Woonsocket

Main Street Livability Plan

Prepared for:
The City of Woonsocket

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April 2013

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Acknowledgements

The City of Woonsocket Department of Planning and Development, led by City Planner Jennifer Siciliano, managed this Woonsocket Main Street Livability Plan. A 13-member Steering Committee provided guidance, feedback and direction throughout the planning process.

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I. Executive Summary

The Woonsocket Main Street Livability Plan (WMSLP) has been undertaken to help revitalize the Main Street area through coordinated streetscape and transportation improvements, changes to land use regulations, and enhanced bicycle and pedestrian amenities. It builds off of previous and ongoing planning efforts and examines the existing conditions in the Main Street area. Ultimately, this plan provides strategies to help strengthen the Main Street area as an arts and entertainment district that is inviting, safe, attractive and convenient for people to live, work and visit.

Key Recommendations

The following are key recommendations from this WMSLP. Chapter 4 provides further details.

Land Use and Zoning

The consultant team, Steering Committee and community has determined that the Main Street area should build off of its existing strengths and enhance the area as an arts and entertainment district.

- *Create a zoning overlay district along Main Street*: Establishing an overlay district along Main Street would allow the City of Woonsocket to permit additional uses in the Main Street area that promote arts and entertainment. The proposed Main Street Overlay District should allow, for example, live/work units and outdoor cafe seating. By creating an overlay district, any changes made within that district would not affect zoning outside of the Main Street area.
- *Adopt design guidelines*: The City should adopt design guidelines to help preserve and enhance the unique, historic character of the downtown, while encouraging a walkable, vibrant environment. Design guidelines can be an effective tool to help guide growth and ensure that changes and improvements in downtown Woonsocket are appropriate and context sensitive.
- *Allow interim uses on vacant or underutilized property*: Woonsocket should allow interim or temporary uses on vacant or underutilized property within the proposed overlay district. Temporary uses could include food trucks, pop-up retail, art and cultural installations, and farmers' markets. Such temporary uses would add vitality and activity to the Main Street area.
- *Establish a demolition delay regulation*: Historic preservation should be as part of an overall strategy to promote the Main Street area's cultural and historic heritage. One way to preserve historic buildings is to establish a demolition delay ordinance. Such an ordiance would provide time for a historic building to be protected instead of demolished.
- *Connect to and create additional open space near the river:* The City should work to improve access to and create additional open space near the Blackstone River. This should include establishing additional usable open space on City-owned property. The planned Blackstone River Bikeway project should particularly be leveraged to maximize access to the river and provide recreational opportunities nearby.

Traffic and Circulation

Downtown Woonsocket's narrow streets, complex intersections and demand for on-street parking pose constraints on the use of Woonsocket's roadways. In balancing these demands, the City has utilized a one-way traffic circulation system in much of the downtown. Traffic movement is, however, just one of many factors that must be taken into consideration when planning for and managing a street. Downtown streets are more than conduits for vehicles; they provide access to businesses, residential areas and local attractions.

- *Convert several streets from one-way to two-way*: To improve access to and within the downtown, several streets are proposed for conversion to two-way traffic. These include Main, Clinton, Social, High, Arnold and Federal streets. The conversion is expected to improve connectivity within the downtown and improve access to businesses. It would require other major changes, including the reconstruction of intersections, traffic signal changes and modifications to Monument Square.

- *Convert Truman Drive into a two-lane street:* Truman Drive is an underutilized asset that occupies valuable riverfront space. It should be converted from a four-lane divided highway to a traditional two-lane street by converting the east (northbound) side of the roadway to a linear park that would be traversed by the Blackstone River Trail. The west (southbound) side of the roadway would be converted to two-way traffic, accommodating existing and future traffic demands.

- *Develop a wayfinding and signage system*: While there is adequate parking in the downtown, it is poorly signed, and there is no wayfinding to assist in locating parking lots. A comprehensive wayfinding and signage system should be developed as a means of quickly and efficiently assisting drivers in locating and securing a parking spot. This system should build upon the 2010 plan, *Connecting our Heritage: A Wayfinding Master Plan for Downtown Woonsocket.*

Bicycle and Pedestrian Improvements

Of primary importance in the Main Street Livability Plan are roadway-related improvements that enhance safety and accessibility for pedestrians and bicyclists. A more pedestrian and bike-friendly downtown will also improve the aesthetic quality of downtown and encourage economic development.

- *Improve pedestrian environment along Main Street*: Enhanced crosswalks, curb ramps and bump outs will improve accessibility and safety for pedestrians. Additionally, wider sidewalks in strategic locations will provide space for cafe tables, landscaping, bike racks and benches.

- *Reconfigure Monument Square*: Currently crossing Main, Social or Blackstone Street near Monument Square on foot is difficult due to the intersection geometry and traffic flow. Enlarging the island that the monument sits on - along with bump outs and new high-visibility crosswalks - will improve pedestrian safety and accessibility at this busy intersection.

- *Provide additional pedestrian, bicycle and ADA connections to the river*: In the long-term, a switchback ramp can connect the proposed bikeway to the Court Street Bridge and provide a fully-accessible connection to the Blackstone River, downriver from the Bernon Street Bridge.

- *Improve bicycle connections into downtown*: Bike lanes along the Bernon Street Bridge and shared lane markings on the South Main Street Bridge will promote access from the adjacent neighborhoods to the Blackstone River Bikeway and to downtown in general.

II. Introduction

Study Overview

This planning study, the Woonsocket Main Street Livability Plan (WMSLP), has been undertaken to help revitalize the Main Street area through coordinated streetscape and transportation improvements, changes to land use regulations, and enhanced bicycle and pedestrian amenities. The Main Street area, the city's traditional downtown, was developed as the commercial, cultural and institutional center of Woonsocket and was once thriving with commercial and industrial establishments. Over time, however, the closure of local industries, construction of Truman Drive that bypasses Main Street, development of Diamond Hill Road and flight of families to the suburbs have contributed to the area's decline. Despite notable renovation projects and improvements since the 1990s, many vacant and underutilized properties remain.

This plan seeks to reinvigorate and reposition the historic Main Street area as a more livable, vibrant and pedestrian-friendly district. It examines the existing conditions of the area, including land use, zoning, parking, circulation, and bicycle and pedestrian facilities. This plan then presents three alternative scenarios for the future of the Main Street area and provides detailed strategies to advance the alternative preferred by the community. That preferred alternative, and the accompanying strategies, aim to strengthen the Main Street area as an arts and entertainment district that is inviting, safe, attractive and convenient for people to live, work and visit. Included within this plan are recommendations to improve the existing streetscape, traffic circulation, parking, bicycle and pedestrian facilities, and land use.

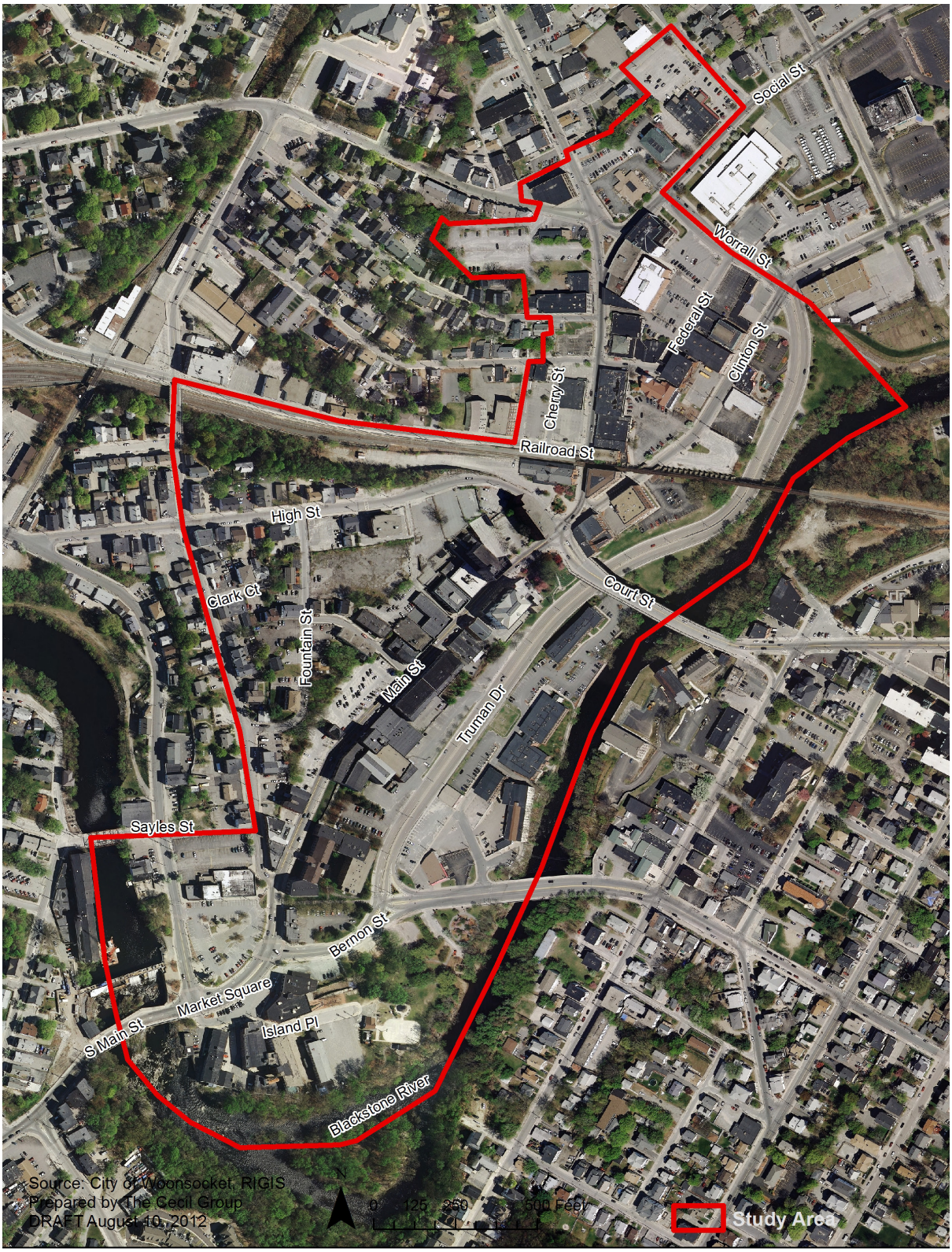
The WMSLP builds off of previous and ongoing planning efforts in the Main Street area. These have included the 2010 Wayfinding Master Plan that redesigns Truman Drive, a retail market study by Local Initiative Support Corporation, and Woonsocket Walks, a pedestrian plan for the City. This plan supports these efforts and provides a clear direction for revitalizing the Main Street area.

Woonsocket's Planning and Development Department managed this study, and a Steering Committee provided advice and guidance throughout the planning process. Funding for this plan came from a grant from the Federal Highway Administration Metropolitan Planning Organization allocated by Statewide Planning Program.

Study Area

The study area, shown in Figure 1, encompasses the city's traditional downtown that stretches along Main Street from Market Square to Monument Square. The study area is bounded by the Blackstone River on the east and south, and the northern portion extends to roughly the intersection of Social and Earle streets. Arnold Street is the western boundary of the study area.

Figure 1 Study Area



Note: All graphics in this report have been provided by the consultant team unless otherwise noted.

Roughly 82 acres in size, the study area consists of 212 properties. These include a broad range of uses, including commercial, residential, civic and institutional uses. City Hall, for example, is on Main Street near the center of the study area, and the Senior Services Inc. is on Social Street near the northern edge of the area. Many social service agencies are also located in the study area as are former mill buildings along the Blackstone River that have been redeveloped into housing.

Main Street, shown in Figure 2, and the bypass road Truman Drive are two-way streets that nearly stretch the entire north-south length of the study area. (Main Street becomes one way at the intersection with Clinton Street.) There are also several one-way streets such as High, Arnold and Clinton streets, which contribute to a somewhat restrictive circulation pattern.

Scattered throughout the study area is a significant amount of parking, both on and off-street spaces, and sidewalks line Main Street, aiding the pedestrian environment. The area's hilly topography, however, creates challenges to the pedestrian experience. Truman Drive also tends to separate the land nearest the Blackstone River from the central Main Street corridor.

The overall landscape of the Main Street area, including its density and relationship to the Blackstone River, reflect the city's economic and cultural heritage. By targeting this area for revitalization, this study seeks to reposition the downtown into a more livable, vibrant center of activity.

Figure 2 Main Street

Process

A consultant team led by The Cecil Group conducted a comprehensive planning process as part of this WMSLP. This included regular meetings of a 13-member Steering Committee. The Steering Committee provided input, advice and guidance throughout the planning process.

The consultant team reviewed previous and ongoing initiatives in the study area and analyzed existing conditions, including the land uses, vacancies, bicycle and pedestrian accommodations, circulation patterns and traffic volumes. Interviews with City officials and other stakeholders were conducted, and three public workshops were held to solicit broader input from the community. The presentation and results of the first public workshop, held in September 2012, are attached as Appendix A. The presentation from the second public workshop, held in December 2012, is also attached in Appendix A.

Based on input from the public and Steering Committee as well as the existing conditions analysis, the consultant team created three alternative scenarios for the future of the Main Street area. These included Alternative 1, which encourages the development of creative businesses; Alternative 2, which seeks to strengthen and grow art and entertainment uses; and Alternative 3, which focuses on creating a strong residential district. (These alternatives are described in greater detail in Appendix B.) The team also developed baseline recommendations to improve the general livability of the Main Street area and set the stage for revitalization and economic development.

Working with the Steering Committee, the consultant team selected a preferred alternative, Alternative 2, and presented it to the public for further feedback. The team refined this preferred alternative and developed detailed strategies to achieve this vision. All of the key information, findings, observations and recommendations made throughout the planning process have been incorporated into this plan.

This WMSLP - and its many recommendations - closely align with many of fhe goals and policies in the Woonsocket Comprehensive Plan (2011 Update).[1] Some of those goals and policies that this plan specifically supports and advances include the following:

- *Goal H-1, Policy H-1.3 - Support the development of live/work dwelling units in structures suitable to such living arrangements as a means of attracting micro-business enterprises and artists to Woonsocket*
- *Goal ED-5 - Support Woonsocket's Main Street as an econoimc heart of the City*
- *Goal OSR-3 - Increase visitation and the appropriate use of the city's parks, conservation areas, and open space lands*
- *Goal NCR-1, Policy NCR-1.3 - Value and prioritize Woonsocket's historic Main Street and Blackstone Riverfront as the central focus for historic preservation and revitalization*
- *Goal C-1, Policy C-1.2 - Provide adequate routing and signage within and through the City for resdients, visitors, and trucks*

1 Woonsocket Comprehensive Plan (2011 Update)

- *Goal C-1, Poilcy C-1.4 - Improve pedestrian safety and accommodation on city sidewalks and streets*
- *Goal C-1, Policy C-1.6 - Ensure adequate opportunities for alternative modes of transportation*
- *Goal C-1, Policy C-1.7 - Ensure that the circulation network supports economic development efforts*
- *Goals LU-1 - To allow for flexible development by increasing options available to property owners*
- *Goal LU-2, Policy LU-2.1 - Developing specific guidelines for Design Review to assist property owners in appropriate design*
- *Goal LU-6, Police LU-6.1 - Developing a revised Zoning Ordinance, consistent with the Goals of the Comprehensive Plan*

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III. Existing Conditions

Early in the planning process, the consultant team examined the existing conditions of the Main Street area to better understand the study area. This included an analysis of the area's land use, zoning, traffic circulation, pedestrian and bicycle access and facilities, and parking supply and demand. This research was aided by site visits, GIS mapping and inventories conducted Woonsocket Pedestrian Advisory Committee and students of RiverzEdge Art Project, a youth development program in Woonsocket.

Land Use and Activity Nodes

The study area centers around Main Street, which is oriented on a northeast-southwest axis, and it includes a diverse mix of uses as shown in Figure 3. The area is home to a residential neighborhood, a mixed-use Main Street corridor, redeveloped mill buildings, civic uses and the historic Woonsocket Depot, which was originally designed for the Providence and Worcester Railroad.

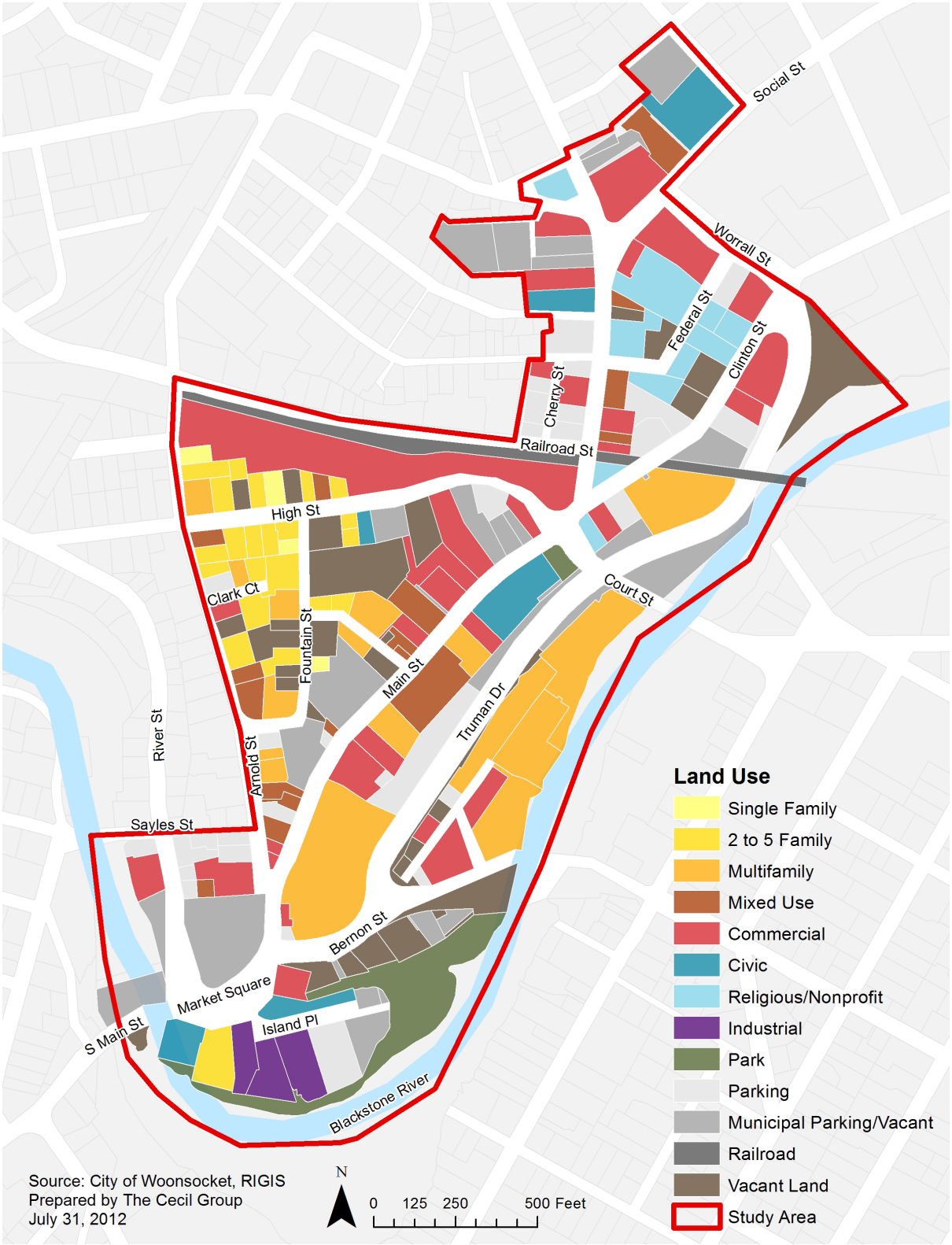
Housing makes up nearly a quarter of the 212 properties in the study area. As shown in Figure 3, a residential neighborhood with single-family to four-family dwellings is located around High and Arnold streets. This neighborhood includes many homes that are in need of repair. Crime and other undesirable activities have also been problems in the area as well as in other parts of the downtown, contributing to negative perceptions of the Main Street area.

