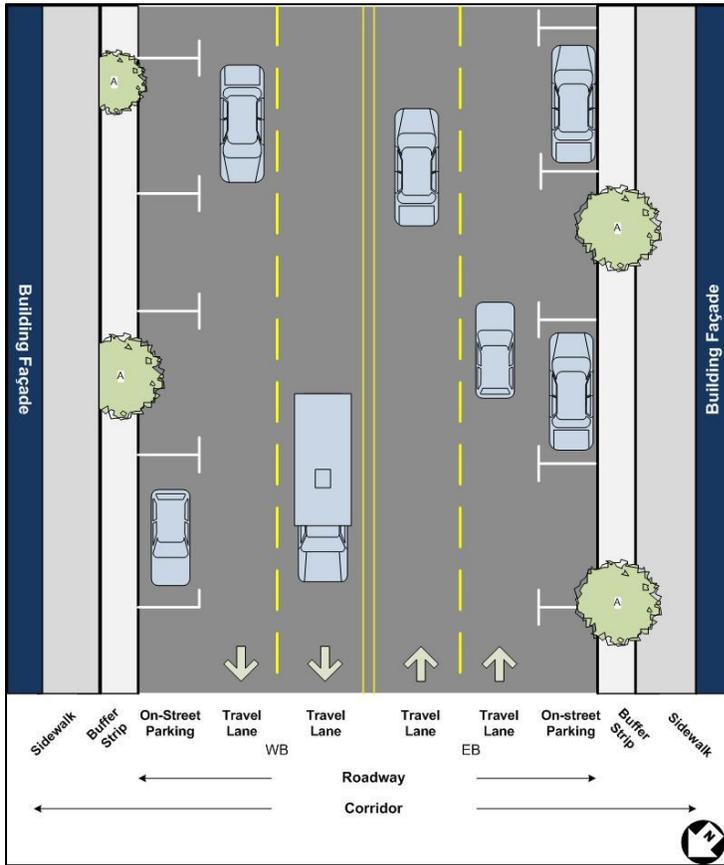
Main Street and Boston Street are urban principal arterials that provide an east-west connection from Peabody to Salem. Main Street begins at Peabody Square and is a continuation of Lowell Street, which provides direct access to Route 128 in the west. Boston Street starts at the Peabody-Salem border by Howley Street and connects at its eastern end with Essex Street. The eastern section of Boston Street is designated State Route 107, as are Bridge Street to the north and Essex Street to the south. An overview of the corridor is illustrated in Figure X.

Main Street has a four-lane cross-section, with two travel lanes in each direction, and a posted speed limit of 20 MPH. The width of the roadway ranges between 52' and 59' between Foster Street and Howley Street, after which the roadway has a width of 44'². On-street parking is permitted and marked along Main Street up to Washington Street, after which there are limited on-street parking spaces.



Photo looking east on Main Street, Peabody

² Based on roadway widths from the City of Peabody Main Street Preferred Alternative Plan Set (6/28/10)



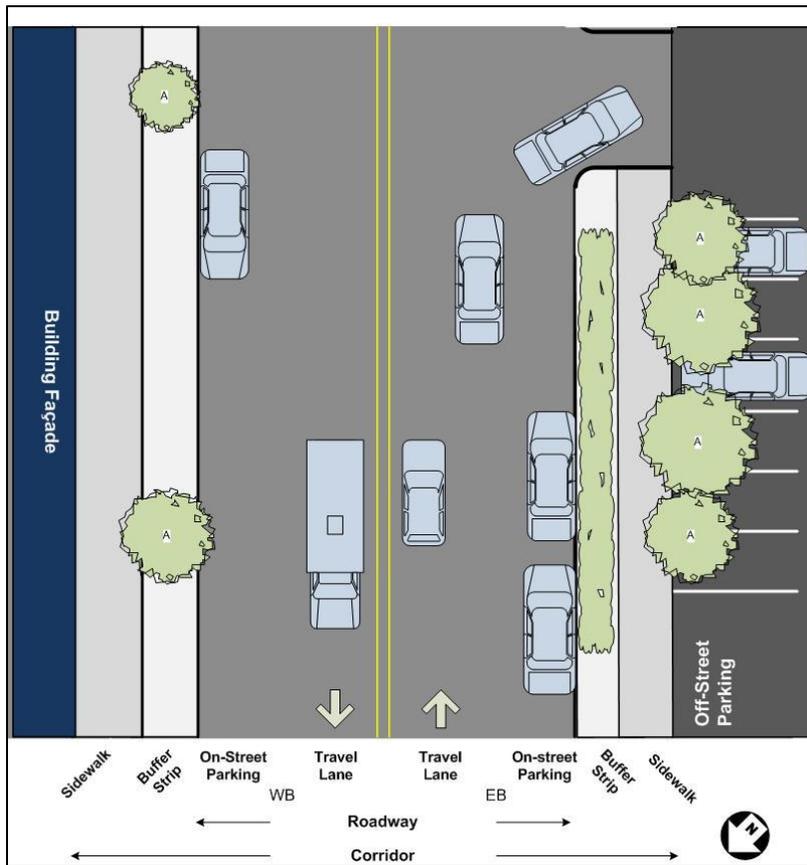
Representative Cross-Section of Main Street, Peabody

Boston Street has a two lane cross-section with permitted, unmarked on-street parking on either side. Boston Street initially has a 44' wide cross-section, but then widens out to 52' or greater with the exception of a 42' - 46' section between Bridge Street and Grove Street³. There were no posted speed limit signs observed on Boston Street.



Photo looking east on Boston Street, Salem

³ Based on roadway widths from the City of Salem Bicycle Circulation Master Plan



Representative Cross-Section of Boston Street, Salem

There are six signalized intersections on the corridor and three signalized pedestrian crossings.

Table 2: Signalized Intersections and Crossings

Signalized Intersections	Signalized Pedestrian Crossings
Foster/Central Street and Main Street	Park Street and Main Street
Washington Street and Main Street	Rawlins Street and Boston Street
Howley Street and Main Street	Federal Street and Boston Street
Nichols Street, Grove Street and Boston Street (offset intersection)	
Bridge Street/Proctor Street and Boston Street	
Essex Street and Boston Street	

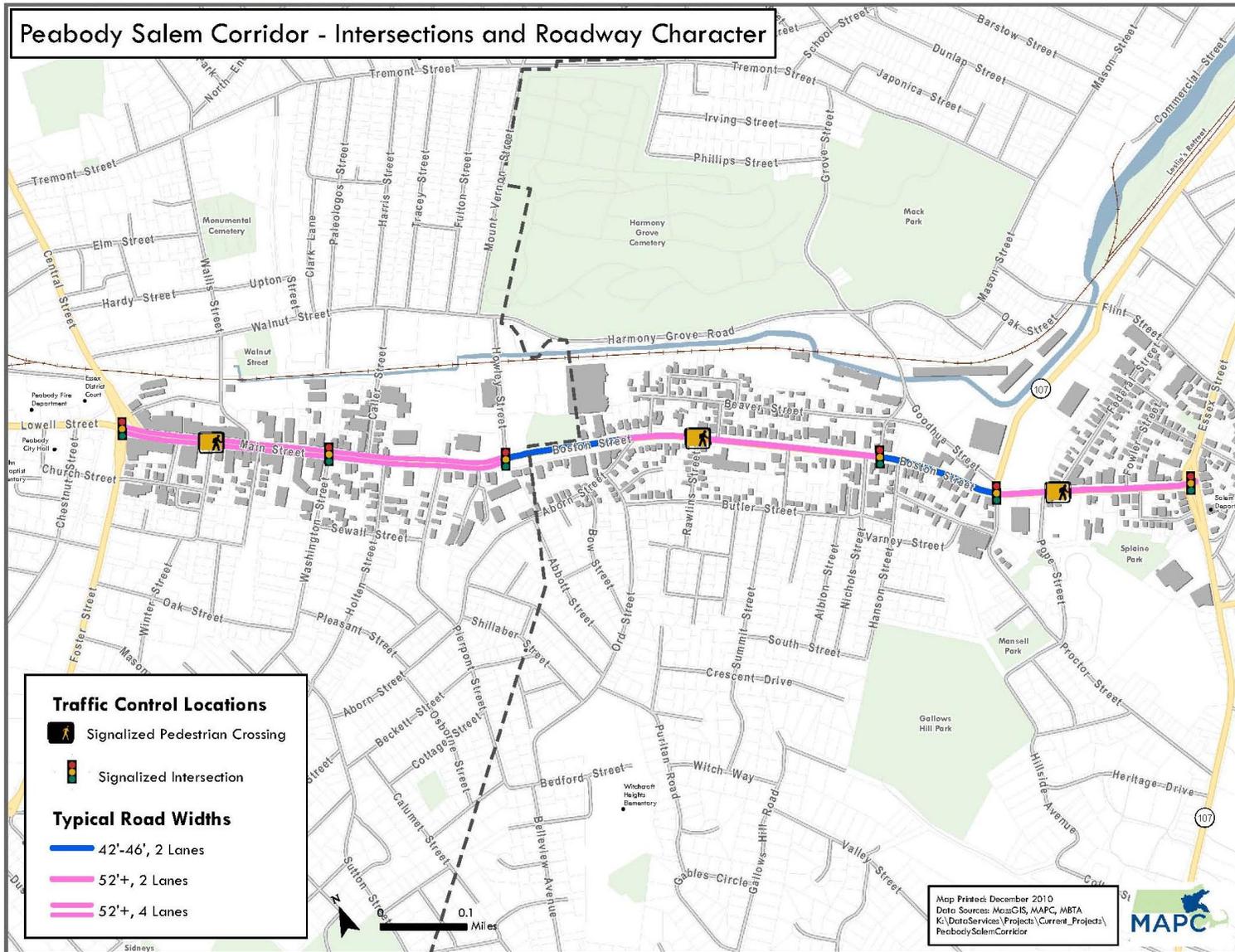


Figure 4- Intersections and Roadway Character

Pavement condition along the length of the corridor shows signs of deterioration such as cracking, potholes and rutting. Additionally, in some locations such as by the Flynntan site, the vertical curb on the corridor has become depressed reducing the definition between the vehicular travelled way and the pedestrian travelled way. The depressed curb may also reduce ability to manage stormwater and prevent parking on the buffer or sidewalk areas.

Pedestrian Facilities

The existing pedestrian facilities on the corridor were reviewed. Sidewalks are present along the entire corridor and are typically 6' wide with a 2.5' - 3' buffer of grass, concrete or stone. In some locations, sign poles and utility equipment creep are present on the roadside and reduce passable width on the sidewalks. Also, there are several locations where concrete sidewalks have been replaced by asphalt. These locations, such as sidewalk in front of the Flynntan site and sidewalk west of Nichols Street, are uneven and cracking.

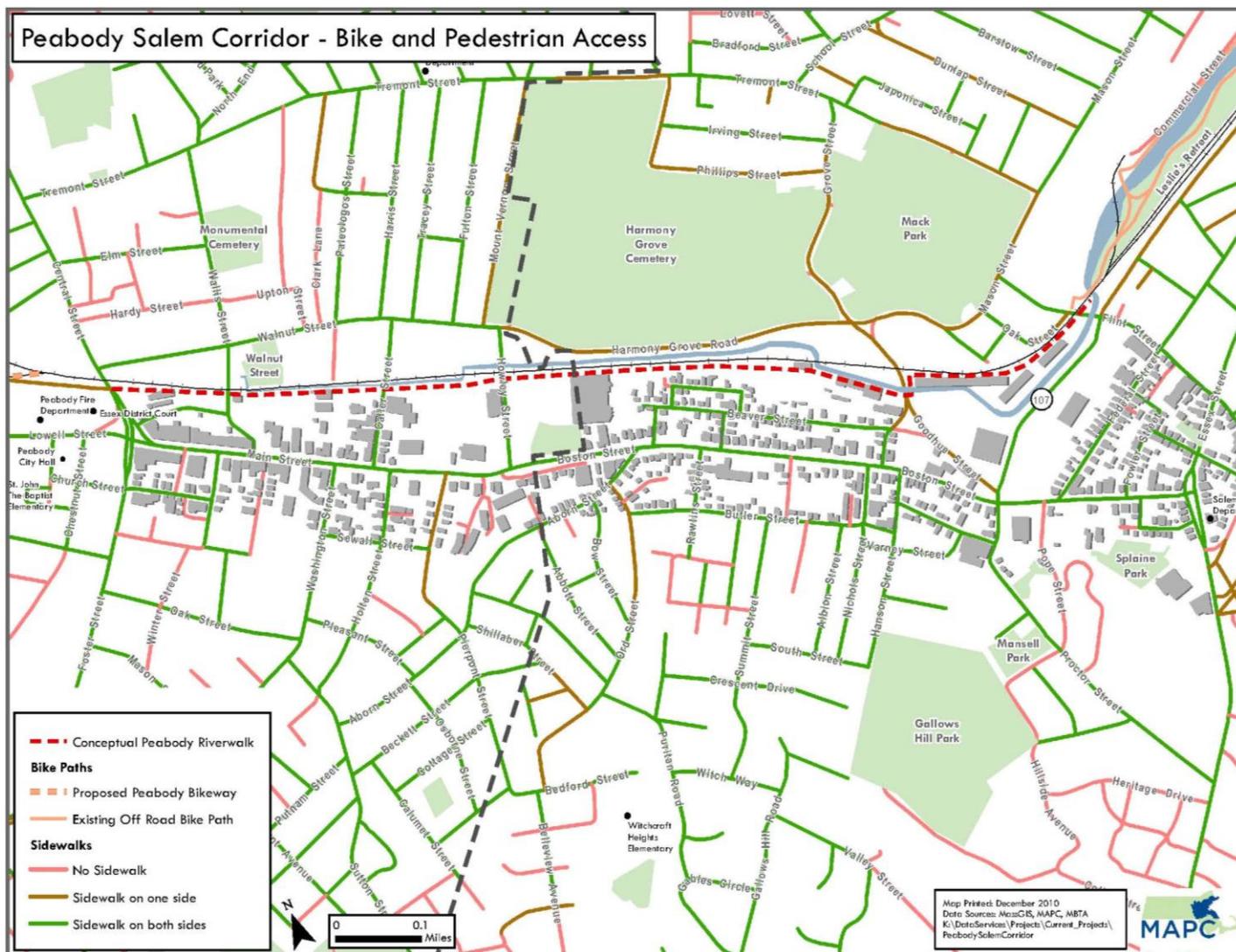


Figure 5-Bike and Pedestrian Access

Crosswalks are present at each signalized intersection with the exception of the intersection of Bridge Street/Proctor Street and Boston Street. Crosswalks are standard striped transverse lines with a painted blue fill. In multiple locations the crosswalk marking were observed to be faded and worn. Similar crosswalk marking are present at the signalized pedestrian crossings. Depressed curbs are provided at most crossing locations, but few featured truncated domes on the sidewalks that sloped down to the street.



Example of Crosswalk Markings

Each signalized intersection, excluding the Bridge Street/Proctor Street and Boston Street intersection, has standard pedestrian signal heads and pedestrian push buttons. Crossing at the intersections are accommodated by exclusive pedestrian phases and are activated by the pedestrian push buttons, which appeared to be in working order. No regulatory pedestrian crossing signs for the push button controls were observed at the signalized intersections. Traffic signal heads, standard pedestrian signal heads and push buttons are provided at the Park Street and Federal Street signalized pedestrian crossings. Rawlins Street has push buttons and traffic signal heads, but no pedestrian signal heads.



Example of Pedestrian Signal Heads

There are also 11 locations where there are un-signalized pedestrian crossings on the corridor. Striped and painted crosswalks are present at these locations, which are identified in Table 3.

Table 3: Un-signalized Pedestrian Crossings

On Main Street	On Boston Street
Nichols Street	Aborn Street
Little's Lane	West of Prospect Avenue
Between Little's Lane and Washington Street	East of Prospect Avenue
Holton Street	Pope Street
Pierpont Street	May Street
Between Pierpont Street and Howley Street	

Bicycle Facilities

Bicyclists were observed on the corridor, but there are no existing bicycle facilities on or adjacent to the Main Street and Boston Street Corridor. Although most of the observed cyclists looked to be performing utilitarian trips, such as shopping or commuting between destinations, there were a few recreational cyclists on the corridor. Additionally, no bicycle parking accommodations were observed either along the street or as part of off-street parking lots.

In the area surrounding the corridor, there are the Independence Greenway in Peabody and Leslie's Retreat Park in Salem. The greenway is an on- and off-road bicycle route that connects between Ipswich River near the Peabody-Middleton town border and the North Shore Mall by Route 128. A possible eastern extension of this route would connect to Downtown Peabody via the proposed Riverwalk along the North River. The Riverwalk would parallel Main Street to the north and be located south of the nearby freight rail line. Leslie's Retreat Park has a shared use path that runs between Flint Street and Commercial Street, just south of the North Street Overpass (Route 114). There is potential for the Riverwalk to continue from Peabody into Salem and connect with Leslie's Retreat Park. In addition, there is the potential for connecting the park path to the Salem Depot rail station.

Transit Service and Amenities

There are three MBTA bus routes that serve the corridor. Two bus routes run directly on the corridor: Route 435 and Route 465. Bus Route 435 travels between Liberty Tree Mall and the Lynn Commuter rail station, using Main Street between Foster Street and Washington Street, and has 60-minute headway. The other service, Bus Route 465, serves the length of the corridor as it travels between the Liberty Tree Mall and the Salem Depot rail station. Route 465 also has 60-minute headway. An additional service, Bus Route 434, makes one peak period AM run and one

peak period PM run from the intersection of Main Street and Washington Street to Haymarket Station in downtown Boston.

There are two additional routes that operate along Essex Street at the western end of the corridor. These routes operate north-south and provide a link between the Salem Depot and Lynn, Revere and Boston.

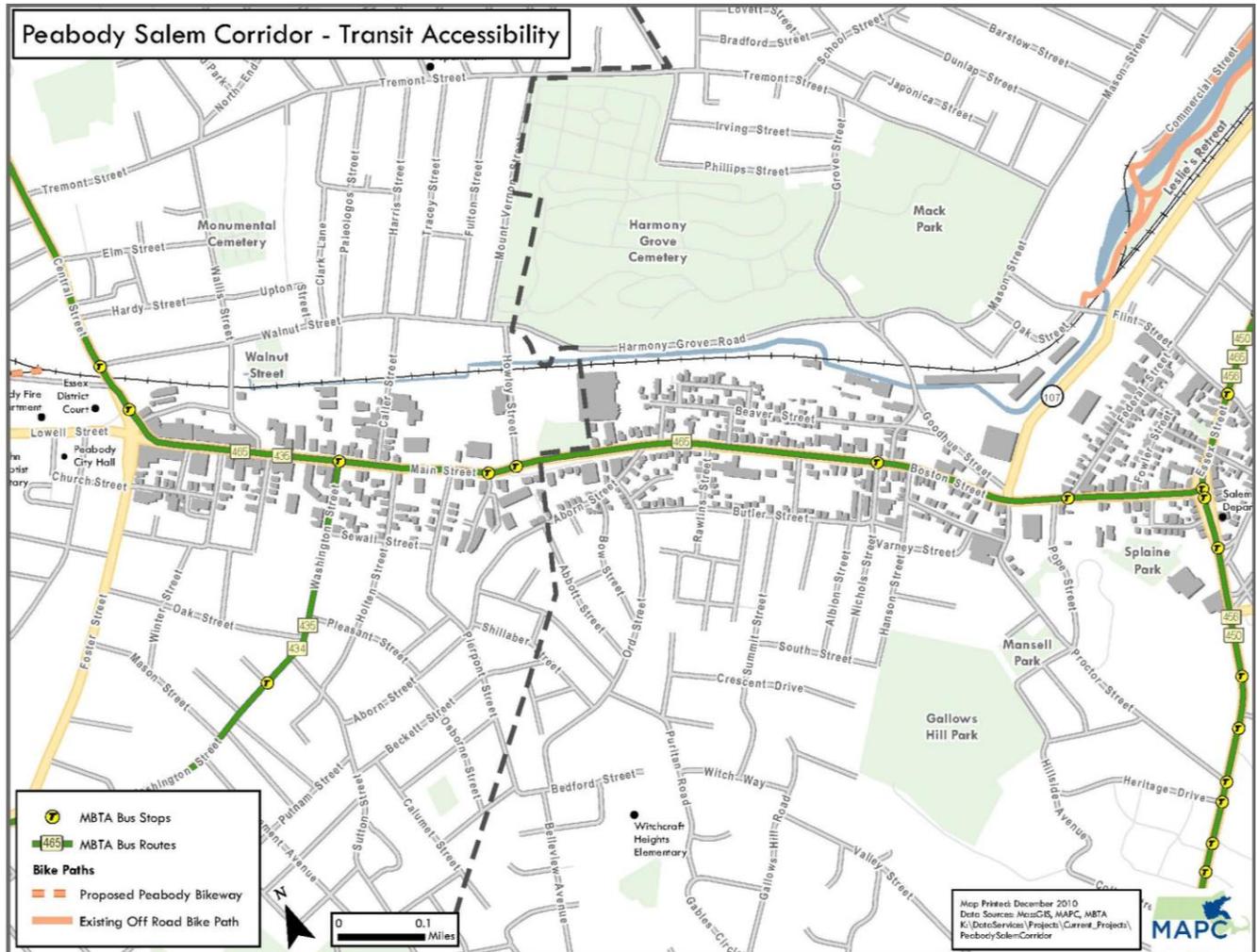


Figure 6-Transit Accessibility

There were no bus stop amenities observed on the corridor. Signs were observed to bus stop locations but there were no benches, shelters, schedules or other accommodations for passengers waiting for the scheduled service.