Other types of housing - particularly multifamily dwellings, rooming houses, condominium complexes and mixed-use buildings - are situated near or along Main Street and the Blackstone River, which borders the study area on the east. For example, former mills along the Blackstone River and Truman Drive have been converted into loft-style condominium residences known as the Lofts at Allen Street. The redevelopment project includes studios, one-bedroom and two-bedroom units.[2]

In addition to housing, there are more than 30 commercial properties in the study area. Totaling roughly 14 acres, they include retail, offices and restaurants such as Vintage Restaurant in Market Square and Chan's Fine Oriental Dining - and Jazz and Blues Club - on Main Street north of the railroad. These restaurants help anchor the two activity nodes in the study area. Generally, these activity nodes center around Market Square at the southern end of the study area and Monument Square at the northern end (stretching toward Depot Square). Both squares include businesses that attract people beyond the work day, providing places to visit and eat in the evenings and on weekends.

2 The Lofts at Allen Street, http://allenstreetlofts.com/index.html

Figure 3 Land Use Map



Monument Square, for example, is home to the historic Stadium Theatre, a performing arts organization that hosts a wide variety of events such as live plays, musicals, concerts, movies and educational programs.[3] Theatre groups from Rhode Island and beyond often perform at the Stadium Theatre, which is shown in Figure 4. The theatre has been renovated and expanded in the last 15 years, and today, it draws people of all ages from throughout southern New England. Monument Square also includes Ciro's Tavern, Greater Woonsocket YMCA, Chan's Fine Oriental Dining and other destinations. Beacon Charter High School for the Arts on Main Street in Monument Square offers students the opportunity to study culinary, visual and theatre arts in addition to taking other courses.

Monument Square itself includes a triangular-shaped island that features a tall monument, plantings and a flagpole with the American flag. The monument, constructed of granite, honors Woonsocket residents who died in the Civil War, and atop the monument is a figure of a Civil War soldier.

At the other end of Main Street is Market Square, which is supported by a large municipal parking lot. This square was redeveloped in the 1990s and now features the Market Square Pavillion, a brick tower that provides information about Woonsocket's industrial past. The square serves as the southern gateway into the downtown and includes restaurants, businesses and organizations such as RiverzEdge Arts Project. Also located at the center of Market Square is the Museum of Work and Culture, which "tells the story of French Canadian immigrants who left Quebec to come to work in the mills and factories of Woonsocket."[4] It opened to the public in 1997.

Figure 4 Stadium Theatre

3 http://www.stadiumtheatre.com/
4 http://www.woonsocket.org/workandculture.htm

There are many other civic, religious and nonprofit uses in the study area, including the U.S. Post Office, First United Methodist Church, Theater Works Inc., The Family Resources Community Action, YMCA, Woonsocket Masonic Temple and Senior Services, Inc. Many of these are clustered in the northern area around Federal and Clinton streets. City Hall is located on Main Street just south of High and Court streets.

Directly to the north of City Hall is a small park called Main Street Mini Park. This municipal park next to the Court Street bridge provides access to Truman Drive via stairs. Another park, River Island Park, stretches along - and provides access to - the Blackstone River near Market Square. Shown in Figure 5, the park was constructed in 1993 and is nearly 3 acres in size. It represents the major recreational use in the study area. It boasts a gazebo, ice skating rink and canoe or kayak launch, though views of the river are somewhat limited from large swaths of the park.

Vacancies

While there are active uses throughout the study area, there are also numerous vacant properties and parking lots, many of which are owned by the City of Woonsocket. Specifically, there are nearly 100 properties that are either vacant lots or parking lots. These properties total roughly 35 acres, which is more than 40 percent of the study area properties' total acreage. Many of the vacant properties - some of which are being used for parking - are located near Market Square on Bernon Street and Island Place. Others are sprinkled throughout the residential neighborhood around High and Fountain streets as well as in the northern portion of the study area around Federal and Clinton streets.

Figure 5 River Island Park

These vacant properties detract from the vitality of the Main Street area, and their average values per square foot are among the lowest of all land use types in the study area. (Chart 1 shows average assessed value per square foot by land use. Mixed-use properties have the highest average assessed value per square foot of any use.)

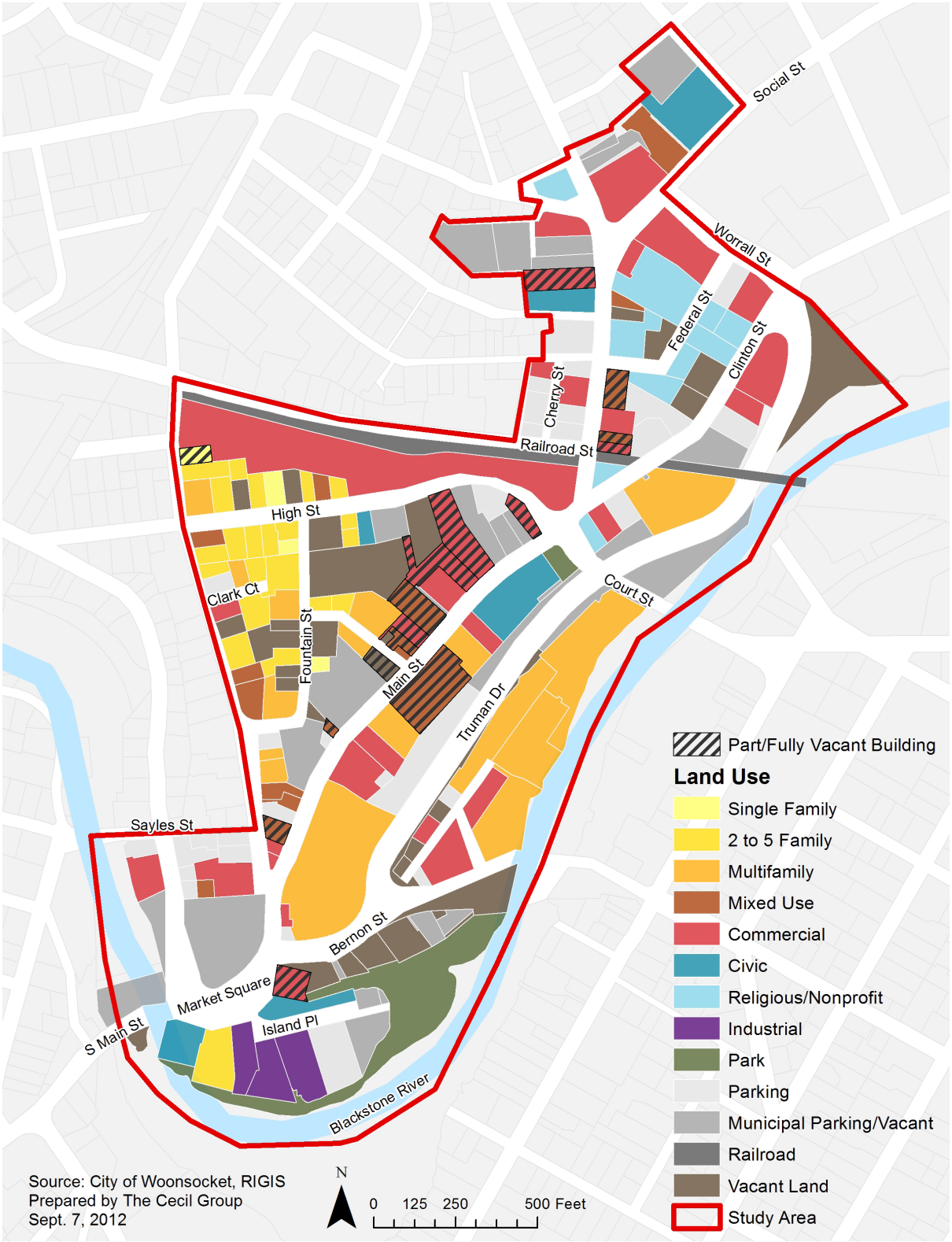
Along with vacant properties are vacant, partially vacant and underutilized buildings, which includes buildings that do not capture their full potential value. As shown in Figure 6, many of the commercial and mixed-use properties in the study area are fully or largely vacant, according to data provided by the City of Woonsocket. These buildings are largely located on Main Street between Market Square and Monument Square, further diminishing the attractiveness and vibrancy of the entire study area. Combined with the vacant and underutilized properties, these buildings create discontiniuties in the downtown. Vacancies were also cited throughout this planning process as one of the reasons people tend not to walk along Main Street and frequent businesses, preferring instead to only visit Market Square or Monument Square.

Chart 1 Assessed Value by Land Use

Land Use	Total Assessed Value	Average Assessed Value per Square Foot
Residential	$11.69 million	$26.97
Commercial	$13.15 million	$42.87
Mixed Use	$5.95 million	$67.84
Civic	$4.35 million	$42.62
Religious/Nonprofit	$6.62 million	$64.67
Industrial	$1.39 million	$23.56
Park	$115,300	$3.47
Parking	$863,600	$3.75
Railroad	$40,000	$1.89
Vacant	$2.2 million	$4.13
Other	NA	NA
Total	$46.37 million	

Source: GIS parcel data from the City of Woonsocket (tax data within the GIS data is from the City's Assessor)

Figure 6 Vacant Buildings



Zoning

The study area consists of five zoning districts as shown in Figure 7. The districts include R-4 High Density Single- and Multifamily Residential District in the neighborhood around High and Fountain streets, C-1 Urban Commercial District along the Main Street corridor, MU-1 Mixed Use Commercial/ Residential District on the western edge of the study area, MU-2 Mixed Use Industrial/Commercial District along the Blackstone River where there are former mill buildings, and PR-1 Active Public Recreation District along the Blackstone River.

Descriptions of the zoning districts from the City's Zoning Ordinance are provided below.[5]

- *"R-4. High Density Single- and Multifamily Residential District, but including customary incidental home occupations, public, semi-public and transient residential uses.*
- *C-1. Urban Commercial District, primarily for the conduct of retail trade, administrative and professional services, and service to the general public. Also permits upper story residential use.*
- *MU-I. Mixed Use Commercial/Residential District, primarily for the purpose of providing day-to-day convenient shopping needs, administrative and professional services, with an emphasis on daily necessities for the immediate residential area, provided that the gross floor area of each establishment shall not exceed three thousand (3,000) square feet, and the lot coverage shall not exceed thirty (30) percent.*
- *MU-2. Mixed Use Industrial/Commercial District, primarily for the conduct of manufacturing and other industrial uses which do not involve excessive smoke, odor, or noise; and/or the conduct of retail trade, administrative and professional services and service to the general public. Also permits accessory residential uses limited to persons conducting primary industrial or commercial uses.*
- *PR-1. Active Public Recreation District, for the preservation and enhancement of those areas within the city which are best suited for structured, active recreational activities, with or without accessory facilities."*

As shown in Chart 2, the majority of the properties - 115 of 212 - are in the C-1 zoning district. They make up nearly 60 percent of the study area properties' total acreage. Another 46 properties are in one of the two mixed-use zoning districts.

The Zoning Ordinance incentivizes nonresidential development along Main Street. Specifically, off-street parking is not required for nonresidential establishments in both the C-1 and MU-2 districts in the Main Street area from Market Square to Monument Square. The ordinance also says "any number or combination of permitted uses may be located on a lot" in Woonsocket as long as the uses comply with the Zoning Ordinance.[6] This allows for mixed-use buildings in the city, including the Main Street area where mixed-use development can encourage pedestrian activity, reduce automobile dependency, promote efficient use of land, encourage economic investment and promote high quality design.

The shape of development in the study area is largely influenced by the dimensional requirements in the Zoning Ordinance; many of these requirements are included in Chart 3. The requirements in the C-1

5 Woonsocket Zoning Ordinance, http://clerkshq.com/default.
6 Woonsocket Zoning Ordinance, http://clerkshq.com/default.

Figure 7 Zoning Map

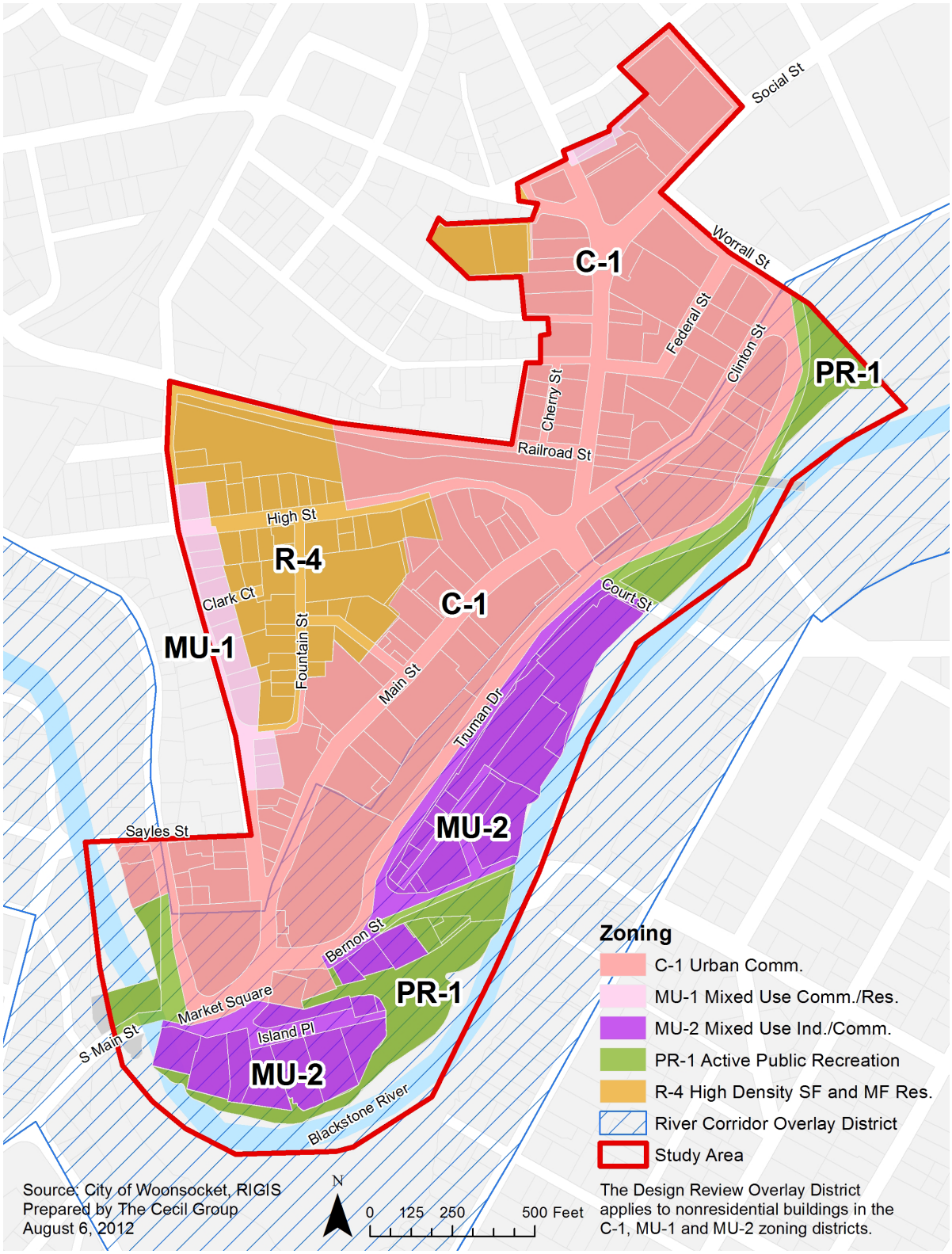


Chart 2 Zoning Districts in the Study Area

Zoning District	Number of Parcels	Total Acres	Percentage of Total Area of Parcels
C-1	115	47.4	58%
MU-1	20	6.3	8%
MU-2	26	11.3	14%
PR-1	9	4.6	6%
R-4	42	11.8	14%

Source: GIS parcel data from the City of Woonsocket

Chart 3 Dimensional Requirements

	Minimum						Maximum	
Zoning District	Lot Area (square feet)	Street Frontage (feet)	Floor Area Ratio	Front Setback (feet)	Side Setback (feet)	Rear Setback (feet)	Height (feet)	Lot Coverage (percent)
C-1	6,000		2.0	0	0 *(25 if abut residential use or zone)*	25	60 or 5 stories *(additional height if side setbacks increased)*	
MU-1	6,000 *(4,000 for each additional unit)*	60 *(10 for each additional unit)*		20 *(conform to or exceed setback of adjoining lots)*	10		30 *(up to 50 if side setbacks increased)*	35
MU-2	6,000		2.0	20	10	25	60 or 5 stories *(additional height allowed if side setbacks increased)*	
R-4	6,000 *(4,000 for each additional unit)*	60 *(10 for each additional dwelling unit)*		20 *(conform to or exceed setback of adjoining lots)*	10	25	30 *(up to 50 if side setbacks increased)*	35

Source: City of Woonsocket Zoning Ordinance

district, which covers the core Main Street area, align with that of a traditional New England downtown core, largely providing for the form of development sought in the area. For example, the minimum floor area ratio (FAR), the minimum side yard setback, the maximum height and the absence of a maximum lot coverage (see Chart 3 above) allow for relatively dense development, which contributes to a vibrant, walkable downtown. In fact, the maximum allowable height and number of stories allow for more development than currently exists in the Main Street District. Many existing buildings in the area are less than 5 stories as shown in Figure 8 on the following page. The restriction of residential units to upper stories also leaves the ground floor of buildings available for more active uses such as retail stores and restaurants.