Truck Traffic

Based on observations and input from stakeholders, there is a considerable amount of truck traffic on Main Street and Boston Street. The mixture of truck types included delivery trucks, dump trucks and tractor trailers. The trucks were observed to have impacts on traffic flow due to their low acceleration after stopping, turning movements at intersections and the capacity they occupied

on the corridor. In addition, the volume of truck traffic on the corridor may be contributing to the deterioration of the roadway surface.



Tractor trailer heading east on Boston Street

Streetscape

On Main Street in Peabody, there is an established streetscape with coordinated elements. There are street trees, pedestrian scale lighting, light pole banners and trash cans. Peabody has also buried utility lines on Main Street between Central/Foster Street to Washington Street. There are no grass buffers on Main Street.

In Salem, Boston Street has a less consistent streetscape format. There are street trees but they only lighting is cobrahead roadway lighting. There are no trash cans. There are sections of Boston Street that have grass buffers, ranging for large tree pits to 30' - 40' grass strips.



Streetscape along Main Street



Streetscape along Boston Street

Corridor Action Plan

Land Use and Economic Development Recommendations

MAPC worked closely with Peabody and Salem planning staff to develop land use and economic development recommendations based on historic uses, field observations, community input and existing land use regulations within the Corridor. The proposed changes emphasize building on the work begun in this study by conducting a thorough zoning dimensional and use conformity analysis (primarily of the Boston Street end of the corridor), evaluating results and considering the adoption of zoning changes. The proposed changes are designed to make the Corridor more vibrant, livable and a better fit with the residential and mixed use areas adjacent to it.

Land Use Recommendations

Z1: Conduct a zoning conformance analysis of the Boston Street Corridor.

Conduct a zoning conformance analysis of the Boston Street Corridor from Howley to Essex Street to determine what percentage of existing uses are conforming and what percentage of existing structures are dimensionally conforming. Visual surveys of this part of the Corridor indicated multiple land uses that have evolved over time along Boston Street, ranging from historic homes to auto body repair shops and drive through businesses. Some of these uses and buildings are probably not in conformance with present zoning and others would be made non-conforming under zoning if the area were rezoned. A thorough zoning conformance analysis could provide a baseline for the city to proceed from as it studies the Boston Street area and considers making changes.

Z2: Build on work begun in the Corridor Action Plan by assessing the current zoning within the Corridor. Hold a one day visioning charrette for the Boston Street end of the Corridor.

A charrette could incorporate the information gathered for the zoning conformance study and help Salem answer some of the following questions, uncover others, and help determine its strategy moving forward:

- What impacts does the current Business Highway zoning have on existing businesses and residents? How many are nonconforming now or would become so under a different type of zoning?
- What currently allowed principal and accessory uses are still relevant and necessary in the city's future vision of the Boston Street Corridor?
- What effects would incorporating State Route 127, one of the themes raised at Action Plan public meetings, into the Boston and Main Street Corridor have on area businesses and residents?

- How well do the current zoning and uses fit with Peabody’s mixed-use oriented Central Business District and pedestrian oriented planned re-configuration of Main Street from four lanes to three lanes?

Z3: Re-evaluate Boston Street Business Highway Zoning.

Salem should evaluate all data and community input gathered using the development of the Action Plan, zoning conformance study and charrette to help evaluate whether Business Highway remains the best choice for the Boston Street end of the Corridor, posing the following questions:

- Does Business Highway zoning support the future vision, quality of life, and economic development strategy desired for Boston Street and its surrounding neighborhoods?
- Would zoning changes incorporating mixed use, residential and neighborhood business uses would be a better fit for with the adjacent North River Canal Corridor Mixed Use District, Business Neighborhood and Residential Districts?
- What degree of non-conforming uses would be created by moving to different type of zoning?
- What are the anticipated impacts of new projects such as the Gateway Center on area neighborhoods under current zoning, as well as the eventual redevelopment of other sites such as the Flynntan parcel?

MAPC believes, based on its own observations and public input during this study, that closer analysis of the Boston Street section of the Corridor zoned Business Highway will lead to the conclusion that this area’s residents and businesses, and Salem itself, would benefit by moving towards zoning and economic development that is more oriented to existing residential uses, pedestrian, bike and neighborhood businesses, with a firm eye on achieving building design and landscaping in harmony with the Corridor’s long history of complementary homes and commercial uses.

To those ends, MAPC makes the following additional land use recommendations:

Z4: Consider requiring Site Plan Review by the Planning Board and a recommendation concerning design of the project by the Design Review Board of the Salem Redevelopment Authority for any proposed building or additions of any size, excluding the construction of a one or two-family home, within a newly created Boston Street Corridor Overlay District.

Under Section 8.4.16 of the [City of Salem Zoning Ordinance](#), Salem requires a recommendation from its Design Review Board for any proposed building, except for one or two-family homes, within the North River Canal Corridor (NRCC) Neighborhood Mixed Use District. This area abuts a portion of Boston Street. NRCC regulations, Section 8.4.15, also require Site Plan Review for the same structures. Following the same procedure for the Boston Street portion of the corridor currently zoned Business Highway would provide a uniform approach towards achieving sound neighborhood design practices both within the NRCC and in an important entrance gateway to the city.

If the city did not wish to have these standards apply to all of its Entrance Corridor Overlay Areas, as per the [Massachusetts Zoning Act, MGL 40A, Section 4, Zoning Districts](#), it would need to create a separate Boston Street Corridor Overlay District (BSCOD), governed by its own regulations, similar to the NRCC District. The new overlay district would include all land zoned for Business Highway along Boston Street.

Suggested language for Site Plan Review and Action on plans submitted to the Planning Board in the new BSCOD would be as follows:

Site Plan Review: Proposals for the BSCOD would follow the same criteria listed under *Section 8.4.15* of the City of Salem Zoning Ordinance for the NRCC, covering information on subsurface contamination, floodplain management, stormwater management and water/sewer distribution, if applicable.

Action on submitted plans by the Planning Board in the BSCOD: Proposals would follow the review criteria listed under as follows:

1. Action shall not be taken on any plan until it has received a recommendation from the Design Project Review Board of the Salem Redevelopment Authority concerning the design of the project. The design review board shall refer to the Urban Design Criteria when making their recommendation.
2. The project shall be designed to complement and harmonize with adjacent land uses (existing and proposed) with respect to architecture, scale, landscaping and screening.
3. Buildings shall use materials and details that are consistent with the architectural heritage of surrounding buildings. Building materials of brick, stone and wood are encouraged. Pre-cast concrete panels are discouraged.
4. Buildings shall be located in such a way to create presence on main corridor street edges.
5. Parking lots shall avoid large expanses that are unbroken by buildings or substantial landscaped areas.
6. Ground floor spaces in mixed use buildings should have lively, pedestrian friendly areas.
7. Buildings shall have a strong pedestrian connection to streets and/or pedestrian ways.
8. New façade elements on existing buildings shall use material and details that are consistent with the architectural heritage of the buildings on which they are located.
9. Parking facilities are to be located to the rear or side of the structures whenever physically feasible.
10. Traffic calming measures should be used to discourage cut through traffic in rear parking lots of any site.

Z5: Consider rezoning the Business Highway portion of the new Boston Street Corridor Overlay District to Business Neighborhood.

Many Corridor residents indicated they would like to see a mix of businesses designed to better mirror the existing One and Two Family Residential Zoning Districts and their corresponding pedestrian uses. MAPC believes that the North Street portion of the Entrance Corridor Overlay District, with its mix of Single Family, Two Family and Business Neighborhood zoning offers a model more in keeping with comments received during the project and strong neighborhood design concepts. Like North Street, Boston Street also has a strong and historic residential core. Shifting to Business Neighborhood Zoning from Business Highway could help revitalize the Boston Street Corridor with well designed, aesthetically pleasing, and pedestrian oriented businesses more in keeping with the nearby residential Salem neighborhoods.

Business Neighborhood's 6,000 square foot minimum lot area requirement, versus 12,000 square feet required under Business Highway, its shallower front yard setback (15 feet versus 30 feet for Business Highway) and higher allowable lot area coverage (40 % versus 25% for Business Highway) are all more harmonious with the historic and pedestrian-friendly nature of the nearby one, two and multi-family neighborhoods. Neighborhoods like Boston Street, with its existing urban residential core, tend to lose their sense of enclosure and safety if front setbacks are too deep and lot coverage is designed more with parking requirements in mind than pedestrian safety and comfort. Shorter setbacks also increase the chance of success for area shops by offering direct access to the sidewalk in front of the business.



Shallow setbacks: shop at 244 Essex Street, Salem

Z6: Consider amending Business Neighborhood to allow, By Right or Special Permit, Dwelling Units Above First Floor Retail, Personal Service or Office Use.

At present, only the Central Development district allows for the by-right use of a dwelling unit above first floor retail, personal service or office use. Allowing dwelling units in the city's Business Neighborhood areas would help to provide consistent customers for Boston Street neighborhood businesses, as well as other Business Neighborhood areas such as the North Street, Essex Street and Bridge Street neighborhoods. Properly sited, additional residential units on upper floors can

help build or keep an identity for the neighborhood as a great place to live and shop. Visual surveys indicated that there are a number of pre-existing mixed used buildings along Boston Street and North Street with residential uses located above first floor commercial uses and that many of these of buildings are historic in nature. Prudent allowance of well designed mixed use buildings along the Boston Street end of the Corridor would help re-establish its identity as a pedestrian oriented but commercially viable neighborhood more in keeping with its historic and aesthetically pleasing Salem roots.



Federal style mixed use building at 94 Boston Street

Z7: Consider increasing the current thirty foot maximum building height in Business Neighborhood to thirty-five feet or 3.5 stories.

The current height limit of thirty feet can lead to one story buildings that do not add to the Corridor’s historic foundation or fit well with the abutting and nearby residential neighborhoods and the new North River Canal Corridor Neighborhood Mixed Use District (NRCC). The maximum building heights for the Residential One Family (R1), Residential Two Family (R2), Residential Multi-Family (R3) and NRCC districts are thirty -five feet for R1 and R2, forty -five feet for R3 and fifty feet for the NRCC. In combination with short front yard setbacks, thoughtfully designed and well situated taller buildings can provide an important sense of enclosure along an urban corridor such as Boston Street. One story buildings often do not provide the essential “edge” needed in this kind of setting and are often more on the periphery of suburban or rural settings. A thirty-five foot height allowance will permit the construction of three-story buildings, a critical factor for creating mixed use buildings that often need at least two floors of residential use above first floor commercial to be financially viable.



Existing One-Story Commercial Use: Boston Street



Mashpee Commons Mixed Use: Mashpee, MA



Historic Mixed Use: 21 Front Street, Salem

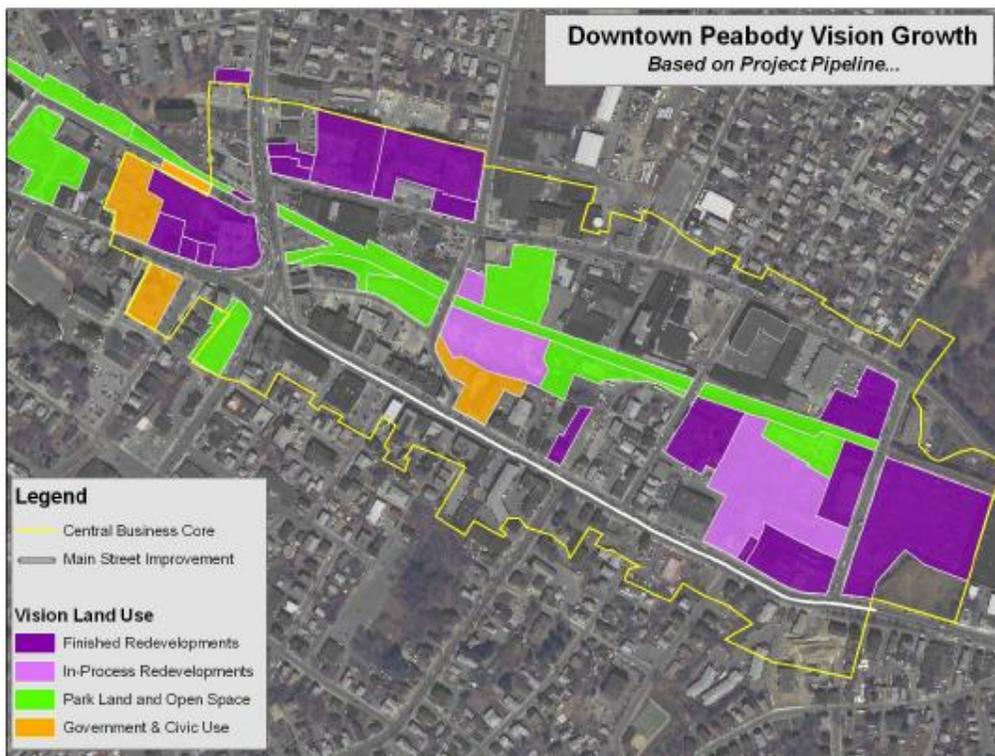
Z8: Consider strengthening the Entrance Corridor Overlay District parking regulations, Section 8.2, by adding the following language under Section 8.25 Parking Areas:

It is recommended that in Section 8.2, the following language be considered for addition to the ‘Parking Area’ regulations:

- Under existing “1.Landscaping”: No plant bed shall be less than 15 square feet and no dimension of such plant bed shall be less than 3 feet.
- Section 4: Parking in the ECOD District should be located to the rear or side of the building whenever physically feasible.

Z9: Complete adoption of new zoning for the Downtown District (B-C).

Peabody has been developing new zoning for its downtown area, including the Main Street portion of the Corridor over the last several years. New zoning language has been drafted and is currently being reviewed by the city concurrent to its efforts to alleviate the chronic flooding that has occurred within the downtown area. Additional upstream flood storage capacity and the enlargement of the culverts that carry the water under downtown Peabody are set to be added over the next two years. Peabody is also moving forward with plans to redesign Main Street’s current four lane traffic configuration to a two lane/center turning lane configuration with improved bicycle and pedestrian amenities. There have been significant redevelopments of several parcels along or close to Main Street and the city is also cleaning and converting a former Brownfield site at 45 Walnut Street, located within one block of Main Street, into a new neighborhood park.



Source: City of Peabody

The new downtown zoning will offer some of the following features and would support both the recommendations of this study and input from both Corridor residents and businesses on helping to make Main and Boston Streets, as well as their surrounding neighborhoods more vibrant and livable.

- The encouragement of a diverse mix of businesses, commercial, office, residential, governmental, institutional and entertainment and the discouragement of highway-oriented strip commercial uses;
- The use of site and design criteria within the B-C district for all residential buildings of 3 or more units, mixed use projects and non-residential projects;
- No additional parking spaces required for office, service, restaurants, theaters, museums, community uses and social clubs in the B-C District;
- Minimum and maximum parking standards established for all zoning districts;
- Shared parking encouraged in all business districts;
- Parking to be located to the rear and side yards if feasible for B-C projects;
- Bike racks required for all parking areas of 20 spaces or more along with provision of safe and convenient pedestrian access for new construction of buildings and parking areas;
- Building orientation, articulation, transparency, and pedestrian outdoor seating area requirements.

For more on information on proposed rezoning in Peabody, compare the proposed language next to the current zoning at [this link](#).

Z10: Study possible alternatives for remaining Industrial District zoned parcels along Main Street.

The rezoning of downtown Peabody will reduce the number of industrially zoned (I-L) parcels in the enlarged B-C district, but there will still be several industrial properties located in the downtown district adjacent to the Main Street end of the Corridor whose development could have a significant impact on land use and economic development in Peabody.



MAPC suggests that Peabody continue to look for long term opportunities for these industrial parcels to provide the following:

- open space and pedestrian and bike connectivity, possibly as part of the proposed Riverwalk;
- institutional uses such as a college satellite campus;
- public parking, either surface or parking garage;
- mixed use buildings.

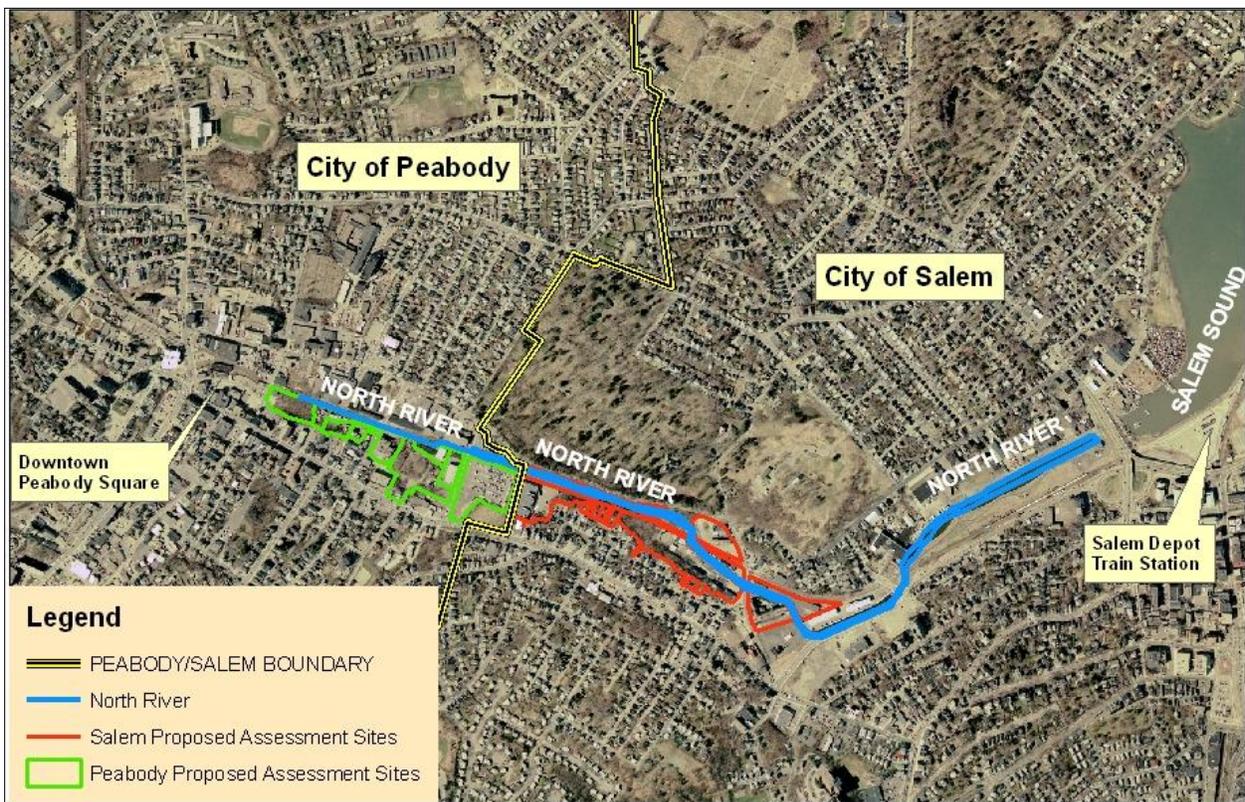
Specific examples of reuse could include the following properties:

- 166 Rear Main Street: flood plain restoration and open space preservation;
- 166 Main Street: commercial or retail mixed use or retail/restaurant development
- 13 Wallis Street: institutional use as tie-in to the existing Peabody Library, college satellite campus area or technical school campus

Economic Development Recommendations

ED1: Brownfields Inventory and Reuse Program. Create an inventory and status report of all known Brownfield sites within the Corridor. Develop a strategy to reach out to Brownfield owners within the North River corridor by listening to private sector needs, establishing end uses for Brownfields, brokering communications with state and federal agencies, and providing information on public and private financing options.

Peabody and Salem are collaborating with MAPC on a [three year EPA grant](#) to assess former industrial sites (Brownfields) within the North River Corridor, most within a few blocks of the Main Street/Boston Street Corridor. Assessment work has begun at 45 Walnut Street in Peabody and at Furlong Park in Salem, with both areas slated to become parks once cleanup is completed. Reuse of these sites is a critical economic development issue for both cities and also involves flood management planning and mitigation as all of the sites are located within North River flood plain area.