The minimum front yard setback in the C-1 district is zero, which allows buildings on Main Street to be built up to the sidewalk. This helps create a pedestrian-friendly environment where on-street activity is encouraged. There is no maximum front yard setback in the C-1 district - or any district - however, which means buildings can be set far back from the front property line. This can detract from the pedestrian experience and can disrupt otherwise continuous building facades or a “street wall.” (This issue will be addressed in the recommendations for the Main Street area.)

The dimensional requirements for the MU-2 district, though very similar to the C-1 district, are less appropriate for the kind of pedestrian-friendly, vibrant downtown sought in Woonsocket. Mainly, the minimum front and side yard setbacks - 25 and 10 respectively - do not support an environment that is highly walkable and inviting and therefore should be changed. The dimensional requirements for the R-4 district align with the existing high-density residential neighborhood around High and Fountain streets. (The community has not expressed a strong desire to change the form of development in this neighborhood, though improvements related to building conditions and crime have been raised.)

Overlay Districts

There are two overlay districts in the study area, the River Corridor Overlay District and Design Review Overlay District. The River Corridor Overlay District, shown earlier in Figure 7, regulates properties along and near the Blackstone River. The Planning Board acts as the River Corridor Review Commission and evaluates the impact of development proposals on the river environment. Among the considerations are environmental impacts, traffic impacts and circulation, and availability of public access to the river.

The Design Review Overlay District regulates the design of commercial or mixed-use buildings - and substantial improvements - in the C-1, C-2, MU-1 and MU-2 zoning districts. Under the district, the Planning Board acts as the Design Review Commission and evaluates proposals with regard to architectural design, landscape design, traffic impacts, vusial quality, site design and other considerations. All developments in the overlay district are required to include 50 square feet of green space for every parking space required, and landscaped buffer areas are required along the perimeter of sites. The City Planner is working to create design guidelines for the overlay district.

Figure 8 Main Street Buildings

Transportation Network

Street Geometry and Operation

Downtown Woonsocket contains a mixture of roadway types reflecting the City's long history with origins in the industrial revolution. Main Street, typically the most physically prominent street in a downtown, is relatively narrow when compared to Truman Drive, a modern bypass of Main Street.

Street widths in the downtown (measured from curb to curb) vary from 16 feet wide at Sayles Street to 52 feet wide at Bernon Street, with most streets being 32 feet wide or less. Street width is the primary constraint on the use of a roadway; restricting the volume of traffic, truck traffic, the direction of traffic flow, and on-street parking. As a result of the narrow streets in Woonsocket's downtown, more than half of the streets within the study area are one-way in their operation. A one-way street network, while providing additional roadway space for on-street parking, results in a circulation pattern that is confusing to drivers and obstructs access to local businesses.

The critical threshold width for a two-way street with on-street parking is 30 feet. This cross-section allows two 11-feet wide travel lanes and one 8-feet wide parking lane. Several streets within the downtown currently designated for one-way operation meet this minimum criteria; this includes upper Main Street, Clinton Street, Social Street and High Street.

Chart 4 and Figure 9 on the following pages summarize various attributes of the streets downtown.

Functional Classification

A majority of the streets in Woonsocket's downtown are designated as collector or arterial roadways within the Functional Classification System. Functional classification is used in the planning and design of roadways and for the allocation of federal roadway improvement funds. Functional classification defines the role that any road or street should play in serving the flow of trips through a highway network.

Within Woonsocket's downtown, Social Street, upper Main Street, Clinton Street and Court Street are designated as principal arterials and are thus the primary routes for carrying traffic through the area. Several other streets are listed as minor arterials including lower Main Street, Truman Drive and Bernon Street. High Street, Railroad Street, and the upper segment of River Street are listed as collector roadways.

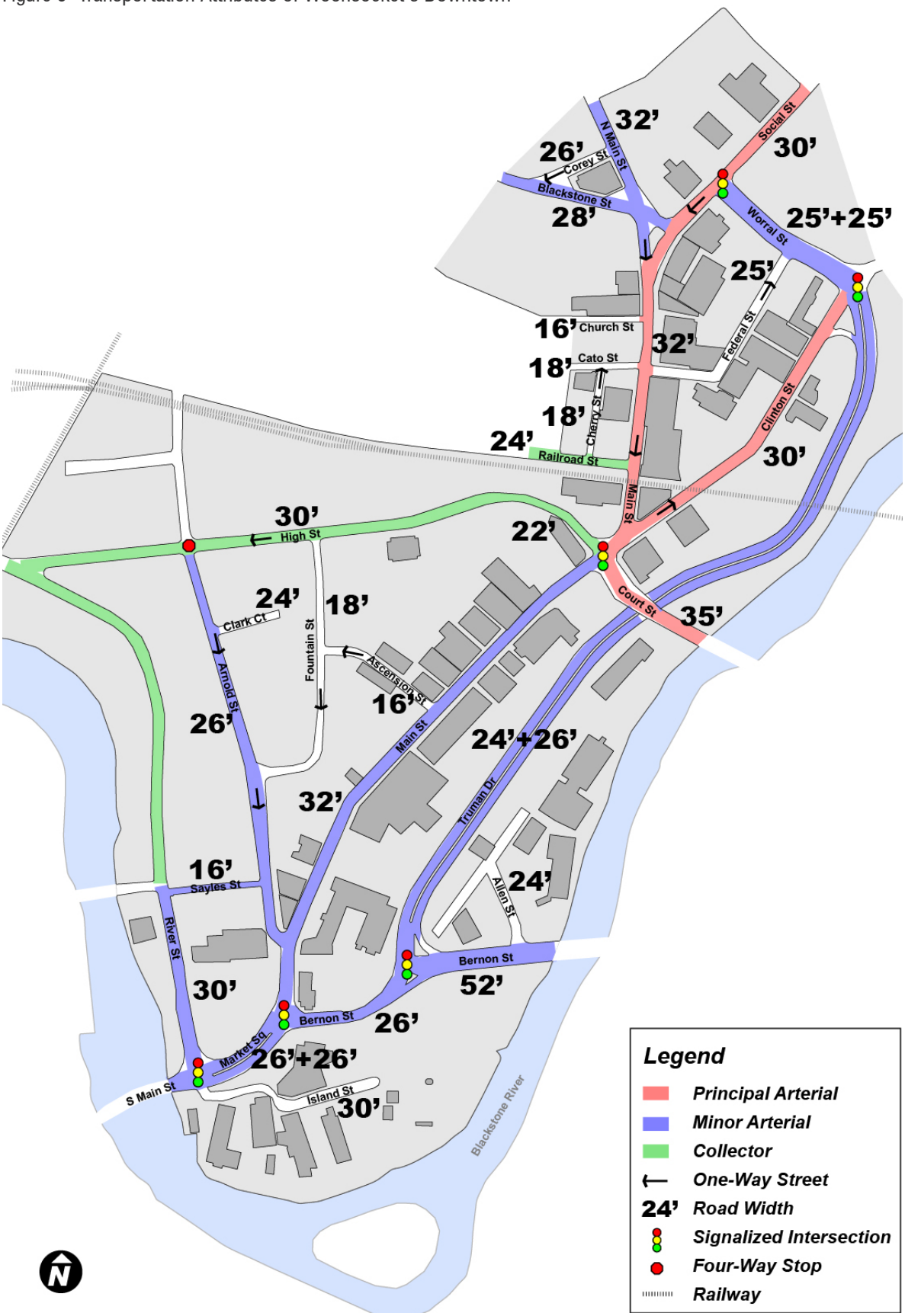
Traffic Control

Woonsocket's 2012 Comprehensive Plan notes that traffic signals within the City, including the downtown, are in urgent need of upgrading with many signals being 20 years old or older. These older devices typically limit the ability to adjust signal phasing and are not actuated by traffic. The City has recently submitted a federal funding request for the upgrading of all existing traffic signals within the City which are currently inadequate or substandard.

Chart 4 Downtown Woonsocket Streets and their Attributes

Street	Typical Width	One-Way	Functional Class	On-Street Parking
Allen Street	24’		Local	
Arnold Street	26’	x	Minor Arterial	x
Ascension Street	16’	x	Local	
Bernon Street	26’		Minor Arterial	
Blackstone Street	28’		Minor Arterial	x
Cato Street	18’		Local	
Cherry Street	18’	x	Local	
Church Street	16’		Local	
Clark Court	24’		Local	x
Clinton Street	30’	x	Principal Arterial	limited
Corey Street	26’	x	Local	x
Court Street	35’		Principal Arterial	
Federal Street	25’	x	Local	x
Fountain Street	18’	x	Local	x
High Street	30’	x	Collector	x
Island Street	30’		Local	x
Main Street	32’	x	Principal/Minor Arterial	x
Market Square	26’+26’		Minor Arterial	
North Main Street	32’		Minor Arterial	
Railroad Street	24’		Collector	
River Street	30’		Minor Arterial	x
Sayles Street	16’		Minor Arterial	
Social Street	30’	x	Principal Arterial	x
Truman Drive	24’+26’		Minor Arterial	
Worral Street	25’+25’		Minor Arterial	

Figure 9 Transportation Attributes of Woonsocket's Downtown



There are six signalized intersections in the study area located at the intersections of the following streets:

- Market Square/South Main Street/River Street
- Market Square/ Main Street/Bernon Street
- Truman Drive/Bernon Street
- Truman Drive/Worral Street/ Clinton Street
- Worral Street/Social Street
- Main Street/Court Street/High Street

Traffic Volume and Type

Traffic volume data is not available from the City or State for streets within the downtown area. Field observations have noted that traffic is light to moderate, even at peak periods. Traffic queues at traffic signals are not excessively long and the roadways have sufficient gaps in traffic to allow for adequate function of the roadway network.

Woonsocket City ordinance limits through freight traffic to numbered routes, thereby limiting the volume of through freight traffic in the downtown to Routes 104, 122 and 126 which are carried on upper Main, Social, High and Clinton Streets. Freight traffic is further constrained within the downtown by low and narrow railway trestles over both Main and Clinton Streets.

Traffic Counts

Traffic Counts were conducted on Main Street and Truman Drive from November 12 to November 26 2012 (see Appendix C). Automated count recorders were placed at Main Street south of Ascension Street and on both sides Truman Drive north of Bernon Street.

The average daily traffic (ADT) volume of Main Street was measured to be 7,681 vehicles per day. Peak traffic periods for Main Street were found to be between 9 a.m. and 5 p.m. Within that peak period, the time period between 11 a.m. and 1 p.m. was consistently the busiest time of day with greater than 500 vehicles per hour within that time frame. Weekend counts were found to be only marginally lower than weekday counts with Sunday (less than 6,200 ADT) the least travelled day of the week.

The average daily traffic volume of Truman Drive was measured to be 6,565 vehicles per day, approximately 1,000 less than Main Street. Peak traffic periods for Truman Drive were found to be between 7 a.m. and 5 p.m. Peak hourly traffic volumes vary within the peak period and does not exhibit the mid-day lunch hour rush exhibited by Main Street. Northbound traffic on Truman Drive is approximately twice that of southbound traffic, averaging 4,400 vehicles per day compared to an average of 2,200 vehicles per day for southbound traffic. This distinction is most notable during morning hours when southbound traffic is often less than 25 percent that of northbound traffic. As with Main Street, weekend counts were found to be only marginally lower than weekday counts with Sunday (less than 4,400 ADT) the least travelled day of the week.

Crash Analysis

Crash data was provided by the Woonsocket Police Department for a three year period from 2010-2012. Streets and intersections within the study area exceeding three crashes per year are included in this comparative analysis. Crash data for the three year period was averaged to provide an average annual crash volume.

The intersections exhibiting the highest crash incidents are Worrall Street at Clinton Street (8.7 crashes per year) and Main Street at Railroad Street (8.3 crashes per year). The Worrall and Clinton intersection is also shared by the terminus of Truman Drive. The elevated crash rate at this location is likely attributed to the size, complexity, and traffic volume through the intersection. The intersection of Main Street and Railroad Street, by comparison, is less complex, smaller and has less turning vehicles. Sight-line restrictions are likely a contributor to crashes at this location given the intersection's proximity to the railroad trestle and bus stop.

While outside the study area, the intersection of Clinton Street and Cumberland Street has an average of 24 crashes per year. The crash rate is nearly triple the highest crash rate observed within the study area and deserves the City's attention.

Chart 5 Average Crashes per Year (2010-2012)

Intersection	Average Crashes per Year
Arnold Street @ High Street	4.3
Main Street @ Arnold Street	3.7
Main Street @ High Street	7
Main Street @ Railroad Street	8.3
River Street @ Sayles Street	3.7
River Street @ South Main Street	5
Truman Drive @ Bernon Street	6
Truman Drive @ Clinton Street	4.3
Worrall Street @ Clinton Street	8.7
Worrall Street @ Social Street	6

Source: City of Woonsocket Police Department

Streets within the study area exhibiting the highest crash rates are summarized below. Streets with greater than 3 crashes per year have been included in this comparative analysis. It is important to note that both Social Street and Clinton Street have been included in this analysis although significant portions of these corridors extend beyond the study area. Of the streets summarized below, Clinton Street has the highest number of crashes per year (48). Second to Clinton Street is Main Street which has 28.7 crashes per year.

When corrected for the length of these roadways, Clinton Street has the highest crash rates (64 annual crashes per mile) with Main Street just below at 57.4 annual crashes per mile. An analysis of crash type

over the three year period revealed one fatality within the study area (pedestrian on Main Street). Injury crashes for the highest crash rate corridors (see table below) varied from 9% to 50% of all crashes. Truman Drive had the highest rate of injury crashes with half of all crashes resulting in an injury. This is likely attributed to the high traffic speeds on Truman Drive. When corrected for the length of the corridor, Main Street exhibits the highest annual injuries per mile (14.6) with Clinton Street comparable at 13.7 annual injury crashes per mile.

Notable in this analysis are the relatively low number of crashes on Social Street given the length of the corridor and the traffic volume that it carries. Annual crashes per mile (8.2) were the lowest of any street in the study area with greater than three crashes per year. Additionally, injury crashes per mile were very low (2.6); only High Street had a lower rate (1.0).

Chart 6 Crash Analysis

Street	**Length** (miles)	**Average Crashes per Year** (2010-2012)	**Annual Crashes per Mile**	**Injury Crashes per Year** (2010-2012)	**Annual Injury Crashes per Mile**	**Injury Crashes per Total Crashes**
Clinton Street	0.75	48	64	10.3	13.7	21%
High Street	0.3	3.3	11	0.3	1.0	9%
Main Street	0.5	28.7	57.4	7.3	14.6	25%
Social Street	0.65	5.3	8.2	1.7	2.6	32%
Truman Drive	0.45	8	17.8	4	8.9	50%
Worrall Street	0.1	3.7	37	1	10.0	27%

Planned and Programmed Roadway Improvements

Recently completed roadway improvements in the downtown include improvements to the Main Street area from Market Square to Monument Square. Improvements include the redesign of the traffic rotary at Monument Square and improvements to traffic flow along Main Street from Depot Square to Market Square. Main Street between Market Square and Depot Square was changed from one-way to two-way traffic as a way of improving circulation through the downtown area. This conversion has been largely supported by the community and is perceived as safe and effective.

Truman Drive has also been the subject of recent planning efforts, with the 2010 plan *Connecting our Heritage: A Wayfinding Master Plan for Downtown Woonsocket* proposing to reduce the number of traffic lanes on Truman Drive and replacing that space with a multi-use path and linear park system.

There are no planned or on-going Rhode Island Department of Transportation road projects in the study area.

Transit

There are two Rhode Island Public Transit Authority (RIPTA) bus routes that travel through Woonsocket's downtown as shown in Figure 10. Route 54 provides regional service to and from Providence with 38 departures to and 36 arrivals from Providence on weekdays between 5 a.m. and midnight. Weekend service is provided hourly from 6 a.m. to midnight on Saturday and 7 a.m. to midnight on Sundays and Holidays. Outbound buses to Woonsocket terminate on Clinton Street north of the rail line and inbound buses to Providence depart from Woonsocket Depot at the intersection of Main Street and High Street.

Route 87 provides intracity service within Woonsocket between neighborhoods such as Fairmount and Constitution Hill and to destinations such as downtown Woonsocket, Diamond Hill Road, the vocational and high school (when school is in session), Park Square, and Lincoln Mall. The eastbound service has 29 trips through the downtown on a weekday basis with the westbound service making 28 trips, travelling through the upper Main Street area of downtown. The Route 87 service runs between approximately 5:30 a.m. and 8 p.m. on weekdays, with a more limited schedule on weekends.

RIPTA also offers Route 281 Woonsocket Flex Service on weekdays, which provides to connections to RIPTA fixed route service. Passengers may also travel anywhere within the flex zone, which includes the entire City of Woonsocket and an extension to Walmart located off 146A in Dowling Village. Passengers must make reservations at least 48 hours in advance.

While Woonsocket has two separate rail lines traversing the downtown, there is no active passenger service available to Woonsocket. The 2009 Rhode Island Intrastate Commuter Rail Feasibility Study proposes a new intrastate service from Woonsocket to Providence and continuing to Warwick. Connections to MBTA service to Boston would be available in Pawtucket and Amtrak connections could be made in Providence (see Figure 11).

The proposed rail station in downtown Woonsocket would be at Woonsocket Depot, the site of the former rail station. The location of a station downtown would provide opportunities for transit-oriented development.