Source: City of Peabody

Successful Brownfields revitalization often includes key strategies such as:

- Connecting Brownfields reuse with community revitalization projects. See revitalization as a community and economic development opportunity that includes an environmental challenge.

- *Identifying an end use upfront.* Begin with the end in mind by identifying end uses for Brownfields prior to beginning remediation.
- *Establishing early citizen involvement.* Develop community involvement and consensus as soon as possible.
- *Engaging the private sector and helping to reduce its risk.* Most Brownfields are revitalized by the private sector with private financing. Municipalities with Brownfields can help private redevelopment by understanding its needs, fostering communication and outreach to Brownfield owners and potential investors and helping to facilitate private sector strategies.
- The Town of Framingham has also received Brownfields assessment grants from EPA. The Division of Community and Economic Development has developed a program to facilitate the redevelopment of Brownfields sites in the Town of Framingham. For more information see the town's [Brownfield Redevelopment](#) webpage.
- For more information on how to create an effective Brownfields revitalization program see the document [Unlocking Brownfields: Keys to Community Revitalization](#) from the NALGEP (National Association of Local Government Environmental Professionals).

ED2: Establish a Corridor Economic Development Committee

An Economic Development Committee is needed to organize and advocate for revitalization of the Corridor. Members should represent a broad cross-section of public and private interests within the Corridor with civic, municipal, business, nonprofit and residential representation. For more information, see the document [“Organizing for Economic Development; Models and Options”](#) published by the Massachusetts Department of Housing and Community Development.

ED3: Create a Corridor Neighborhood Economic Development Action Plan

Besides serving as an organizer and advocate for the Corridor, the leading task for the Economic Development Committee should be to create a Corridor Economic Development Action Plan. The Plan could serve as a coordinating tool for planning, prioritizing and implementing economic development actions within the Corridor. The following measures should be included within the Action Plan:

A. Creating a joint survey of businesses and homeowners in the Corridor, using Reverse 911 calling for contact assistance, to identify key issues and open lines of communication. Many communities are now making use of Reverse 911 or CTY Connect type reverse look-up phone systems to contact area businesses and property owners with targeted surveys. Online survey resources such as Survey Monkey provide easy and affordable surveys that can yield the most current information and provide a great communication link to stakeholders in a specific area such as the Main and Boston Street Corridor.

A survey of business owners in the Corridor could include questions such as the following:

- How would you rate (excellent, good, fair, poor, unacceptable) the overall appearance and quality of the Corridor between Peabody Square and Essex Street?
 - How would you rate trees and landscaping, traffic island appearance, traffic timing and flow, pavement and curbing, sidewalks and pedestrian friendliness, municipal and directional signage, general upkeep and maintenance, bike access and safety?
 - How important (top, very important, can wait, unnecessary) are improvements to trees and landscaping, etc.
 - Do current vacancy rates have (great, some, little, no) effect on area businesses and on my business?
 - How long has your business been at its present location?
 - What best describes your business type?
 - How many employees do you currently have?
 - What's been the growth trend (rapid, some, flat, slow decline, sharp drop) for your business over the last 5 years?
 - Approximately how many square feet does your business occupy?
 - Would you be willing to provide a letter of support for a joint Public Works and Economic Development grant?
 - Ask for business contact information.

See [Survey Monkey](#) for more information on how to create and use effective online surveys.

B. Conducting a comprehensive Corridor market analysis.

A market analysis is needed to develop a complete picture of existing commercial conditions in the Corridor and to identify market opportunities.

- A market analysis is needed to develop a complete picture of existing commercial conditions in the Corridor and to identify market opportunities.
- Such an analysis involves a complete inventory of all businesses and commercial spaces to estimate economic activity across various commercial segments. An analysis of the surrounding neighborhood demographics provides an estimate of the purchasing power across those same segments. The result is a picture of the district's strengths as well as market "leakage"—segments with the highest potential to capture local purchasing power.

- The Economic Development Committee is the appropriate party to manage such a market analysis, which would be conducted by an economic development consultant. Funding should be sought from local banks or other major businesses and employers.

C. Beginning Corridor joint marketing actions.

- Joint marketing can help to attract more shoppers and encourage them to visit multiple merchants during a single visit.
- The marketing campaign could involve print or radio advertisements, advertising at the commuter rail station, or internet campaigns.
- The Economic Development Committee is an appropriate party to coordinate a joint marketing campaign, which would be funded by participating businesses.

D. Continuing storefront/façade improvement programs in both Salem and Peabody.

- A storefront/façade improvement program provides matching funds for property owners or tenant merchants who wish to make improvements such as new or improved windows, doors, signage, awnings, lighting, entryways, and other items.
- Both [Salem](#) and [Peabody](#) have façade improvement programs.

E. Organizing workshops and technical assistance programs for Corridor businesses.

F. Creating an overall marketing and branding strategy.

G. Investigating the possibility of creating a Boston/Main Street Corridor Business Improvement District.

- Business Improvement Districts (BIDs) are special districts in which property owners vote to initiate, manage and finance supplemental services above and beyond the baseline of services already provided by their local city or town governments. To finance these services a special assessment, or common area fee, is levied only on property within the district. The goal of a BID is to restore or promote business activity in targeted commercial areas.
- For more information on Business Improvement Districts, see the section on BIDs in the [MA Smart Growth/Smart Energy Toolkit](#).

Transportation Recommendations

Recommended transportation improvements for Main Street and Boston Street were prepared based on data collected, field observations and input from local officials and the public. The recommendations include proposed changes to the roadway cross-section, bicycle and pedestrian facilities, and transit accommodations. In addition, the recommendations propose potential improvements for green infrastructure on the corridor and site development for commercial properties. The focus of the recommendations is to enhance access and mobility for multiple modes of travel while building on a shared vision for a unified and attractive community corridor.

Recommendations are organized below according to improvement area (e.g., roadway, bicycle and pedestrian, etc.).

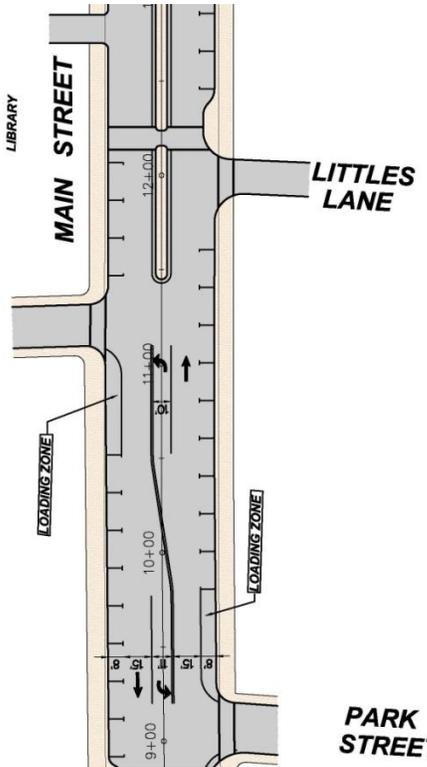
Roadway Recommendations

R 1: Advance a two lane cross-section with a center left turn lane/median and on-street parking.

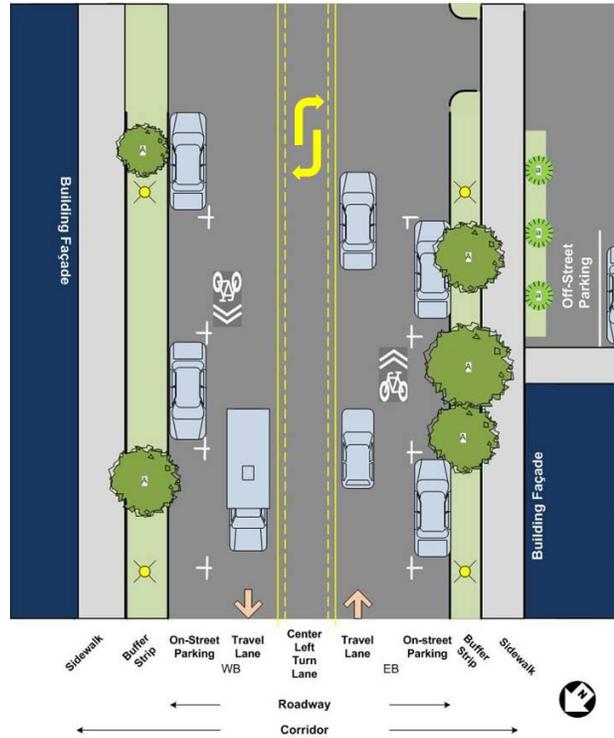
Peabody is currently pursuing the option of changing the existing four lane cross-section of Main Street to a two travel lane cross-section with a center left turn lane and median treatments. The proposed cross-section also retains existing on-street parking and provides curb extensions at intersections. It is recommended that this proposed roadway design be advanced in Peabody and continued in Salem, which currently has a two lane cross-section with on-street parking. In Salem, the existing travel lanes were noted to be very wide. The existing cross-section has the potential to include a center left turn lane and median treatments while maintaining the on-street parking. Curb extensions should also be installed in Salem at key pedestrian intersection crossing locations, such as Federal Street and Rawlins Street, and mid-block crossing locations, such as the crosswalk just west of Prospect Street.



Example of a three-lane cross-section in a town center



Section of proposed three-lane cross-section on Main Street in Peabody



Three-lane cross-section concept for Boston Street in Salem

R 2: Mill and resurface corridor.

The roadway surface along much of the corridor showed signs of deterioration. A poor roadway surface can adversely affect motor vehicle and bicycle travel, and can create additional noise for nearby residents. It is recommended that the surface be milled and new asphalt be installed along Boston Street and Main Street. It is also recommended that the towns explore possible changes to the roadway base course that would improve long-term performance relative to impacts from freight truck traffic.



Pavement deterioration near the intersection of Boston Street and Bridge Street

R 3: Reconfigure the intersection of Aborn Street and Boston Street.

Aborn Street is currently a stop-controlled roadway that intersects Boston Street at a skewed angle. This type of intersection can reduce sight lines for motorists and create longer distances to travel for turning vehicles. Both of these issues can increase the risk of crashes. It is recommended that Aborn Street be realigned to intersect with Boston Street closer to a 90 degree angle. The realignment could be achieved by extending the curb from the east side of the roadway and restriping the approach on Aborn Street. This change would also result in a reduced pedestrian crossing distance across Aborn Street. An additional improvement at this location would be replacing the existing set of flashing beacons on the north side of Boston Street with a set of beacons on a mast arm or cable that is suspended over the intersection.



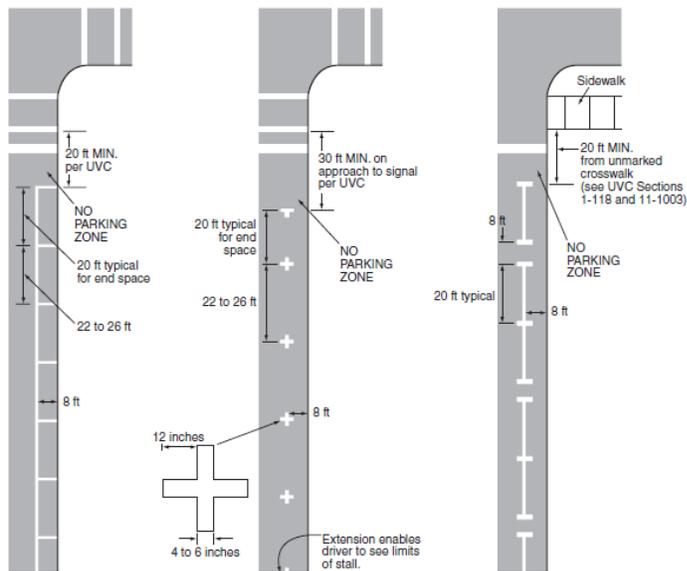
Existing Conditions at Boston Street and Aborn Street



Proposed new curb line at Boston Street and Aborn Street

R 4: Mark on-street parking spaces along Boston Street in Salem.

On-street parking is currently permitted in many locations on Boston Street. This parking serves businesses but is also essential for residents in the area who lack driveways for off-street parking. On-street locations are signed, but the spaces are either not marked or existing striping has faded. Based on field observations and input from residents, the lack of markings affects roadway delineation and results in motorists often using empty on-street parking locations as travel or passing lanes. It is recommended that permitted on-street parking locations be marked with either a solid line or with individual space markings. This will improve definition between travel lanes and parking spaces, and should assist in maximizing the amount of on-street space that can be used for parking.



Source: MUTCD, 2009 Edition. Figure 3B-21

R 5: Install Modern Roundabouts along Grove Street.

The intersection of Grove Street with Goodhue Street and Beaver Street is not well defined due to the size of the intersection and skewed angles on the roadway approaches. Similar conditions are present at the intersection of Grove Street with Harmony Grove and Mason Streets. Additionally, these two intersections serve as gateways to the Boston Street Corridor. To better define and enhance these locations, it is recommended that modern roundabouts be installed. A modern roundabout is defined by a circular shape and uses yield entry controls and geometric features to create lower traffic speeds. Modern roundabouts have been installed around the country and have demonstrated safety, operational, and other transportation benefits when compared to other intersection controls. The roundabouts should also enhance bicycle and pedestrian access from Boston Street to nearby Mack Park.



Examples of modern roundabouts

R 6: Reset curbing on Boston Street.

The curbing along Boston Street, especially on the north side between Goodhue Street and Grove Street, has become depressed. As a consequence there is poor definition of the roadside and vehicles park on the sidewalk. In wet weather conditions, the depressed curb may also be leading to flooding and allowing water to pond on the sidewalk. It is recommended that the curb be reset along the corridor where it has recessed to less than 4” - 6” above the grade of the roadway. This improvement could be performed as an individual project, but it is likely better accomplished as part of a roadway resurfacing or reconstruction project.



Section of Boston Street where curbing is depressed

R 7: Enhance roadway guide and regulatory signage.

Many existing street signs on Main Street and Boston Street were observed to be faded or in need of repair. This is compounded by the absence of some recommended regulatory and warning signs, such as pedestrian warning signs and speed limit signs. The signs in poor condition and missing signs can be addressed through an inventory of the corridor and development of a sign improvement program. In particular, the following are recommended:

- *Speed limit signs:* There are few locations where speed limit signs are present. Motorists are not provided information about appropriate travel speeds, especially in sections where the roadway transitions between different land use contexts. Speed limit signs should be installed after the major intersections within the Corridor, which are Main Street and Foster Street, Main Street and Washington Street, Main Street and Howley Street, Boston Street and Bridge Street, and Boston Street and Essex Street.
- *Overhead street signs:* Street signs on the corridor are primarily located on signs posts by the side of the road. As a result, signs are out of the line of sight of motorists and can be obscured by street trees and traffic equipment. It is recommended that new overhead street signage be installed on existing mast arms at key intersections, which include Main Street and Foster Street, Main Street and Washington Street, Boston Street and Bridge Street, and Boston Street and Essex Street.



Example of overhead guide signs on mast arms

- *Parking signs:* On-street parking locations on the corridor are very important for two reasons. In Peabody, and to some extent in Salem, parking locations provide spots for customers who are visiting local merchants. In Salem, there are concentrations of residences that lack off-street parking and require on-street spaces for overnight and other parking needs. Parking signs in each town should be reviewed for condition and placement. This review should determine if parking signs should be replaced or repositioned to better identify whether parking is permitted and applicable time constraints.

In Peabody, there are several off-street public parking locations such as the Courthouse lot by Central Street and the municipal lot by Foster Street; however, there are few signs that direct motorists to these locations. It is recommended that on Main Street, parking area guide signs be installed. Including the names of the specific parking facilities would assist motorist in choosing the lot that best fits their needs.

- *Destination guide signs:* There was much input from residents and stakeholders regarding guide signs on and in the vicinity of the corridor. The input included not only the condition of existing signs but also the potential for using guide signs to direct visitors and other motorists to the corridor.

As the Corridor is unified through transportation improvements and changes to the built form, it presents the opportunity for developing a cross-jurisdictional community wayfinding system. The use of consistent and coordinated guide sign system across the entire Corridor would aid navigation through the area and provide motorist with directions to important civic, cultural and commercial locations on Main and Boston Streets. It is anticipated that these signs would be located on the Corridor and major connecting roadways such as Lowell Street, Foster/Central Street, Washington Street, Bridge Street and Essex Street.

R 8: Enhance Striping and Markings for the Traveled Way

Most of the pavement striping and markings have faded along the corridor. In some cases this is due to excessive wear from vehicles and in other instances it is likely a result of winter weather conditions. To increase the longevity of pavement markings, it is recommended that new long-life epoxy materials be used for striping and markings applied on the corridor. As with curbing recommendation, this is an improvement that would best be accomplished as part of roadway resurfacing or reconstruction project.

R 9: Gateway Center Traffic Mitigation

A traffic mitigation plan was developed as part of the site plan review process for the proposed Gateway Center at the intersection of Boston and Bridge Street. Since the mitigation plan and related measures were developed prior to this study, there are no direct recommendations for this area. However, much public input was provided regarding the need for better pedestrian accommodations at the intersection of Boston and Bridge Streets. As the Gateway project begins, it is suggested that attention continue to be paid to the mitigation plan and especially the elements that address pedestrian accessibility such as pavement markings, push buttons and pedestrian signals, curb ramps and connecting sidewalks.

R 10: Truck traffic management

Truck traffic is evident on the Corridor based on field observations and input from both Peabody and Salem stakeholders. Although trucks require access to both Boston Street and Main Street, there are roadway changes that can be made to reduce the related impacts of the truck traffic. In particular, monitoring and maintaining the roadway on a regular basis should assist in addressing roadway surface impacts from trucks using the corridor. Also, implementing a roadway scheme as

proposed in Peabody and recommended for Salem, should help calm traffic and reduce conflicts with trucks and other roadway users, especially pedestrians and bicyclists.

Bicycle and Pedestrian Recommendations

BP 1: Install Pedestrian Refuge Islands on Boston Street.

As part of the proposed new roadway cross-section in Peabody, Main Street would include pedestrian refuge islands at marked pedestrian crossings. The refuge elements are at-grade cut-throughs of the proposed median and will allow a pedestrian the opportunity to cross the roadway in two movements if necessary. A similar application should be used in Salem as part of a roadway reconfiguration. There are several marked pedestrian crossings at unsignalized locations on Boston Street, noted in the **Mobility Context** section, which could be enhanced through the use of the refuge islands.



Example of a pedestrian refuge at intersection

BP 2: Enhance Crosswalk Markings

Crosswalks on the corridor are typically standard striped transverse lines with a painted blue fill. Standard stripe crosswalks do help define a pedestrian crossing location, but they are less visible to motorists than other types of crosswalk markings. Furthermore, since the standard stripes and paint are positioned perpendicular to the travel of motor vehicles, these markings are worn off quickly. It is recommended that crosswalk markings along the corridor be enhanced through the use of longitudinal striped markings. These markings are more visible to motorists and can be aligned with vehicle tire tracks so that they last longer and require less maintenance. Additionally, a striping pattern that communicates that the pedestrian phase is exclusive should also be investigated.



Example of longitudinal crosswalk markings



Source:

<http://www.brokencitylab.org/images/full/0828crosswalk500big.jpg>

BP 3: Install Shared Lane Markings and Bicycle Warning Signage along Shared Travel Lanes.

The concept plan for Main Street in Peabody proposes bicycle accommodations through wide travel lanes in locations where there is on-street parking and five-foot wide striped shoulders where parking is not permitted. It is recommended that shared lane pavement markings (SLMs) be installed on sections with wide travel lanes. The SLMs assist bicyclists with positioning in the travel lane, especially in relation to parked cars, and have been shown to reduce sidewalk and wrong-way riding. Also, the SLMs alert motorists to the presence of bicyclists along a corridor. Bicycle warning signs should be installed on the corridor immediately after major intersections and along the major intersecting routes just prior to the intersection with Main Street.

For Boston Street, either SLMs or striped bicycle lanes should be installed based upon the available existing pavement width. Based on the Salem Bicycle Circulation Master Plan, the recommendation is for the use of bicycle lanes on Boston Street. However, if a median or center left turn treatment is installed, the SLMs would be the recommended treatment on the resulting wide travel lanes. The application of either of these improvements will enhance bicycle accommodations on the corridor, and set up a spine for the development of an on-street bicycle network between the two cities.



Example of shared lane markings

BP 4: Install Bicycle Route Signage

A number of community and recreational destinations are located on or in the vicinity of the corridor. As with the suggested guide signage for motorists, bicycle route signage should be used along Boston Street and Main Street. The bicycle route signs should contain directional and destination information (e.g., ‘Salem T Station 1.5 Mi. →’) and be located by major intersections. Possible destinations include Downtown Peabody, Mack Park, and area schools.