Figure 10 RIPTA's Woonsocket Bus Routes

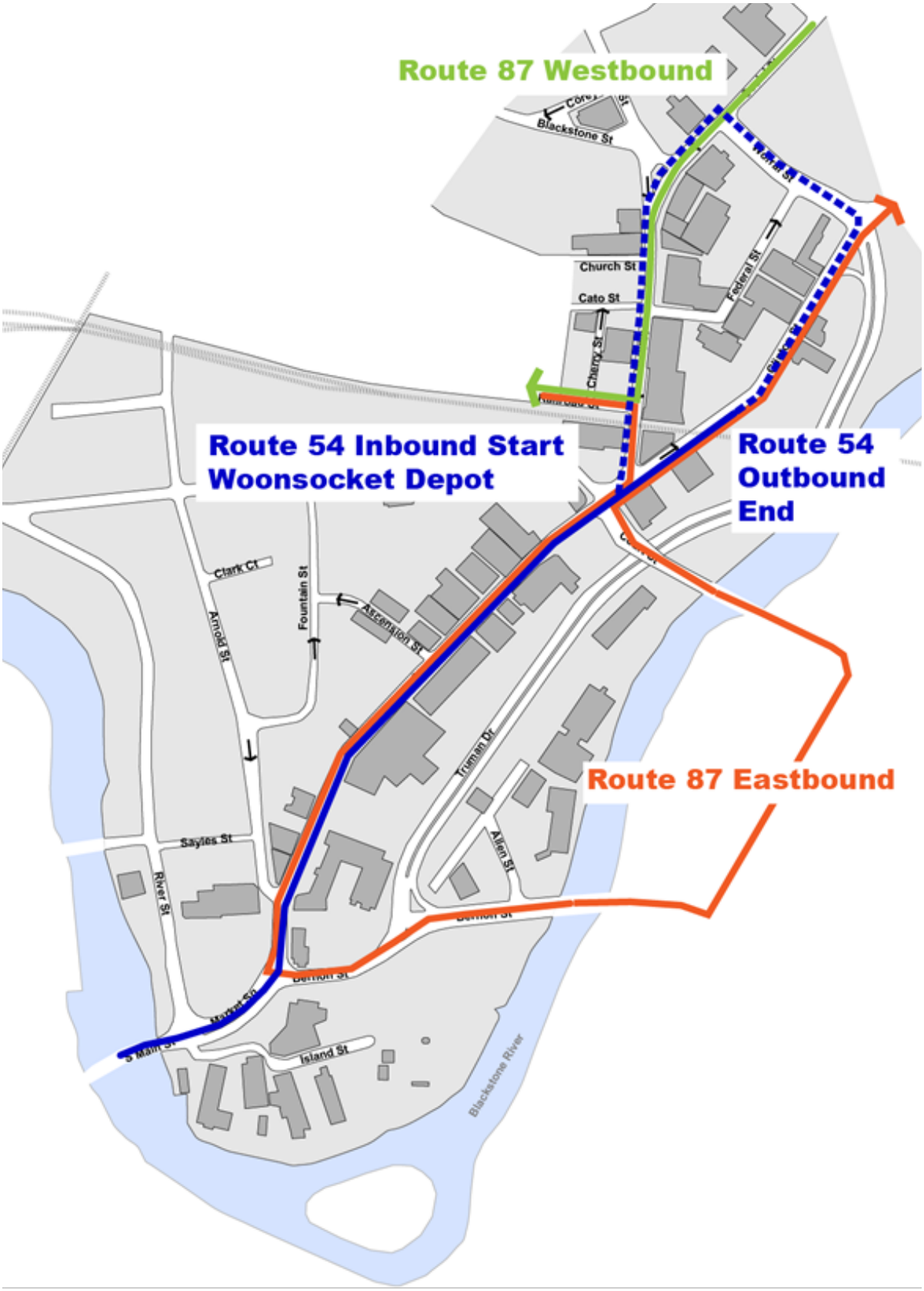


Figure 11 Proposed Intrastate Rail Service

Parking

The supply of parking in Downtown Woonsocket is abundant given the current level of usage. An assessment of peak weekday parking lot use indicated that of the approximately 1,700 parking spaces available in private and public lots (including dormant or unutilized lots), only 25% were utilized (see Figure 12). Weekend evening parking lot usage exhibited pronounced differences, with many municipal an private lots vacant or near vacant while lots near popular destinations such as The Stadium and at Market Square being near capacity (see Figure 13). This pattern suggests that destinations at Market Square and Monument Square, while being popular, do not exhaust the available supply of parking downtown. Additionally, of the approximately 300 on-street spaces, only 40% of spaces were utilized during the weekday, with less than 30% of spaces occupied during the weekend evening (see Figure 14). Parking availability within the downtown area, in terms of the number of spaces, is considered sufficient to meet existing and future needs.

Concerns regarding the availability of weekend evening parking are likely attributable to the desire for parking on premises or within a one- or two-minute walk of the destination. The perception of safety and

the quality of the pedestrian environment are likely factors in the willingness of patrons to park more than a couple of minutes' walk from their destination.

Field inspection of downtown's parking facilities revealed that both public and private lots are in need of improvement. Pavement condition, landscaping, lighting, and signage are lacking at many municipal and private lots. The City has recognized these deficiencies as evidenced by the following Downtown parking needs identified in the Comprehensive Plan:

- A program for the management of public parking facilities
- Upgrading surface conditions, lighting and security in existing municipal lots
- Improved signing of lots
- Increased enforcement of parking regulations
- Designation of long-term and short-term parking facilities

Figure 12 Public and Private Parking Lots and Weekday Usage

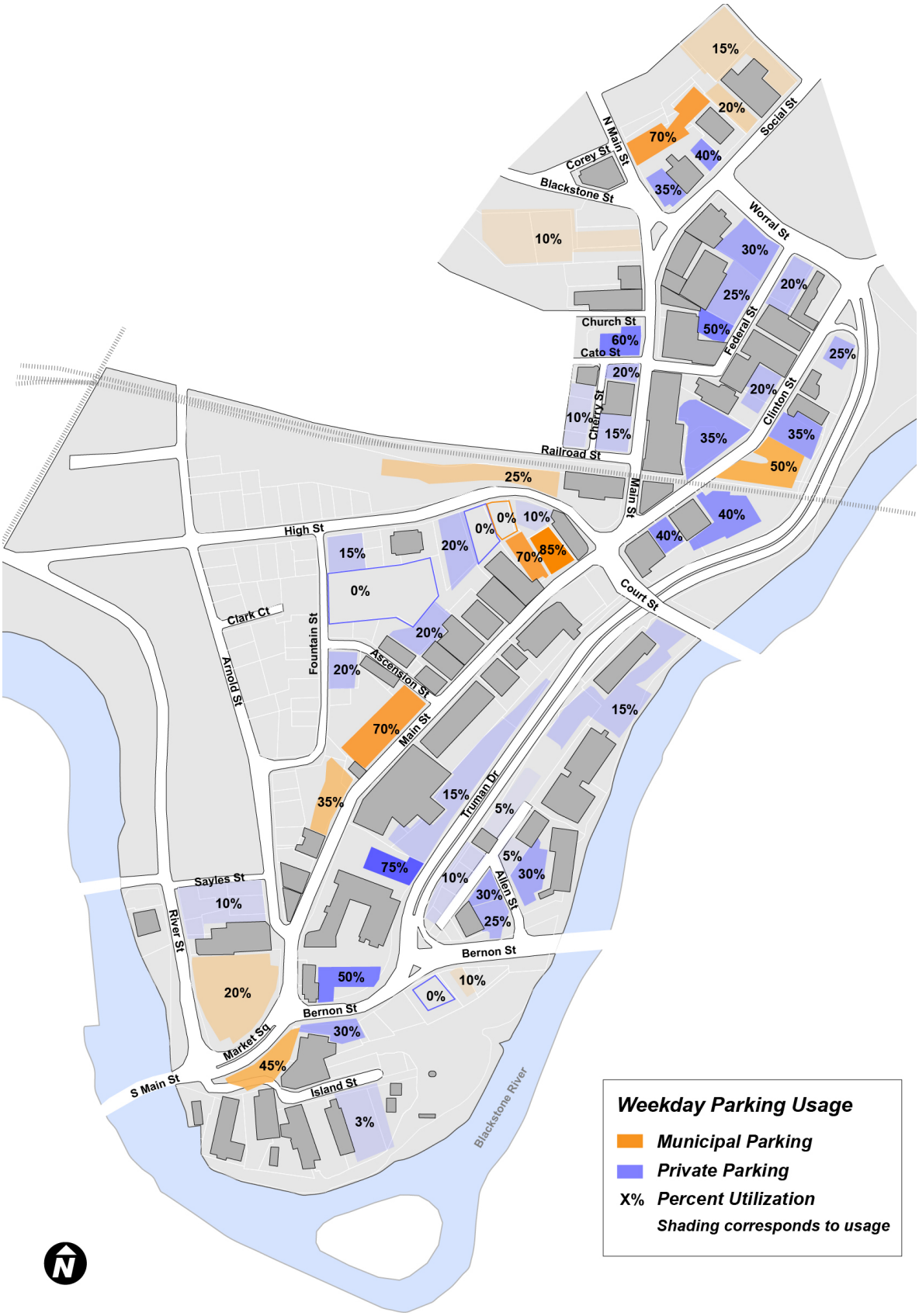


Figure 13 Public and Private Parking Lots and Weekend Evening Usage

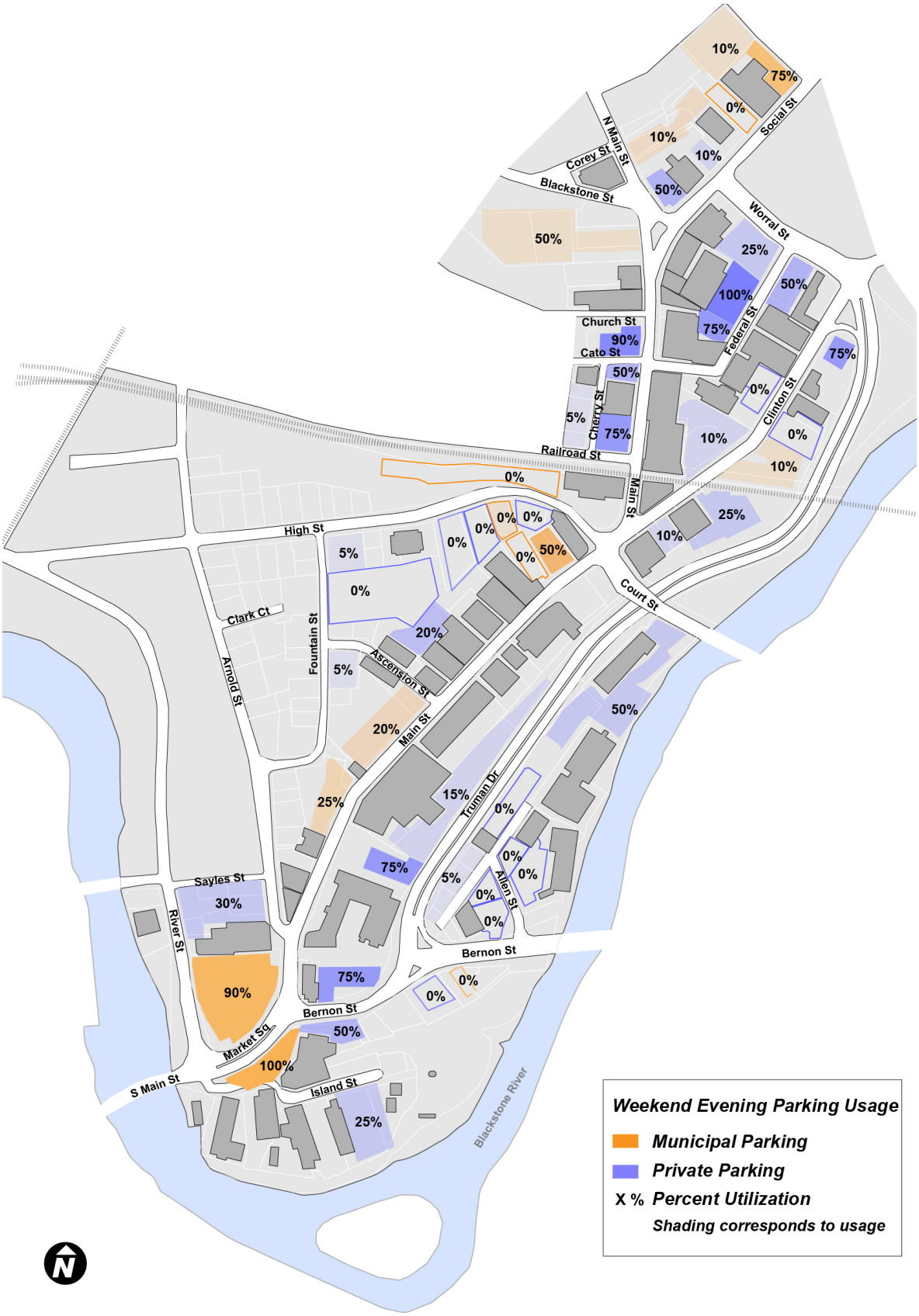


Figure 14 On-Street Parking Locations and Usage

Bicycle and Pedestrian Access and Facilities

The consultant team analyzed and mapped the bicycle and pedestrian infrastructure, network and travel patterns in the study area to better understand the existing conditions for people who travel by bike or by foot. The following are the team's findings

Inventory

The Inventory Map, shown in Figure 15, catalogs the locations and conditions of pedestrian and bicycle infrastructure within the study area, including sidewalks, crosswalks, and shared-use paths. In addition, the map shows the locations of bike racks and benches and the proposed Blackstone River Bikeway route. The curb-to-curb dimensions are called out on key streets, such as Truman Drive, Main Street, High Street, and the bridges entering the Main Street area.

While the majority of roadways within the study area have sidewalks, a few stretches of roadway have inadequate pedestrian facilities. In particular, along the north side of High Street sidewalks are deteriorating and are overgrown with vegetation and along Truman Drive, the sidewalks are narrow and there are no marked crossings for a half mile. A public stair connects the Truman Drive sidewalk up to Main Street Park. An additional set of stairs connects two parking lots on the north side of Main Street across from Main Street Park.

Currently, there are no designated on-street bike facilities through downtown Woonsocket. On-street bike facilities include either bike lanes or shared lane markings and signage. There is a path that is wide enough for pedestrian and cyclist travel (approximately 12-foot wide) connecting the lower end of Main Street to the intersection of Truman Drive and Bernon Street. The Blackstone River Bikeway, a regional trail that will eventually connect Providence and Worcester, is proposed to pass through the study area along the River. Bike racks are found in only a couple of locations within the study area – Market Square and the Main Street Park adjacent to the Woonsocket City Hall. In addition, benches are found in only a few locations – Riverside Island Park, across the street from Main Street Park, and at the bus stop on the east side of Main Street at Depot Square.

Gap Analysis

The Gap Analysis Map, shown in Figure 16, depicts gaps in the current bicycle and pedestrian network. These are categorized as spot gaps, connection gaps, and corridor gaps. The spot gaps consists of intersections in need of improvements. The connection gaps include missing sidewalks and the lack of connections between Main Street and Truman Drive. A corridor gap is created by the Truman Drive, which is considered a significant barrier due to the width of the street, the speed of traffic and the lack of crosswalks.

Multiple intersections within the study area are in need of modifications to improve conditions for pedestrians. Typically, improvements would include high-visibility crosswalks, modified geometry and shorter shortened pedestrian crossing distances. Also, at cross streets along Main Street, minor improvements such as high-visibility crosswalks would improve pedestrian safety. A couple intersections along Main Street are currently lacking crosswalks across Main Street.

Figure 15 Inventory Map

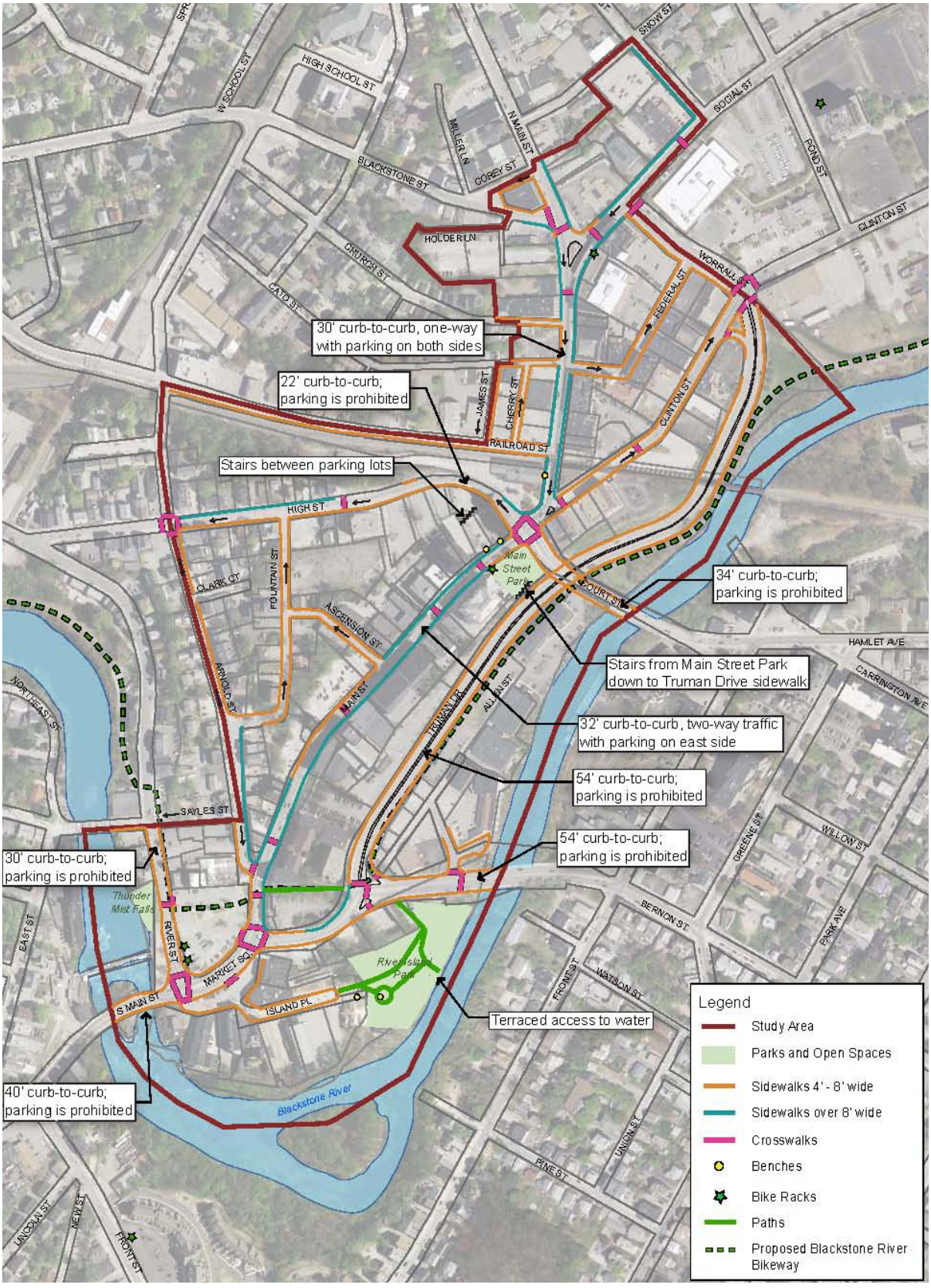
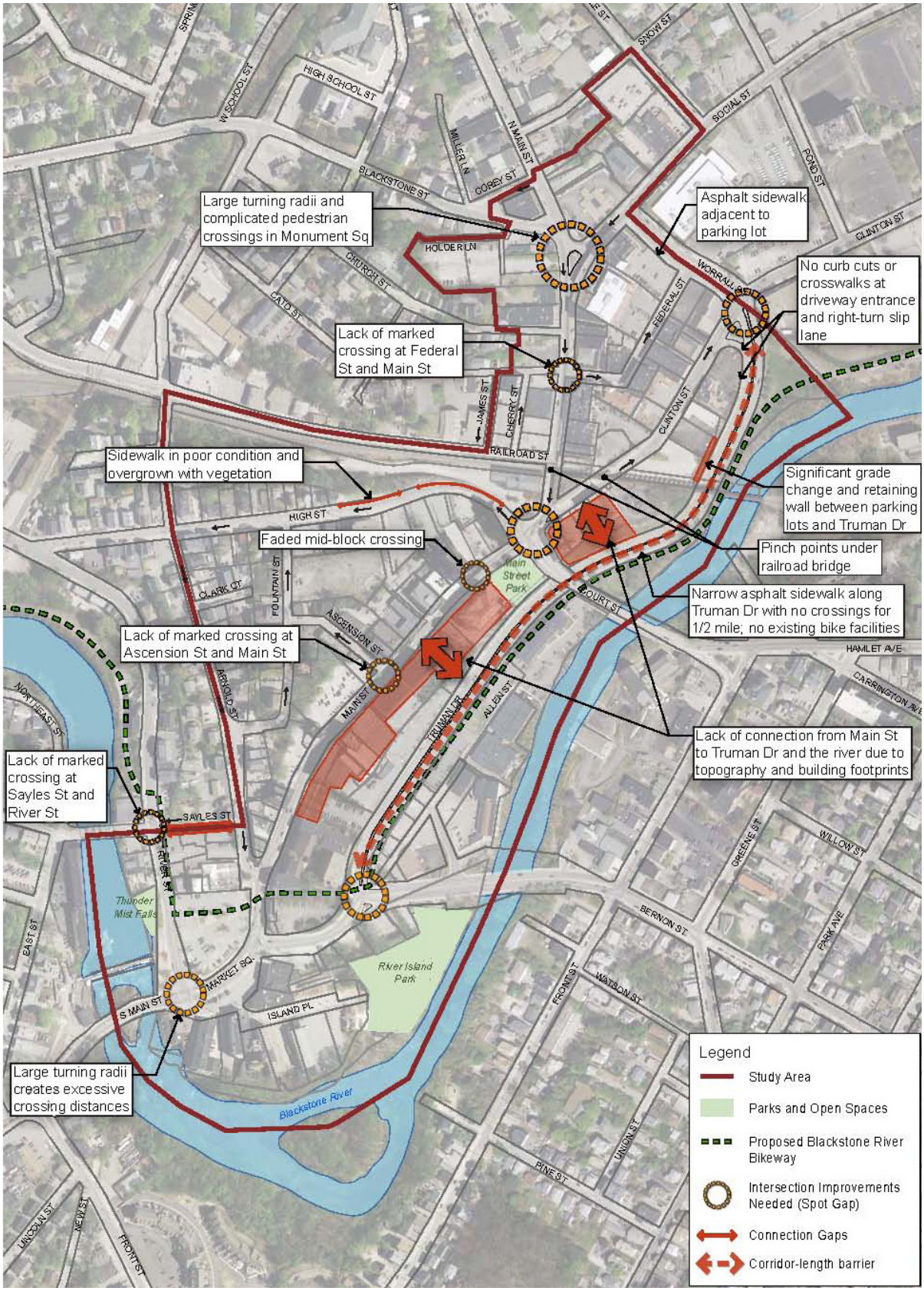


Figure 16 Gap Analysis Map



Topography and building footprints along the south side of Main Street are significant barriers between Main Street and Truman Drive/Blackstone River. A continuous stretch of buildings from Hanora Lippitt Manor north to Main Street Park make this block impenetrable. While the stairs on the south side of Main Street Park provide a route between Main Street and Truman Drive, they are not accompanied by an accessible path of travel (i.e. there is no accompanying ramp). In addition, Truman Drive is a four-lane road with no crossings for a half mile, creating a barrier to the river. Currently, there is a marginally accessible pedestrian route along Truman Drive, which has very narrow sidewalks.

Travel-Pattern Analysis

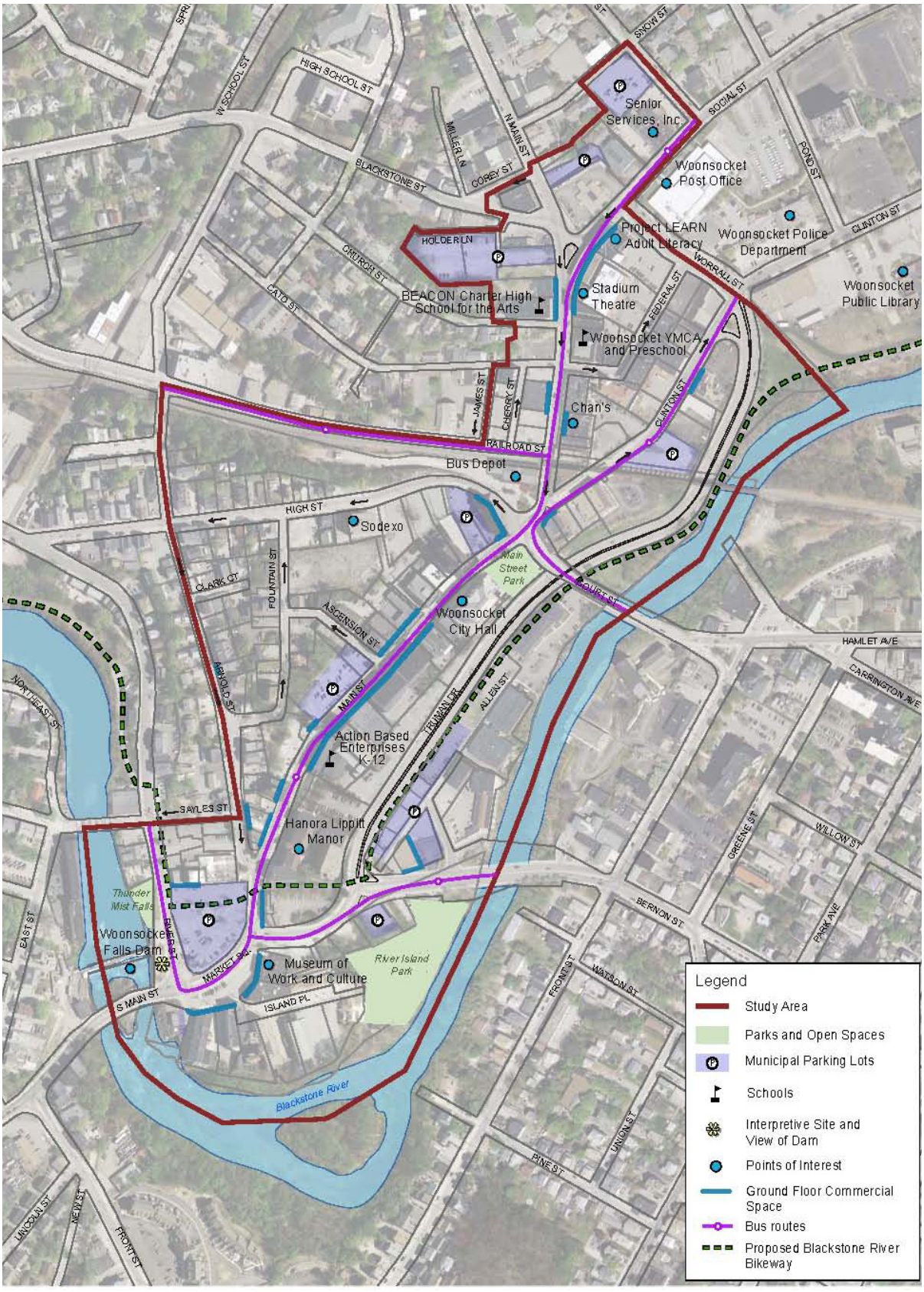
The Travel-Pattern Analysis Map, shown in Figure 17, examines destinations and the key routes that currently generate walking and biking activity. The level of existing and expected future activity therefore leads to a demand for walking and bicycling facilities and helps to guide planners where considering improvements. In addition to points of interest, the map shows schools, parks, ground floor commercial space (occupied or empty), parking areas and bus routes. Some of the key locations include:

- Woonsocket YMCA
- Woonsocket City Hall
- Sodexo, which employs 70 people, 59 of whom live in Woonsocket [6]
- Hanora Lippitt Manor, a large housing complex on Main Street
- Chan's, a jazz and blues club and restaurant
- Stadium Theatre Performing Arts Centre
- Interpretive site and view point to the Woonsocket Falls Dam
- Beacon Charter High School for the Arts
- Museum of Work and Culture
- Le Moulin – Center for Arts and Wellness
- Theatre Works
- Depot
- Woonsocket Market
- Rob Roy Academy: School of Cosmetology
- Variety of restaurants and nightclubs

Ground floor commercial space occupies a significant stretch of buildings along the south side of Main Street between Market Square and the Woonsocket City Hall. In addition, clusters of commercial space are found in Market Square and in Monument Square.

6 Sodexo Rhode Island, http://www.sodexori.com/woonsocket/index.html

Figure 17 Travel-Pattern Analysis Map



IV. Recommendations

Based on input from the Steering Committee and public, the consultant team recommends that the City work to strengthen the Main Street area as a vibrant, pedestrian-friendly arts and entertainment district, which was Alternative Scenario 2 of the three different scenarios studied. The team has recommended specific strategies - described below - that Woonsocket should undertake to move the Main Street area in this direction. As mentioned earlier, the baseline recommendations have been refined, and detailed graphics have been provided to highlight proposed improvements in key locations. Draft zoning language, included as Appendix D, has been developed as part of the overall zoning strategy.

Identity

It is important to clearly define and understand the identity of the Main Street area as the community works to reposition it moving forward. This includes naming the study area - the Main Street District - so the City, community members and others can identify it in a consistent and meaningful manner.

As recommended in this plan, the Main Street District will be a vibrant area where art and entertainment uses draw visitors and commerce, foster local talent, and support the success of area businesses. It will be a distinctive area that reenforces and build off of existing attractions such as the thriving entertainment venues, restaurants and other destinations. People will be able to live and work in the district, and new enterprises will be able to fill vacant buildings, take root and grow.

As the historic commercial and cultural center of Woonsocket, the Main Street District will preserve and promote its historic buildings and cultural assets, while ensuring that future changes enhance the area's asthetic appeal. Vacant and underutilized properties will be occupied - both in the short and long term - by desirable uses that contribute to the overall streetscape and liveliness.

The Main Street District will be a welcoming area with a pedestrian network that provides safe and convenient access to the river, civic and institutional resources, and local shops and services. This network will be complimented by attractive streetscapes and helpful wayfinding and signage that direct people to parking as well as destinations. People will be encouraged to park once and walk to different shops and attractions. These improvements will support and encourage the revitalization of the Main Street District. The following sections provide specific strategies to help Woonsocket achieve this identity.

Land Use and Zoning

There are a few ways in which the City of Woonsocket should revise its zoning to help achieve its vision for the Main Street District.

Proposed Overlay District

A zoning overlay district should be established in the Main Street District along Main Street. As shown in Figure 18, the overlay district should encompass the existing C-1 and MU-2 districts as well as a small portion of the R-4 district near Social Street. As opposed to the creation of a new zoning district, an overlay allows the City to change the uses that are permitted in an area without affecting the underlying zoning. Properties in the overlay district would be subject to the existing underlying zoning regulations as well as the proposed zoning overlay regulations. In addition, the overlay district would not affect zoning outside of the study area, so provisions can be tailored specifically to the Main Street District.

The zoning overlay district, as proposed in Appendix D, should be established to allow *additional* permitted uses that encourage further growth and concentration of art, cultural and entertainment attractions. Specifically, live/work units, artist studios and galleries, and outdoor cafe seating should be allowed in the proposed Main Street Overlay District. The first two uses would compliment the arts district that already encompasses the Main Street District and provides tax incentives for artists to live and work in the district.[7] The City is working to better publicize this arts district, create an inventory of available properties and develop a website. By allowing live/work units in the Main Street District, artists could both live and work in the same unit. Small fabricators or craftsmen could do the same.

To encourage art and entertainment-related uses - such as restaurants, retail stores and art galleries - the City should create an incentive in the overlay district. One way to do this would be to allow properties that include these desirable uses on the ground floor - at least 50 percent of the ground floor - to exceed the maximum floor area ratio (FAR), which is proposed to be 2.0 in the overlay. The properties would gain additional entitlements but should not be allowed to exceed an FAR of 3.0. As an example, this would allow a building in the overlay district that covered 75 percent of its property to build up to four stories as opposed to only roughly 2.5 stories.

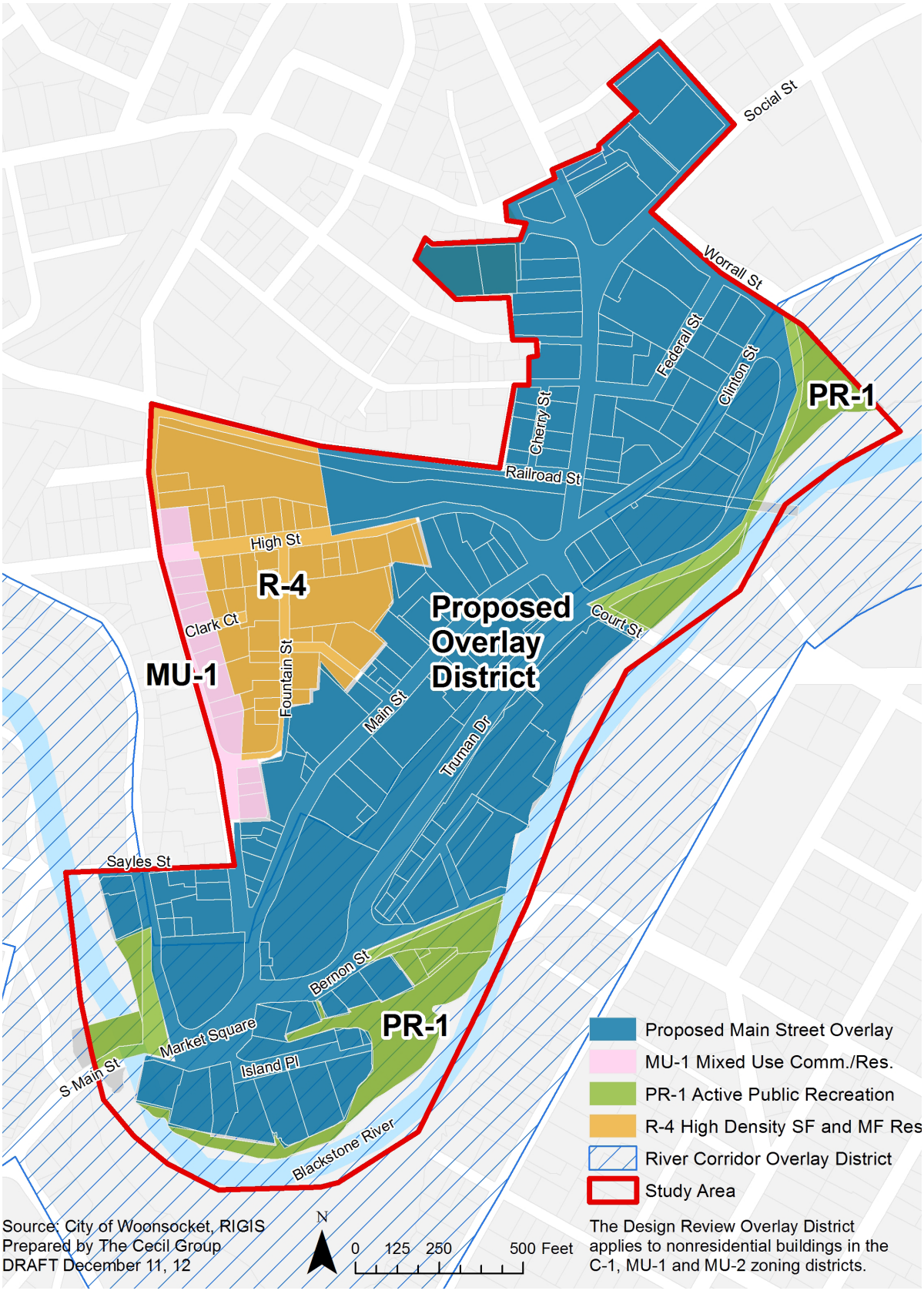
Outdoor Seating

Outdoor cafe seating should be allowed in the proposed Main Street Overlay District (see draft zoning language in Appendix D). Such seating would assist and enhance existing restaurants in the Main Street District, boosting their presence and potentially drawing more interest from pedestrians and motorists passing by. It would also add to the overall level of activity on the streets in the Main Street District, helping create a more vibrant area. Restaurants currently anchor Monument and Market Squares, and allowing outdoor seating could encourage smaller cafes to locate on Main Street between the two squares.

Outdoor cafe seating could be located on a restaurant's property or on adjacent sidewalks or so-called bump-outs, which are essentially areas where the sidewalk has been widened. (Bump-outs will be discussed later in this chapter.) If outdoor seating is allowed as recommended on sidewalks or bump-outs, the City should coordinate and streamline the application process as it relates to other existing licenses and permits that are required such as licenses to serve alcohol. A one-year permit to occupy the public right-of-way could be established and issued by the Public Works Department similar to the permits for A-Frame signs on sidewalks.[8] The permit could be renewable, and a fee could be established.