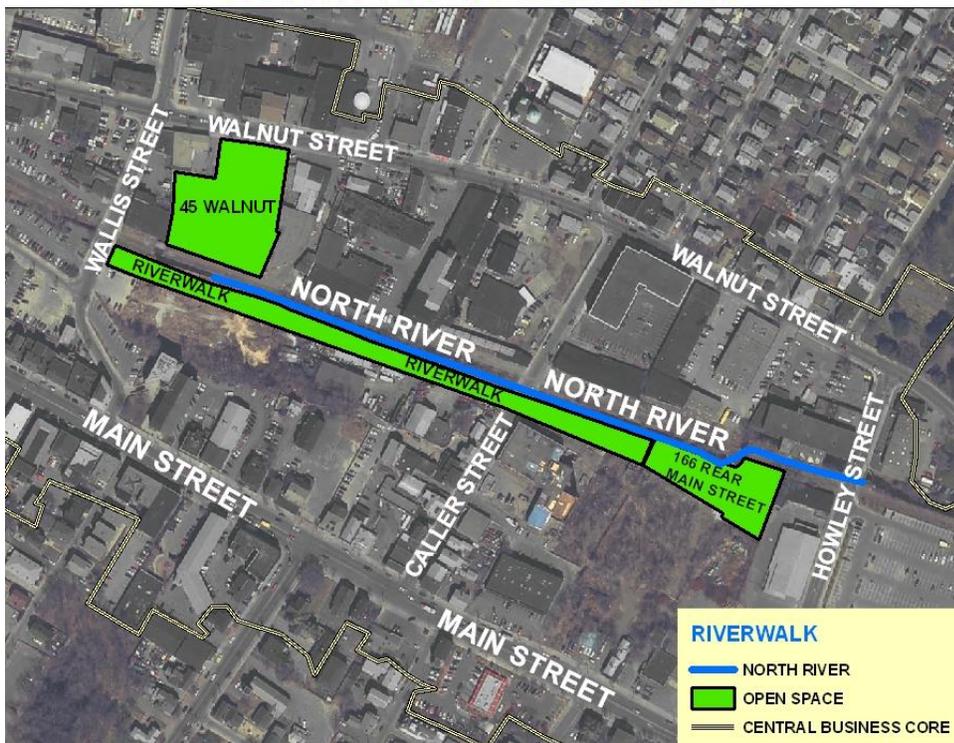


Example of bicycle route signage- Source: MUTCD, 2009 Edition. Figure 9B-4.

BP 5: Advance the proposed Riverwalk shared use path.

Among bicyclists and those interested in bicycling, there are varying levels of comfort with bicycling on road. Some bicyclists like traveling in traffic while others prefer to travel off-road. In the vicinity of the Main and Boston Streets corridor, there are two off-road paths: the Independence Greenway and Leslie’s Retreat Park. It is recommended that the Peabody Riverwalk be advanced to bridge the gap between these two existing facilities. The Riverwalk will likely involve easements across private properties, but as a redeveloping area, there may be opportunities in the near future for these easements. In particular, Brownfield sites along the North River are the focus of an ongoing EPA study and the Riverwalk may fit with redevelopment plans for these sites. When complete, the Peabody Riverwalk would be part of an off-road, east-west connection between Middleton and the Salem Depot rail station.

NORTH RIVER GREENWAY



Source: City of Peabody

BP 6: Install Bicycle Accommodations on Walnut Street/Harmony Grove/Mason Street.

Walnut Street, Harmony Grove Road, and Mason Street combine to form a parallel corridor to Main and Boston Streets. These roads have fewer commercial uses at present than the Main and Boston Street Corridor to the south. To increase the bicycle network in Peabody and Salem, it is recommended that bicycle accommodations be installed along Walnut Street, Harmony Grove Road and Mason Street. The accommodations, similar to those proposed in the Salem Bicycle Circulation Master Plan, could include SLMs at the western and eastern ends of the corridor and bicycle lanes or SLMs between Howley and Goodhue Street. This facility would pass adjacent to

Mack Park and could connect to the Salem Depot commuter station via Flint Street and Leslie's Retreat Park.



Example of bicycle lane striping and markings

BP 7: Improve Sidewalk on Boston Street, east of Nichols Street.

Although sidewalks on Boston Street are primarily concrete, there are sections of sidewalk east of Nichols Street that are asphalt paved. Asphalt can be used for sidewalk, but the application of asphalt sidewalks along this section is inconsistent with the rest of the corridor. In some cases the asphalt paving may be mistaken for a driveway or parking space, and could explain the observation of parked cars on the sidewalk by the Flynntan site. It is recommended that sidewalk in these locations be replaced with concrete sidewalk consistent with sidewalk located west of Nichols Street. Where width allows, installation of street trees and other amenities should be considered.

BP 8: Install Pedestrian Scale Lighting on Boston Street.

In Peabody, there are existing pedestrian scale streetlights. The streetlights illuminate the sidewalks and add character to the streetscape. It is recommended that similar scale lighting be added on Boston Street. The pedestrian scale lights would enhance the lighting provided by the existing cobra-style overhead lights which were observed to illuminate the roadway but leave roadside areas and sidewalks dark.



Pedestrian scale lighting on Main Street in Peabody

BP 9: Upgrade Pedestrian Signal Heads and Pedestrian Push Buttons.

With the exception of the Boston Street and Essex Street intersection, the existing pedestrian signal heads on the corridor are standard type. Similarly, the push buttons that actuate the pedestrian crossing phase are of an older style and provide no feedback to pedestrians. It is recommended that pedestrian signals be upgraded at the signalized intersections to countdown signal heads. These signal heads provide pedestrians with more information about available time for crossing and have been associated with reductions in pedestrian crashes. New pedestrian countdown signs should also be installed at Federal Street and Rawlins Street to alert pedestrians and motorists to these pedestrian-only signals.

The second part of this recommendation is to upgrade pedestrian push buttons so that they include an internal pilot light at a minimum. The pilot light will let pedestrians know that they have requested a crossing phase. Currently a pedestrian, especially one new to the Corridor, can be uncertain if the phase was activated or when it may occur. To go further with this measure, tactile or audio characteristics could be used. These features assist in making signals more accessible to those with visual or auditory disabilities.



Pedestrian countdown signal head



Pedestrian push button with internal pilot light

BP 10: Identify Potential Locations and Install Bicycle Racks.

Bicyclists were observed along the entire length of the Corridor. However, there were no bicycle racks noted either in front of businesses or on properties with off-street parking. It is recommended that bicycle racks be installed at regular intervals along Main Street and Boston Street where there are commercial activities. These racks could be U-style or be designed by local artists and specific to each town. MAPC and the Boston Metropolitan Planning Organization (MPO) have a program that enables 100% reimbursement of the cost of eligible bike parking equipment. For more information on this program, please visit:

<http://www.mapc.org/resources/regional-bike-parking>



Examples of U-Style bicycle racks

In addition, it is recommended that a bicycle parking ordinance, if not already enacted, be considered by Salem and Peabody. The ordinance would set a requirement for the inclusion of a bicycle racks relative to the amount of off-street vehicle parking spaces created.

BP 11: Install Additional Pedestrian Warning Signage.

Pedestrian warning signs used to indicate mid-block crossing locations were observed on Main Street and Boston Street. In most cases, these signs were faded or damaged and only present at the crossing location. To better alert motorists and pedestrians to these crossing locations, it is recommended that existing warning signs be replaced and new advance warning signs be installed.



Example of pedestrian (school) crossing warning sign used at and in advance of crossing location

BP 12: Utilize the Regional Bicycle Plan and the Regional Pedestrian Transportation Plan.

MAPC completed a Regional Bicycle Plan in 2007 and a Regional Pedestrian Transportation Plan in 2010. These plans are both resources for identifying a variety of concepts and applications to improve bicycle and pedestrian travel. There is even the potential to adopt the regional plan in order to strengthen local goals for integrating bicycle and pedestrian elements into municipal circulation plans. For more information on these regional plans, use the following website: <http://www.mapc.org/resources/ped-plan>.

Transit Recommendations

T 1: Install amenities at bus stops on Main Street and Boston Street.

Bus stops on Main Street and Boston Street do not have existing amenities such as benches, shelters or route information. In studies, it has been found that transit ridership can be enhanced by improving the waiting experience through amenity and information improvements. Therefore, it is recommended that options be explored for improving the stop locations on the corridor. There is potential space in both Salem and Peabody for the placement of benches in the furnishing zone along the sidewalks. There may even be enough room to provide shelters. Bus route and schedule information should also be provided as an attachment to existing sign poles.

T 2: Highlight transfer locations.

There are two locations on the corridor where multiple lines intersect: Main Street and Washington Street, and Boston Street and Essex Street. It is recommended that the installation of transit amenities be prioritized at these locations to highlight these possible transfers. Currently, there are no indications of these junction points and the possible destinations facilitated by making connections at these locations.



Intersection of Main Street and Washington Street

Green Infrastructure Recommendations

GI 1: Conduct a street tree inventory and replacement program.

Street trees are located along most of Main Street and Boston Street. Trees add to the visual quality of the street and provide ecological benefits. The trees slow rainfall, absorb stormwater, provide shading, and serve as habitat for wildlife. Some trees on the corridor were observed to be in poor condition and some sections were missing trees. It is recommended that an inventory be performed to identify existing healthy trees by type and size as well as the locations of unhealthy trees and missing trees. Based on observations, the sections between Rawlins Street and Prospect Street, Howley Street and Aborn Street, and Washington Street and Pierpont Street may be good starting points for review and replacement of trees.

As part of the replacement process, activities should follow recommended best practices for urban street tree plantings, especially for tree variety, soil substructure, and tree pit specifications.

GI 2: Investigate installation of bioretention features in proposed curb extensions.

In areas around the United States, cities are experimenting with the applications of ‘Green Streets’. Green Streets are streets that have been reconstructed to include low impact development (LID) features. The LID approach includes decentralized treatment of rainfall and infiltration techniques that minimize runoff and mimic natural hydrology. A particular application used on Green Streets is bioretention within curb extensions. This application retains stormwater and then allows for infiltration and treatment through the vegetation and soils in the curb extension. It is recommended that the use of bioretention in proposed curb extensions be investigated. Not only would this feature assist in addressing stormwater related impacts along the corridor, it would also contribute to the aesthetics, natural resources and snow storage space on the corridor.



Examples of bioretention features in curb extensions

For examples of Green Streets applications in Portland please see the website for the [City's Bureau of Environmental Services](#).

Site Access and Circulation Recommendations

SC 1: Encourage Joint Driveways and Cross-Access Easements.

There are multiple driveway access points on Main Street and Boston Street. While individual driveways may be needed for residential properties, commercial properties can share driveways and accommodate vehicle access across sites. These arrangements allow people to park once and visit multiple uses, and can allow more development on a site. It also reduces the number of times a motorist must enter and exit a roadway, activities which slow traffic flow and can lead to more vehicular conflicts. It is recommended that as part of the site plan review process joint driveway be encouraged and development sites be required to explore options for cross-access drives with adjacent sites.