7 http://www.arts.ri.gov/projects/districts.php, and City Planner Jennifer Siciliano
8 Woonsocket City Code, Chapter 13 - Licenses and Permits, http://clerkshq.com/default.ashx?clientsite=woonsocket-ri

Figure 18 Proposed Zoning Overlay



Interim Uses

Another concern raised by many community members throughout this planning process centered on the many vacant and underutilized properties in the Main Street District. The overlay district, as proposed in Appendix D, should allow on these properties temporary or interim uses such as food trucks, pop-up retail, art and cultural installations, and farmers' markets (see Figure 19 and 20). These uses could temporarily occupy vacant land and makeshift parking lots and therefore contribute to the liveliness of the Main Street District and fill gaps - so-called "missing teeth" - in the otherwise continuous building street frontages or street wall. (If interim uses are allowed, any inconsistencies between the proposed overlay and existing City regulations and licensing requirements must be reconciled.)

The City of Providence revised its zoning in the summer of 2012 to allow interim uses on underutilized or vacant property in the downtown area, including land vacated as part of the Interstate 195 relocation project.[9] There, vacant or underutilized properties can have interim uses such as pop-up retail for up to five years, with an extension possible by the Downcity Design Review Committee, which reviews development in the zoning district D-1 Downtown - Central Business District.[10] In Woonsocket, it is recommended that there be a time limit - such as one year - on each interim use (as opposed to each property), with an extension requiring a special use permit. This reinforces the temporary nature of interim uses and encourages property owners to seek permanent uses. It also acknowledges that uses that exist for greater lengths of time begin moving toward a more permanent status, which the City may want to regulate differently.

Pop-up retail is an interim use that has grown in popularity across the country. Not only do they fill vacancies with retail uses but they promote entrepreneurship and can benefit both downtowns and businesses. In Maine, for example, three pop-up stores have started up in downtown Biddeford, and one such store was run by a college intern.[11] That businesses' sales and customer base significantly increased in the single month during which the pop-up store was open. In Providence, pop-up stores were included as a permitted interim use in part because there was interest in allowing modular temporary retails spaces along the edge of a parking lot in the downtown area.

In Woonsocket, officials and Main Street stakeholders should work with property owners, real estate professionals, business owners and others to find interim uses for vacant or underutilized properties. For example, officials should actively reach out to retailers in other areas and ask them to try out a space in the Main Street District. Pop-up stores require less investment and thus less risk than setting up a permanent store, and if a pop-up store is successful, the retailer could decide to permanently locate in the district.

Interim uses could also be transitioned into permanent permitted uses in other zoning districts if the community so desired in the future. In addition, interim uses such as pop-up retail and art and cultural installation could fill vacant buildings and storefronts. (Uses allowed by zoning can already fill vacant stores and buildings on a temporary or permanent basis, so explicitly allowing them in the proposed overlay district is not necessary.) Area organizations such as RiverzEdge and some property owners have begun working together to fill vacant storefronts with art installations, and this work should continue as a means to avoid unsightly windows. Filling vacant windows would not only showcase local art but would also draw attention to buildings that are for sale or rent.

8 Interviews with Providence Planner Choyon Manjrekar and Principal Planner Chris Ise, November 8 and December 5, 2012
9 http://www.providenceri.com/efile/3059
10 ttp://bangordailynews.com/2012/11/15/business/pop-up-stores-in-maines-downtowns-not-just-for-the-giant-retailers/

Figure 19 Food Trucks in Portland, Oregon

Source: New Urban News, http://www.mayorsinnovation.org/pdf/23TacticalUrbanismFULL_Part2.pdf

Figure 20 Farmers' Market in Pawtucket

Source: http://www.panoramio.com/photo/11265633

Dimensional Requirements

The City should establish dimensional requirements in the overlay district that contribute to a pedestrian-friendly, vibrant environment. It is recommended that these dimensional requirements largely mirror that of the existing C-1 district (see Chapter 3) with one major exception: a maximum front yard setback of 10 feet should be established in the Main Street Overlay District. This would encourage buildings to be built close to - if not up to - the front property line. In turn, this would help establish a continuous built edge or "street wall," which would help create a more walkable, pedestrian-friendly downtown.

Currently, there are no maximum front yard setbacks in the C-1 or MU-2 districts, and the minimum front yard setback is 20 feet in the MU-2 district and 0 feet in the C-1 district. Buildings can therefore be set far back from the front property line. When a building is set too far back from the front property line within an area where buildings are otherwise built up to the street, the "street wall" is disrupted, which negatively affects the pedestrian experience.

As mentioned earlier, a maximum FAR of 2.0 is recommended for the proposed Main Street Overlay District. However, properties should be able to exceed this FAR - up to an FAR of 3.0 - if it includes art and entertainment-related uses and has an active ground floor building facade that contributes to the pedestrian environment. This includes a minimum amount of building facade transparency - windows - and a main entrance. (See draft zoning language in Appendix D.)

Design Guidelines

The City should adopt design guidelines to help preserve and enhance the unique, historic character of the downtown, while promoting a vital, pedestrian-friendly environment. Design guidelines can be an effective tool that City officials, property owners and developers can use to help guide growth and ensure that changes and improvements in downtown Woonsocket are appropriate and context sensitive. The draft design guidelines provided in Appendix E specifically provide design guidance for sites and blocks, building facades and parking to encourage and support a walkable, vibrant downtown. They are intended to provide a framework for discussions and decisions about design characteristics.

The draft design guidelines in Appendix E could be adopted as part of the proposed Main Street Overlay District or as part of the existing Design Review Overlay District. As mentioned earlier, the City of Woonsocket is in the process of developing design guidelines for the Design Review Overlay District, which regulates the design of commercial and mixed-use buildings in the C-1, C-2, MU-1 and MU-2 zoning districts. It includes the area that has been proposed for the Main Street Overlay District.

According to Woonsocket's Zoning Ordinance, an applicant for a development proposal in the Design Review Overlay District must submit for evaluation a site plan, architectural submittals and landscaping plans. The proposals are evaluated with respect to architectural design, landscape design, impacts on utilities, off-site traffic impacts, on-site traffic circulation, overall visual quality, relationship to surrounding buildings and sites, site design and placement, and site layout. If the draft design guidelines in Appendix E are adopted as part of the existing Design Review Overlay District, the City may choose to augment them with additional guidelines for architecture and other site or building elements. Appendix F provides a list of resources related to design guidelines as well as examples of a wide range of design guidelines.

Historic Preservation

The City of Woonsocket should work to preserve to the extent possible its historic and architecturally-significant buildings such as Depot Station, shown in Figure 21. Historic preservation should be as part of an overall strategy to promote the area's cultural and historic heritage. Currently, there are national historic districts and several sites on the National Register of Historic Places in the Main Street area, but there are no local historic districts or specific regulations to protect historic properties. The Department of Planning and Development and the Planning Board are looking into historic districts in Woonsocket.

Another way to preserve historic buildings is to establish a demolition delay ordinance. The City of Woonsocket should investigate, draft and adopt such an ordinance, which should mandate that there be a waiting period before a historic building is torn down. This period - often 60 days long - provides the opportunity for someone else to purchase or move the structure.

Demolition delay ordinances are fairly rare in Rhode Island, but they are common in Massachusetts and Connecticut. Where demolition delay exists, they are included within zoning ordinances in the state. On Block Island in Rhode Island, a demolition delay or review period has been established as part of New Shoreham's Zoning Ordinance. It applies to all buildings in New Shoreham and requires a 60-day waiting period during which a notice is placed in the local newspaper, inviting letters of interest in the building.[12] The building can be demolished if an agreement is not reached within 60 days between the building owner and a party that wants to purchase it to restore or relocate it.

Figure 21 Depot Station

12 http://www.new-shoreham.com/docs/Zoning%20Ordinance%20as%20of%202011-08-17x.pdf

Providence also includes in its zoning ordinance a provision that seeks to preserve the urban fabric in the downtown D-1 Zone. It specifically prohibits the demolition of any building in the D-1 Zone until the Downcity Design Review Committee has granted a waiver to do so and has also approved plans for new construction. The committee holds a public hearing on the waiver application, and in its deliberations, the committee considers the "historic value and architectural quality of the existing building," the "design of new structures for the site," and how the design relates to adjacent structures.[13]

In addition to demolition delay, Woonsocket could promote historic preservation by actively promoting the City's Commercial Facade Restoration Grant Program for Main Street. The grant program provides grants of up to $40,000 per building, and the buildings are required to front on Main Street. This program could be used by owners of historic properties to help preserve and enhance their buildings.

Open Space and River Access

The Main Street area, as mentioned earlier, is bordered on the east by the Blackstone River, which is an important asset valued by the community. This river provides the area with recreational opportunities, particularly as River Island Park stretches along it. The park, located at the southern end of the study area, takes advantage of the river; it includes a canoe or kayak launch, for example. However, additional open space along the river are scarce, especially along the eastern edge of the study area.

It is recommended that the City work to create more open space near the river that can be used for passive recreation. This could be done by establishing additional usable open space on City-owned property (see Figure 22). For example, as part of the planned Blackstone River Bikeway, the City could create an overlook park north of Court Street as suggested by the 2010 Wayfinding Master Plan for Downtown Woonsocket.

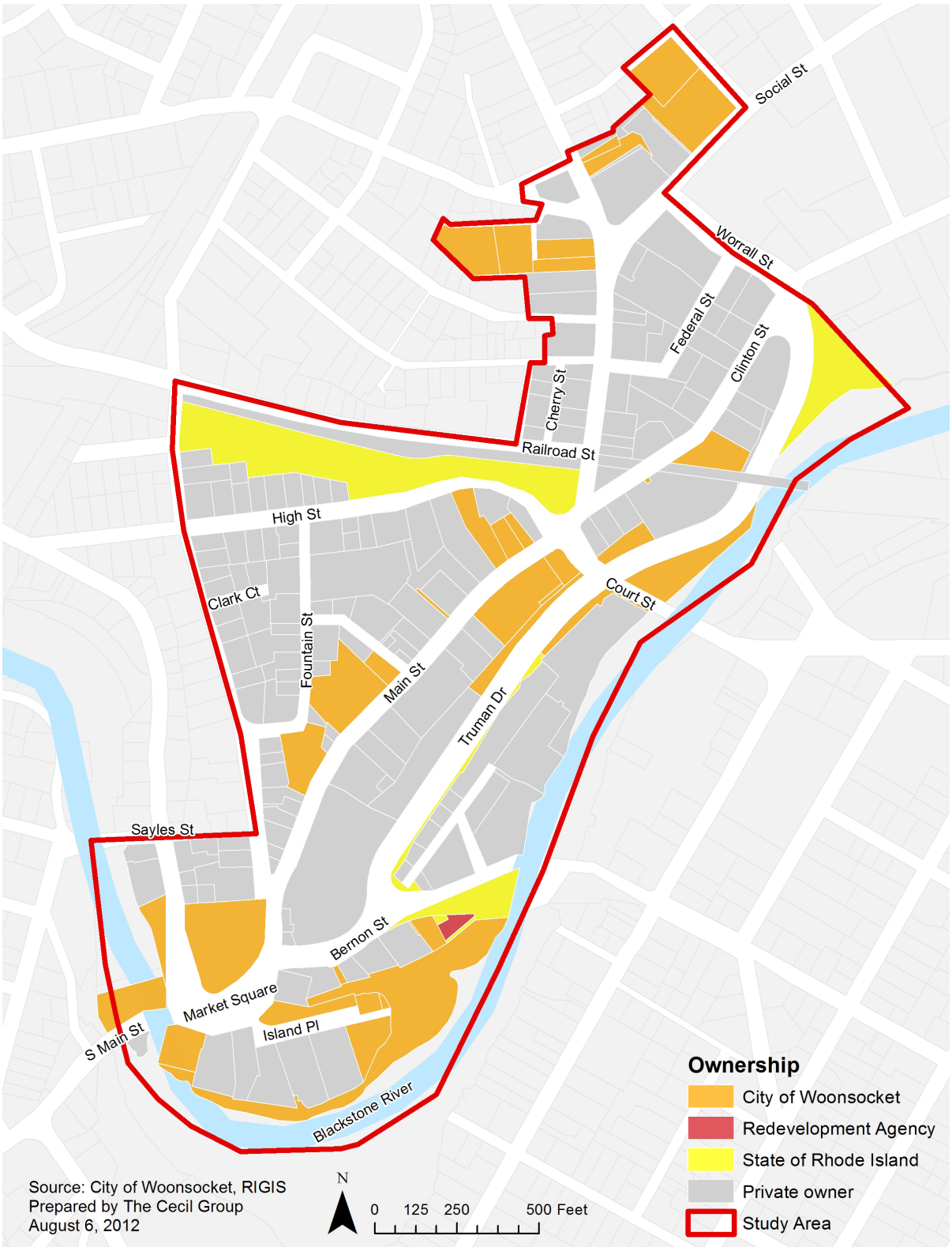
The City should also continue working to improve access to the Blackstone River. Woonsocket's Zoning Ordinance includes a River Corridor Overlay that regulates development and land use near the Blackstone River. Among the criteria used to evaluate proposals in the overlay is availability of public access to the river. Complimentary initiatives could include establishing new or improved crosswalks across Bernon Street and Truman Drive.

In addition, the City of Woonsocket should create additional paths from Main Street to the river as suggested in the 2010 plan, *Connecting our Heritage: A Wayfinding Master Plan for Downtown Woonsocket*. That plan, prepared by VHB, considered several options for connecting Main Street to the Truman Bypass and riverfront. It concluded that the most feasible option in the short term was to create a link to the river through the City-owned land north of the P&W railroad trestle or through a private parcel south of the trestle. Such a link would connect to the planned Blackstone River Bikeway.

In addition to improved linkages, better signage directing people to River Island Park could help increase usage and visibility of the park, and better lighting could help ensure that it is safe, attractive destination for residents and visitors alike. To increase visibility of the river itself, the City could clear low-level vegetation along the slopes and edge of the river. Currently, heavy vegetation along the river, as well as the steep grade that separates the park from the river, impede riverviews from within the park.

13 http://www.providenceri.com/efile/3059

Figure 22 Property Ownership Map



Other Improvements

There are several areas in the study area that have been described by community members as unsafe and plagued by crime and loiterers. These conditions must be addressed if the downtown core is to become a safe, vibrant, attractive place. The City should focus its community policing efforts in the Main Street area if resources allow. The Woonsocket Police Department, which has training in community policing, has established partnerships with organizations in the city, and these partnerships should continue to be reenforced and strengthened. Working with organizations familiar with specific problems in the Main Street area could be particularly beneficial.

One area that specifically requires attention is the residential neighborhood on the western edge of the study area. This area includes many buildings that are in need of repair, and it has been described in public meetings as being unattractive and unsafe. The City should use Community Development Block Grant (CDBG) and other resources to help make improvements to this neighborhood. This could include enhancing the streetscape or rehabilitating key properties. The City could also increase code enforcement to address dilapidated buildings, yard debris and other code-related issues.

More broadly, the Police Department could help residents and visitors to the area feel safer by having a presence on Main Street when large events occur. The Stadium Theatre, as mentioned earlier, draws crowds from throughout New England, and many of the visitors may not be familiar with downtown Woonsocket. By having police officers in the area before and after larger shows and events, visitors may be more willing to explore other areas of Main Street. Efforts are currently underway to develop temporary and long-term solutions to safety issues in the area, and these efforts should continue.

Traffic, Circulation and Parking

One-way to Two-way Street Conversions

Woonsocket's system of one-way streets originate in the philosophy that the expeditious movement of traffic is the highest and best use of a downtown's streets. In Woonsocket, the downtown's narrow streets, complex intersections and demand for on-street parking have made the apparent simplicity of a one-way system the most obvious solution for balancing these demands. Traffic movement is, however, just one of many factors that must be taken into consideration when planning for and managing a street. Downtown streets are more than conduits for vehicles; they provide access to businesses, residential areas, and local attractions.

As transportation planning philosophies evolve and technology improves, many communities throughout the country are converting one-way streets to two-way operation. Notable cities that have undertaken such conversions include: Albuquerque, Austin, Berkeley, Birmingham, Cambridge, Chattanooga, Cincinnati, Denver, Des Moines, El Paso, Lansing, Louisville, New Haven, Palo Alto, Portland, Oakland, Sacramento, San Jose, Seattle, St. Petersburg, Tampa and Toledo.

There are many benefits to two-way streets. Two-way streets tend to have slower travel speeds than one-way streets; they reduce confusion for motorists unfamiliar with the area; and they provide better access to both businesses and residential areas. Two-way streets may also have disadvantages including the potential loss of

on-street parking, reduced vehicular capacity, intersection delay and more complex pedestrian crossings. Many of these disadvantages can be mitigated against and are often offset by the advantages of a two-way system.

The cost versus benefit of a conversion to two-way traffic should be considered as a factor in the feasibility of such a conversion. The potential disadvantages of reduced parking and intersection delay should be considered relative to the benefits of enhanced circulation and mobility within the downtown. The two-way conversion has been presented herein as a feasible concept when measured against roadway geometry and traffic volumes. Further study is necessary to determine the engineering and operational feasibility of these concepts.

The suitability of one or two-way traffic for a particular roadway will often differ depending on the perspective from which it is considered. Those perspectives often include: the traffic engineer, the roadway user, and the local community.

The Traffic Engineer's Perspective

Traffic engineers are tasked with moving as much vehicular traffic as possible, as quickly as possible. This approach often comes at the expense of other roadway users and adjacent land uses. From a traffic engineering perspective, one-way streets help facilitate good signal progression through a downtown network. One-way streets also have fewer conflicting turning movements at their intersections, reducing the chance for a through vehicle to encounter a turning vehicle. Finally, curbside activity such as service vehicle loading and unloading is less disruptive to the traffic flow on a one-way street, where only one travel lane may be blocked by this activity.

As the profession and practice of transportation engineering evolves with new technologies, tools and methods, the operational disadvantages associated with one-way streets are becoming increasingly recognized by transportation engineers. The one-way system often forces drivers to follow out-of-direction routes to their destinations, causing an increase in both the number of turning movements required and vehicle miles of travel. A study of a two-way conversion in El Paso, Texas found that two-way configurations lead to approximately 2–16 percent lower total vehicle miles travelled.[14] The same study found that the two-way configuration generally results in a speed reduction of 17 percent.

The Roadway User's Perspective

Drivers use the street network as a means of navigating to or through a downtown to get to their destination. While one-way streets do not pose a major inconvenience to commuters and regular visitors to a downtown (these motorists have learned the downtown network and know the "best route" to their destination), they do confuse and disorient visitors encountering a one-way street network. These occasional users are potentially customers that downtowns are trying to attract. If circulation in the downtown can be made easier by converting one-way streets, downtown visitors may be more impressed with their overall downtown experience and become more regular downtown patrons.

For those travelling to the downtown, their destination is a parking spot whereupon they become a pedestrian. One-way streets can present challenges to pedestrians due to the speed of traffic and additional turning

14 Chiu, Zhou, and Hernandez, Journal of Urban Planning and Development, December 2007

movements within the network due to the extra vehicle miles and turns necessary for a driver to reach their destination. Additionally, any turning movement, regardless of street configuration as one- or two-way, creates exactly the same potential for vehicle/pedestrian conflict, namely, one legally turning vehicle crossing the path of one legally crossing pedestrian.

Downtown Community Perspective

One-way to two-way street conversions are part of a much bigger effort to make downtowns more livable and economically successful. Retailers often prefer the exposure and accessibility offered by a location on a two-way street. This fact is supported by examples such as a downtown street in Cincinnati where 40 percent of businesses in an economically-depressed downtown district closed after a street was converted from two-way to one-way traffic.[15]

One-way streets also have a negative impact on storefront exposure for those businesses highly dependent on pass-by traffic. As a vehicle stops at or enters an intersection, the driver has excellent visibility of the storefronts on the far side of the intersection. In one-way street networks, storefront exposure is lost when one direction of travel is removed, causing one side of every cross street to be partially "eclipsed" from view. "Eclipsing" occurs on storefronts along the nearside of the intersection relative to the direction of travel. Where downtown street networks contain many one-ways, the accumulated negative impacts of this are significant.

As retail and entertainment activities increase in a downtown, so do visitors and potential new residents. For these people, livability is of paramount importance. Large gains in overall livability can often be accomplished through street conversions while exacting only a marginal increase in vehicular delay. From a safety perspective, research published in the Canadian Journal of Public Health documented an injury rate that was 2.5 times to 3 times higher on one-way streets than on two-way streets.[16] This difference is most likely attributable to higher traffic speeds on one-way streets.

By requiring less out-of-direction travel and fewer turning movements, a two-way street network is better for short trips to local establishments than a one-way street network. Livable streets benefit all users of a downtown whether they are using transit, an automobile or walking.

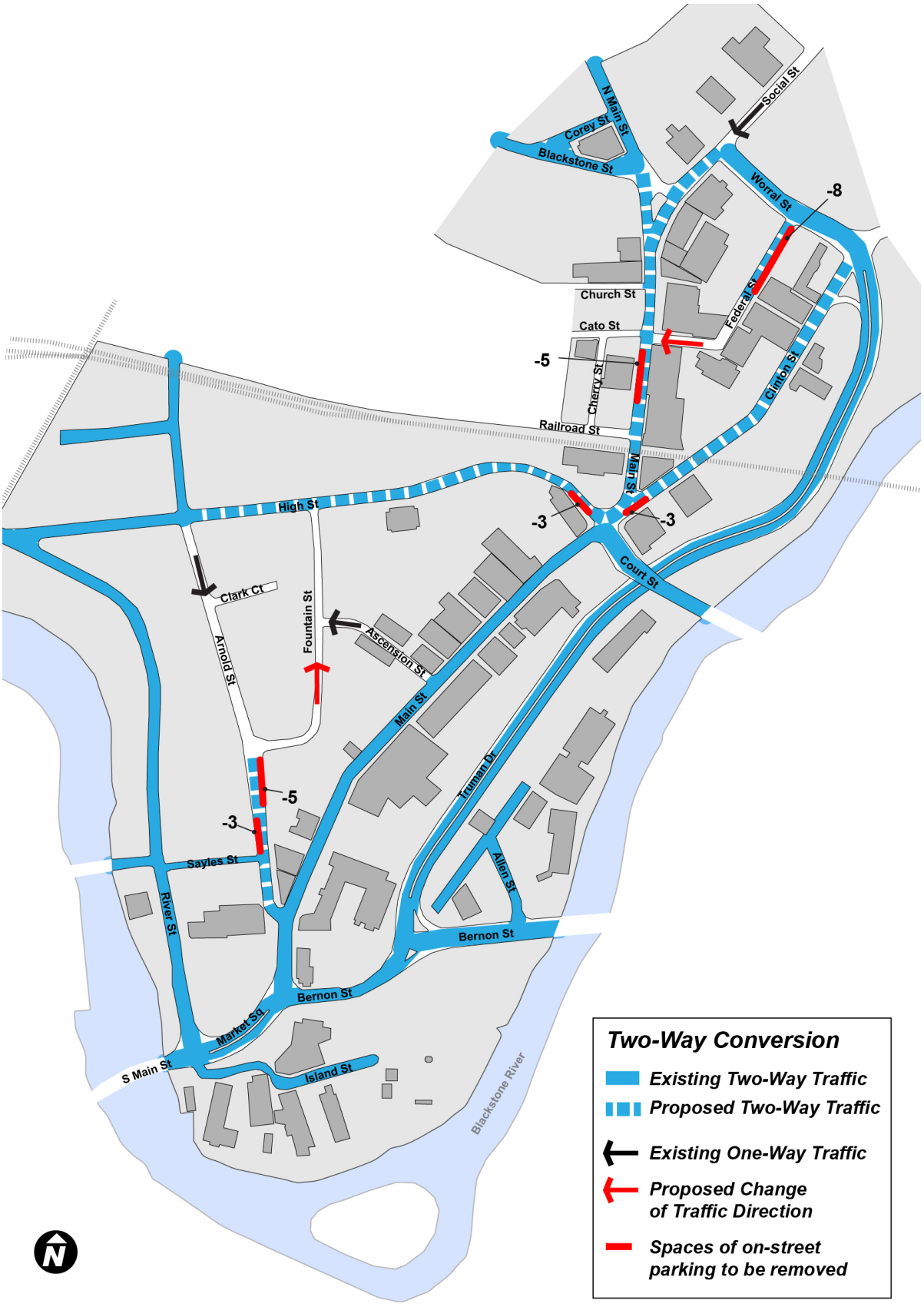
Converting a street network from one-way to two-way will not by itself guarantee an immediate resurgence of growth and activity downtown. Most communities have come to this recommendation as a part of a greater vision or urban design plan for their downtown. The conversion of one-way streets is most often accompanied by other initiatives designed to attract additional downtown development or redevelopment and make downtown a more livable community.

Proposed One-Way to Two-Way Traffic Conversions

Several streets within downtown Woonsocket are proposed for conversion to two-way traffic, as shown in Figure 23.These include: Main Street, Clinton Street, Social Street, High Street Arnold Street and Federal Street. The conversion from one-way to two-way traffic is expected to improve connectivity within the downtown and improve access to businesses. The conversion to two-way traffic would require

15 Walker, et al, TRB Circular E-C019: Urban Street Symposium
16 Wazana, et al, Canadian Journal of Public Health, May-June 2000

Figure 23 Proposed Conversions to Two-Way Street



reconstruction of several intersections, restriping of the roadways, installation of new traffic signage, traffic signal modifications and upgrades, and modifications to Monument Square.

Main Street

Main Street north of Depot Square is currently one-way southbound from North Main Street to Depot Square. Conversion to two-way traffic operation is feasible while still accommodating on-street parking on the east side of the roadway. Parking on the west side would need to be removed, resulting in the loss of two loading zones and five on-street spaces. The loading zone south of Beacon Charter School can be recessed into the adjacent parking lot which is used by the school so as to preserve this asset. This parking demand can easily be absorbed by the municipal parking lot on the west side of Main Street at Monument Square (which is 10 percent utilized) and by private parking lots on Main Street.

The conversion to two-way traffic will require the modification of both the Depot Square and Monument Square intersections (see Figures 24 and 25). These modifications would include new traffic signalization and provide an opportunity to improve pedestrian crossing safety by reducing crossing distances through curb modifications and bump-outs. The most significant improvement for pedestrians would be at Monument Square where pedestrians would cross with the assistance of pedestrian-actuated crossing signals and would also gain access to an expanded monument island.

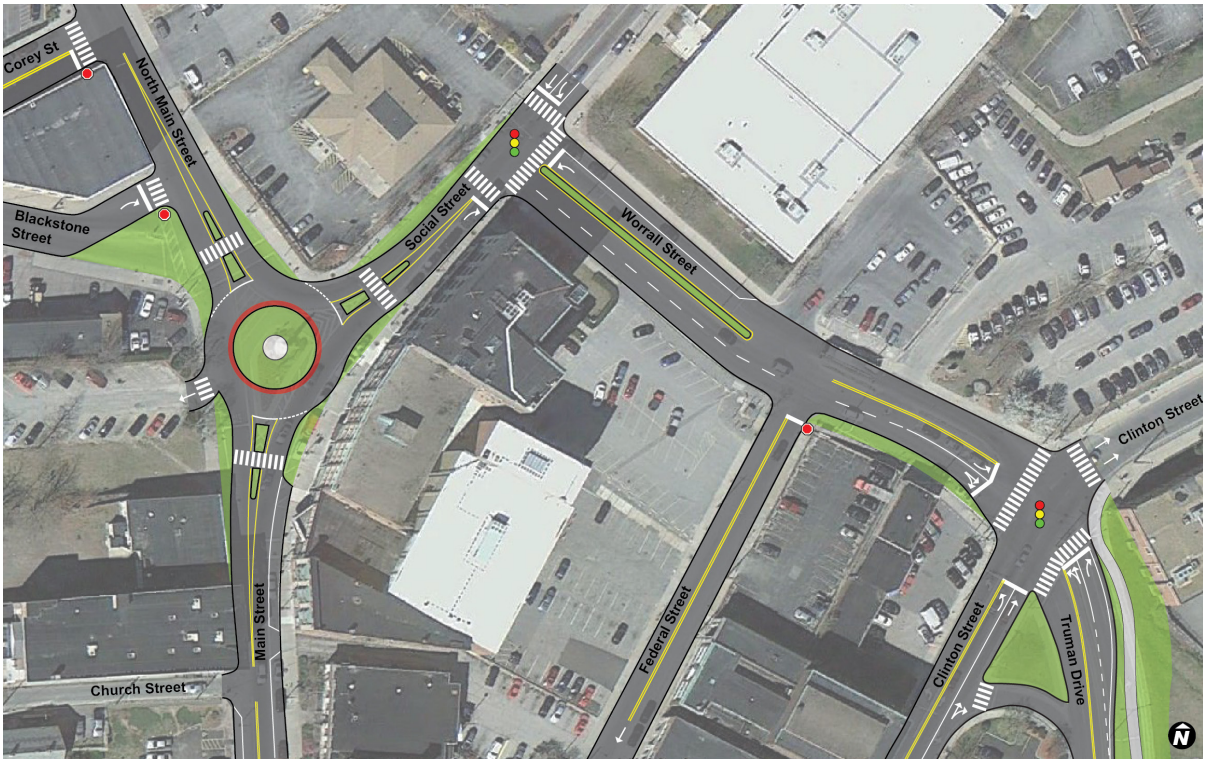
The proposed signalized intersection at Monument square will require additional traffic counts and modeling to test the performance and feasibility of such an arrangement. As an alternative to this concept, a roundabout could be considered at this location (Figure 26). The roundabout would have the advantage of reducing traffic queues, slowing vehicle speeds, providing more connectivity between intersecting streets, and allowing for U-turns on Main Street by circling the intersection and returning to Main Street in the opposite direction. This concept would, however, require moving the monument several feet to place it at the center of the roundabout. Additionally, there would be a greater impact to on-street parking with the loss of more spaces on Social Street.

Figure 24 Modification of Depot Square

The bus stop on Main Street north of Depot Square would need to be relocated as a result of a conversion to two-way traffic. The current location, under the railroad trestle, is a difficult and congested location that would benefit from relocation. A potential relocation site would be adjacent to the municipal parking lot on Main Street south of Ascension Street.

Figure 25 Modification of Monument Square

Figure 26 Alternative Modification of Monument Square



Clinton Street

Clinton Street has one-way northbound traffic flow throughout the study area. Conversion to two-way traffic operations is recommended for this roadway between Main Street and Worrall Street. This conversion would provide direct access, in the southbound direction, to Clinton Street from both Worrall Street and Truman Drive. The impact to on-street parking would be minimal with three spaces lost from the east side of the roadway near the Depot Square intersection.

The additional traffic lane required by the two-way conversion would require the existing bus stop north of the rail trestle to be set back from the roadway by the construction a bus pull-out. The bus pull-out would allow queuing buses to pull out of the traffic lane so as not to obstruct traffic flow while unloading, loading or waiting.

Social Street

Social Street is one-way southbound as it merges with Main Street. The street is recommended for conversion to two-way traffic flow between Monument Square and Worrall Street. This conversion would provide a northbound connection from Main Street to Worrall Street without the loss of any on-street parking spaces. Traffic signal modifications and pavement marking upgrades would be necessary at the intersection of Social Street and Worrall Street in order to accommodate two-way traffic.

Social and Clinton Streets Outside of the Study Area

The conversion of Social Street and Clinton Street from one-way to two-way traffic operations is recommended for the entire length of each corridor, extending eastward outside of the study area. A cursory review of these corridors suggests that the roadways are capable of carrying two-way traffic. The primary constraint along these corridors are the multiple intersections. A total of 7 intersections would require traffic signal modification, with one of those intersections (Social Street at Clinton Street) potentially requiring reconfiguration. Further study is needed to determine the feasibility of a conversion. Additional study required would include the collection of traffic volume counts, turning movement counts, and the development of a traffic model for the network.

High Street

High Street is one-way between Arnold Street and Main Street with traffic flowing in the westbound direction. It is recommended that this corridor be converted to two-way traffic flow. Two-way traffic would allow a direct eastbound connection from River Street to Depot Square and to the Court Street Bridge. Roadway modifications would be minimal and would involve pavement striping and signage upgrades, although intersection improvements would be necessary at Depot Square. The impact to on-street parking would be minimal, with only three spaces lost on the south side of the road at the Depot Square intersection.

Figure 27 Arnold Street Conversion

Arnold Street

Arnold Street is currently one-way in the southbound direction from High Street to Main Street. Conversion of the roadway between Fountain Street and Main Street would provide direct vehicular access, from Main Street, to businesses and storefronts on this segment of Arnold Street (See Figure 27). The conversion of this segment of Arnold Street to two-way traffic would require the direction of traffic on Fountain Street to be reversed to one-way northbound (uphill) to accommodate northbound Arnold Street traffic.

This two-way conversion would displace eight on-street parking spaces. The loss of these spaces could easily be absorbed by on-street parking capacity on Arnold Street or via a large and underutilized private parking lot at the corner of Arnold Street and Sayles Street.

Federal Street

Two-way traffic is proposed for Federal Street from Worrall Street to the parking area at the back of the Stadium Theater. This will result in the loss of eight on-street parking spaces, which would be regained by the provision of eight new on-street spaces on Worrall Street. This conversion will provide direct access to parking areas from Worrall Street, thereby reducing bus and truck traffic on Main Street in route to the Stadium Theater.

Traffic direction at the southern segment of Federal Street, near the YMCA, would remain one-way but be reversed. Keeping this segment one-way will allow on-street parking to be retained and will avoid potential conflicts due to limited sight-lines at the road's bend. Thru-truck and bus traffic would be prohibited from this segment of the road so as to avoid low vertical clearance at the YMCA's pedestrian overpass and a limited turning radius onto Main Street. The directional change of traffic at the southern end of Federal Street is critical to providing a right turn loop around the Stadium Theater, thereby improving access to the theater.

Intersection Improvements

To accommodate two-way traffic flow in downtown Woonsocket, several intersections will need to be modified. The level of modification will vary from pavement marking and traffic sign upgrades, to the modification of curb lines, new traffic signals, new crosswalks and the relocation of bus stops. A summary of the intersection modifications is provided in Chart 7.

Next Steps

- Identify potential funding sources for further planning and design
- Conduct traffic study including the collection of turning movement counts at all impacted intersections. Develop traffic model to test the feasibility of the recommended two-way network and recommend modifications to the concept as required
- Schematic design and engineering feasibility with cost estimates
- Identify funding sources for construction
- Final design and construction

Chart 7 Intersection Modifications

Intersection	Modification
Arnold Street at Main Street	Stop sign and pavement markings
Arnold Street at Fountain Street	Pavement marking upgrades, traffic signage
Main Street at High Street	Traffic signal modifications, pavement marking upgrades, traffic signage, curb bumpout at northeast corner
Main Street at Clinton Street	Curb bumpout, pavement marking upgrades, traffic signage
Main Street at Monument Square	New traffic signal, expand monument island, curb extension at northwest and northeast corners of North Main Street and Blackstone Street, curb extensions on east side of Social Street, pavement marking upgrades, traffic signage Alternate: Roundabout at Monument Square
Social Street at Worrall Street	Traffic signal upgrades, new pavement markings, traffic signage upgrades
Clinton Street at Truman Drive	Traffic signal upgrades, new pavement markings, traffic signage upgrades.

Traffic Signal Technology

As streets within Woonsocket's downtown are converted to two-way traffic, the signalized intersections on those streets will need to be reconfigured to accommodate two-way traffic. This traffic will also place additional demand on those intersections and could potentially degrade their performance. New traffic signal technologies can be used to mitigate against these additional traffic demands.

A relatively new but well-established technology is the Video Detection System. Video detection has become a popular replacement for traditional loop detectors at signalized intersections. A steady decline in the cost of these systems and a steady increase in accuracy and reliability have contributed to video detection becoming the preferred method of vehicle detection for new traffic signal installations. Video

detection can easily be adjusted when lane closures are in effect or when lanes are restriped. Detection zones can also be easily added or removed. Video detection can also easily detect bicycles without adding bicycle specific inductive loops.

Next Steps

- Integrate video detection technology into signal modification plans of reconfigured intersections

Bus Accommodation

The conversion of both Main and Clinton Streets to two-way traffic flow will impact the existing bus stops at Clinton Street near the rail trestle and at Depot Square. The accommodation of two-way traffic flow will require additional roadway space, space that is currently used for bus queuing at both locations. A bus pull-out is recommended at both locations - as shown in Figures 28 and 29 - as a means of accommodating buses.The pull-out is a shoulder space that allows buses to move out of the traffic lane while waiting, loading or unloading passengers. Bus shelters, benches and trash cans are typically located at bus pull-outs.