Example where parking is in the rear with local roadways offer connections between off-street lots by Peabody Square

SC 2: Require Pedestrian Connections from Sites to Existing Sidewalk Network.

New commercial development on the corridor typically features off-street parking. This parking can be located on the sides or in front of the new buildings. While this parking may help motorists, residents walking to the sites occasionally lack a defined pedestrian connection to the front door of the business. It is recommended that site plan review require provision of a pedestrian walkway between the existing sidewalk network and the entrance for the business. The walkway can consist of uniform paving materials or be indicated through pavement markings. It should indicate a recommended path for pedestrians to access the business, especially through an off-street parking lot.



Building set back from the street with no connection to sidewalk network



Building set back from the street with a pedestrian path to connect with the sidewalk network

SAC3: Maintain Continuity of Sidewalks across Driveways

When driveways cross over existing sidewalks, the sidewalks are typically continuous in material and width. In some cases, however, driveways are paved across sidewalks, effectively displacing the sidewalk. It is recommended that as part of site plan review, new developments maintain or replace the sidewalks with the same material and width. Also, it is recommended that sidewalk elevation control the driveway design so the driveway entrance meets the sidewalk and does not cut through it.



Example of a continuous sidewalk across a driveway

Moving Forward with the Action Plan

The Peabody-Salem Corridor Concept Action Plan presents an opportunity for the inter-municipal planning and development of a unified corridor both in a community form context and a mobility context. There are many ways to move forward with the recommendations and proposed changes in this plan. Each could be advanced individually, as part of larger project or phased in over time according to a mutually agreed to schedule. To assist in the decision making, tables are presented with possible timelines for advancing the recommendations.

Advancing Land Use and Economic Development Recommendations

Land Use and Economic Recommendations are generally listed in priority order for each section. Apart from stand-alone activities such as the zoning study, holding a charrette, creating an economic development committee, and establishing the Brownfields inventory and reuse program, many of the recommendations could be performed concurrently. For example, Recommendations Z5 - Z10 could be taken up at the same time as could several elements of the Corridor Economic Development Plan under the guidance of the Corridor Economic Development Committee.



TABLE 4 Land Use and Economic Recommendations Proposed Time Periods

Recommendation	Short-term	Medium-Term	Long-Term
Z 1: Conduct a zoning conformance analysis of the Boston Street Corridor	✓		
Z 2: Hold a One Day Visioning Charrette for the Boston Street Portion of the Corridor	✓		
Z 3: Evaluate Boston Street Zoning	✓		
Z 4: Create new Boston Street Corridor Overlay District with Site Plan Review and Design Review Board Plan Approvals		✓	
Z 5: Rezone Business Highway section of Boston Street Corridor Overlay District to Business Neighborhood		✓	
Z6: Amend Business Neighborhood to Allow Dwelling Units Above First Floor Retail, Personal Service or Office Use		✓	
Z 7: Increase the Current Thirty Foot Maximum Building Height in Business Neighborhood to Thirty-five feet or 3.5 stories		✓	
Z8: Amend Entrance Corridor Overlay Parking Regulations		✓	
Z 9: Complete Adoption of New Zoning for the Downtown District (B-C)		✓	
Z 10: Study Uses for Main Street Area Industrial Properties			✓
ED 1: Create Brownfields Inventory and Reuse Program	✓		
ED 2: Establish a Corridor Economic Development Committee	✓		
ED 3 Create a Corridor Neighborhood Economic Development Action Plan:			
Conduct Corridor Survey	✓		
Perform Corridor Market Analysis		✓	

Recommendation	Short-term	Medium-Term	Long-Term
Develop Joint Marketing Strategy			✓
Continue Store Front Façade Programs	✓		
Hold Workshops and Provide Technical Assistance		✓	
Create Corridor Marketing and Branding Strategy			✓
Research Business Improvement District			✓

Advancing Transportation Recommendations

The proposed timelines periods consider each recommendation as an individual improvement. However, the recommendations could be advanced on a different timeline if they are combined into a more comprehensive project. For example, if the two lane cross-section is advanced, the proposed new crosswalk markings, the shared lane markings and the pedestrian refuge islands could be included in the project. In addition, by combining these recommendations, there may be opportunities for cost savings in design, construction and material costs.



TABLE 5 Mobility Recommendations Proposed Time Periods

Recommendation	Short-term	Medium-Term	Long-Term
R 1: Advance a two lane cross-section with a center left turn lane/median and on-street parking		✓	
R 2: Mill and resurface corridor		✓	
R 3: Reconfigure the intersection of Aborn Street and Boston Street		✓	
R 4: Mark on-street parking spaces along Boston Street in Salem	✓		
R 5: Install Modern Roundabouts along Grove Street			✓
R 6: Reset curbing on Boston Street		✓	
R 7: Enhance roadway guide and regulatory signage	✓		
R 8: Enhance Striping and Markings for the Traveled Way	✓		
R 9: Gateway Center Traffic Mitigation	✓		
R 10: Truck traffic management		✓	
BP 1: Install Pedestrian Refuge Islands on Boston Street			✓
BP 2: Enhance Crosswalk Markings	✓		
BP 3: Install Shared Lane Markings and Bicycle Warning Signage along Shared Travel Lanes		✓	
BP 4: Install Bicycle Route Signage	✓		
BP 5: Advance the proposed Riverwalk shared use path			✓
BP 6: Install bicycle accommodations on Walnut Street/Harmony Grove/Mason Street	✓		
BP 7: Improve sidewalk on Boston Street, east of Nichols Street		✓	
BP 8: Install pedestrian scale lighting on Boston Street			✓
BP 9: Upgrade pedestrian signal heads and pedestrian push buttons		✓	
BP 10: Identify potential locations and install bicycle racks	✓		

Recommendation	Short-term	Medium-Term	Long-Term
BP 11: Install additional pedestrian warning signage		✓	
BP 12: Utilize the Regional Bicycle Plan and the Regional Pedestrian Transportation Plan	✓		
T 1: Install amenities at bus stops on Main Street and Boston Street		✓	
T 2: Highlight transfer locations		✓	
GI 1: Conduct a street tree inventory and replacement program		✓	
GI 2: Investigate installation of bioretention features in proposed curb extensions		✓	
SC 1: Encourage joint driveways and cross-Access easements	✓		
SC 2: Require Pedestrian Connections from Sites to Existing Sidewalk Network	✓		
SAC3: Maintain continuity of sidewalks across driveways	✓		

Resources

There are several resources that could be used to put the recommendations into action. Local resources, both in terms of funding and staff time, will push the recommendations forward, but additional outside resources will likely be necessary for completing improvements. A listing of potential outside resources, which include planning toolkits and funding, is detailed below:

- Brownfields Revitalization- EPA's Brownfields Program provides direct funding for Brownfields assessment, cleanup, revolving loans, and environmental job training. To facilitate the leveraging of public resources, EPA's Brownfields Program collaborates with other EPA programs, other federal partners, and state agencies to identify and make available resources that can be used for Brownfields activities. In addition to direct Brownfields funding, EPA also provides technical information on Brownfields financing matters. http://www.epa.gov/brownfields/grant_info/index.htm
- Brownfields Revitalization: Smart Growth/Smart Energy Toolkit- Fostering the cleanup and re-use of contaminated properties is a priority for the state, and is consistent with the Commonwealth's [Sustainable Development Principles](#). This section of the Toolkit is a brief guide to Brownfield redevelopment and resources available from the Commonwealth.
- The Brownfields Support Team Initiative- brings together MassDEP, the Executive Office of Housing and Economic Development (EOHED), and MassDevelopment to help municipalities solve the problems that impede the redevelopment of contaminated properties. Other state and federal agencies will be brought into these teams depending on the needs of specific projects. These could include the Office of the Attorney General, MassBusiness, the Department of Revenue, and federal EPA and HUD. <http://www.mass.gov/dep/cleanup/brownfie.htm#intro>
- Downtown Revitalization- DHCD's Massachusetts Downtown Initiative (MDI) offers a range of services and assistance to communities seeking help on how to revitalize their downtowns. The primary mission of the MDI is to make downtown revitalization an integral part of community development in cities and towns across the Commonwealth. http://www.mass.gov/?pageID=ehedterminal&L=3&L0=Home&L1=Community+Development&L2=Community+Planning&sid=Ehed&b=terminalcontent&f=dhcd_cd_mdi_mdi&csid=Ehed
- MassWorks Infrastructure Program – The MassWorks Infrastructure Program provides grant funding for publicly owned infrastructure including, but not limited to sewers, utility extensions, streets, roads, curb-cuts, parking facilities, site preparation, demolition, pedestrian walkways, streetscape, and water treatment systems. The focus of the grant program is job creation and economic development. The Public Works Economic Development (PWED) grant, as well as five other grant sources, has been consolidated into this grant program.

<http://www.mass.gov/eohed/infrastructure>

- MPO Transportation Improvement Program (TIP) – The TIP program funds for the implementation of the Boston MPO’s long-range transportation plan. As a four year plan, it programs federal-aid funds for transit projects, and state and federal-aid funds for roadway projects.

http://www.ctps.org/bostonmpo/3_programs/2_tip/tip.html

- Low Impact Development Toolkit – Low Impact Development is a set of strategies that treat stormwater management as a site design problem, not an exercise in sizing storm drains and detention ponds. This publication is one component of the Massachusetts Low Impact Development Toolkit, produced by the Metropolitan Area Planning Council, in coordination with the I-495 MetroWestCorridor Partnership, and with financial support from United States Environmental Protection Agency.

<http://www.mapc.org/resources/low-impact-dev-toolkit>

- Mixed Use Zoning Toolkit – Mixed Use Zoning: A Planners Guide presents the fundamentals you need to plan a mixed use bylaw. A version of the guide for citizens is also available for download. This guide is based primarily on the experiences of five suburban communities that have prepared bylaws with assistance from the Metropolitan Area Planning Council (MAPC), supported by grants from the state’s Priority Development Fund.

<http://www.mapc.org/resources/mixed-use-zoning-toolkit>

- Sustainable Transportation: Parking Toolkit – This toolkit is designed to help local officials, developers, citizen board members, and advocates understand the sources of parking issues in their communities and identify potential solutions. The strategies outlined in the toolkit address a variety of situations and concerns in ways that save money, protect the environment, support local businesses, and encourage alternatives to driving.

<http://www.mapc.org/resources/parking-toolkit>