The proposed location on Main Street is located at the site of an existing bus shelter. The inclusion of a pull-out would impact the municipal parking lot on the north side of Main Street, causing a loss of 8 spaces. This impact is not expected to be disruptive as the lot is only 35 percent utilized during weekdays. The proposed location at Clinton Street would have a minimal impact to the adjacent municipal parking lot resulting in a loss of only two spaces. Pedestrian circulation would not be negatively impacted at either location although a crosswalk would need to be relocated at Clinton Street.

The Rhode Island Public Transit Authority (RIPTA) provides funding for the installation of new shelters through the “TransART” program. The goal of the TransART program is to enhance the experience of those using RIPTA service by providing seating and shelter from the weather while introducing interesting and unique bus shelters to the streetscape environment.

The TransART program is made available through federal transit funds. For all TransART projects, RIPTA will provide 80 percent of the project cost, and the remaining 20 percent is provided by the partnering agency/community. The partnering agency/community is also responsible for maintaining the shelter.

RIPTA prioritizes projects based on several contributing factors, including: 1) the volume of passengers who board at the stop, 2) the number of bus routes utilizing the stop, and 3) the population density of the area.

Next Steps

- Design and construct bus pull-outs as Main and Clinton Streets are converted to two-way operation.
- Apply to the RIPTA TransART program as a means of funding new shelters and soliciting engaging shelter designs.

Figure 28 Proposed Bus Pull-Out on Main Street

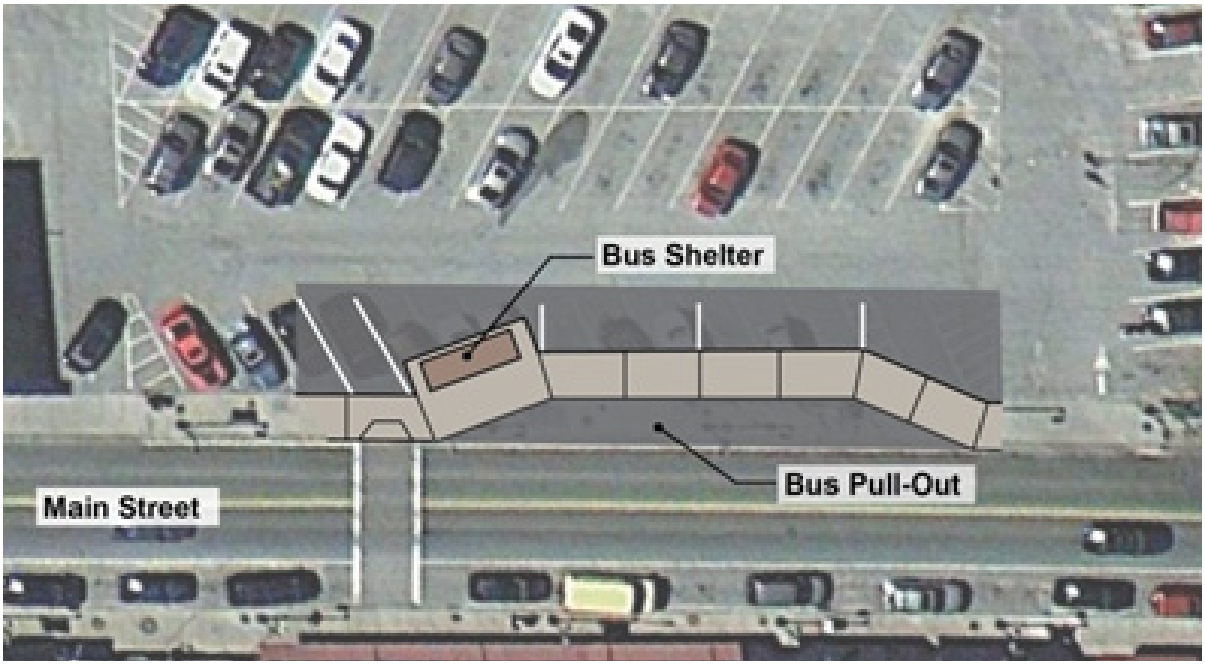
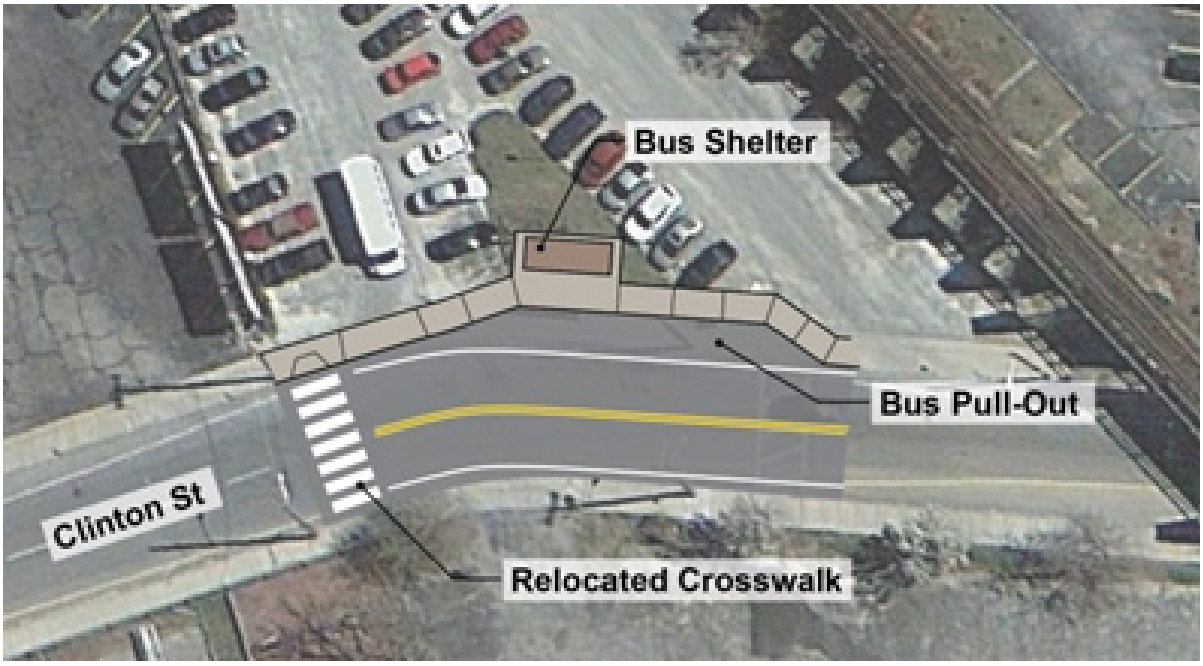


Figure 29 Proposed Bus Pull-Out on Clinton Street



Truman Drive Road Diet

Truman Drive currently carries an average of 6,600 vehicles per day. This volume is considerably less than the capacity of comparable four-lane divided highways. For instance, Louisquisset Pike (Route 146) in Providence carries approximately 10 times the traffic (64,600 vehicles per day). See Chart 8 for traffic volume on comparable roadways.

Reducing Truman Drive to a two-lane roadway would free valuable riverfront space that could be used to accommodate the planned Blackstone River Bikeway and a linear park as visioned in the 2010 plan, *Connecting our Heritage: A Wayfinding Master Plan for Downtown Woonsocket.* Reducing travel lanes in response to the traffic volume on a roadway is an increasingly common practice referred to as a "road diet." Numerous communities throughout the country have undertaken roadway diets within the past decade including a recent project in North Kingstown, RI where Quaker Lane, a main thoroughfare, was reduced from four travel lanes to two travel lanes with a center left turn lane.

Reducing Truman Drive from a four-lane divided highway to a two-lane roadway would have the added benefit of reducing the footprint of both the Bernon and Clinton Street intersections. By reducing the size of these intersections, pedestrian crossing distances can be significantly shortened and pedestrian safety improved. A conventional two-lane roadway would also allow mid-block pedestrian crossings across Truman Drive, thereby allowing additional connections between Main Street and the riverfront.

Next Steps

- Work with state to identify potential sources of funding
- Solicit funding for schematic design, engineering feasibility

Chart 8 Traffic Volumes

Roadway	ADT Volume	Description
Truman Drive, Woonsocket	**6,600**	**4 lane divided highway**
Huntington Expressway (Route 10), Providence	53,100-97,300	4 lane divided highway
Louisquisset Pike (Route 146), Providence	64,600	4 lane divided highway
Storrow Drive, Boston	72,700	4 lane divided highway
Mendon Road (Route 122), Woonsocket	29,600	4 lane two-way roadway
Cumberland Street, Woonsocket	19,700	4 lane two-way roadway
Diamond Hill (Route 114), Woonsocket	8,200-14,600	2 lane two-way roadway
Main Street, Milford, MA	11,500	2 lane two-way roadway
Cambridge Street, Cambridge, MA	16,600	2 lane two-way roadway
Main Street, Woonsocket	***7,700***	***@ 2 lane two-way segment***

Parking

Wayfinding

Parking wayfinding provides information on the location and type of parking in an area. Parking wayfinding is typically combined with other wayfinding signage in an area in a standardized format. Parking wayfinding signage should clearly communicate the location of parking, the name and type of the facility, and whether it is public or private. Wayfinding should be located on key ingress routes in an area (see Figure 30). Typically, the level of information provided increases as proximity to a parking facility increases. For example, in the outskirts of an area, wayfinding may only provide directional guidance to public parking, whereas in the immediate vicinity of a facility, the name (ex. Main Street Parking Lot), and use (Public) may also be provided. Parking wayfinding is typically used in conjunction with parking facility branding and can be combined with elements of a parking guidance system.

Parking Facility Branding

Parking facility branding is used to standardize the way in which a facility's use and availability is communicated to the public. In most parking systems, the nearly universally recognized "P" is used to communicate a facility's status as entirely or partially publicly accessible. Parking branding is often used in conjunction with parking wayfinding and guidance systems; however, parking branding can be successful without the presence of a comprehensive wayfinding system.

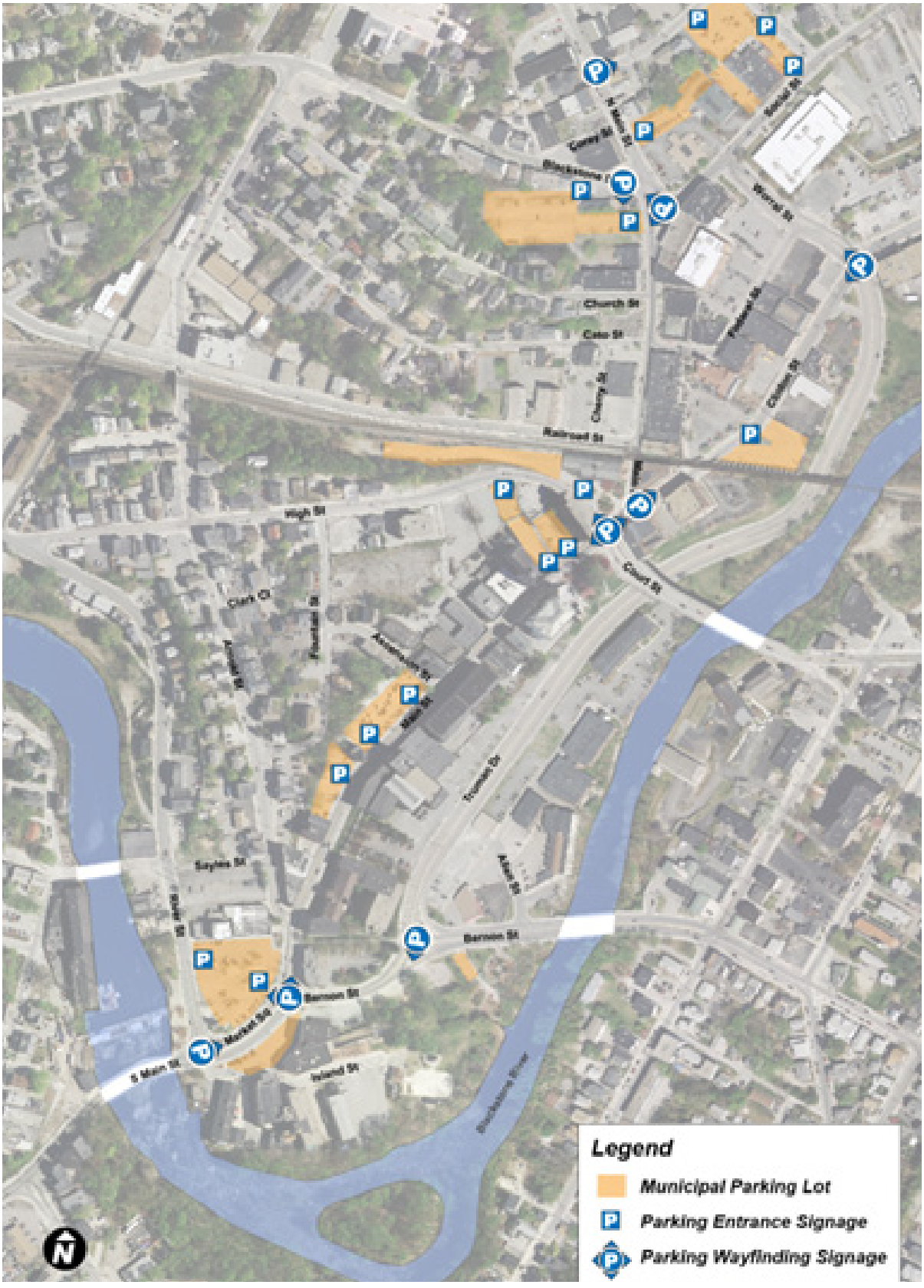
Facility Signage

Parking facilities should have signage that clearly indicates use, hours of operation, and whether parking is free or there is a fee. Ideally, signage for facilities of similar use (i.e. Public or Private) should be similar. Parking facility signage is an essential element of parking wayfinding systems and is a key part of parking facility branding.

Enforcement

Parking enforcement is critical for the effective function of any parking system. The two-hour parking limits on Main Street are an effective means of reserving valuable on-street space for short-term visits to shops and restaurants. Consistent enforcement of these parking regulations is the only means by which these on-street spaces can be used as intended. It is recommended that the City of Woonsocket continue to strictly enforce the two-hour limit on a consistent basis.

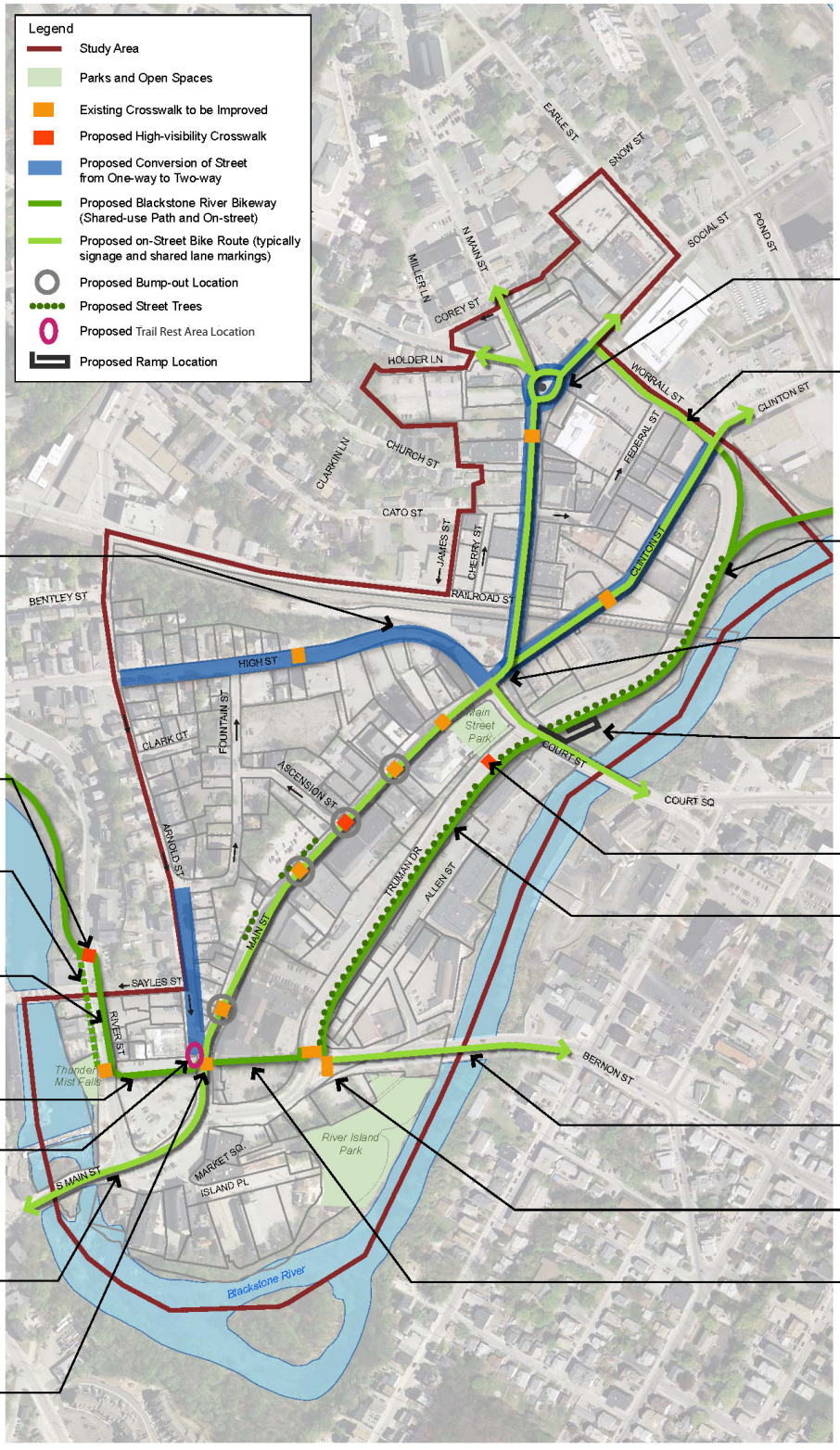
Figure 30 Parking Wayfinding and Signage



Bicycle and Pedestrian Facilities

To enhance safety and accessibility for pedestrians and bicyclists, roadway-related improvements are needed. Specific recommendations are shown in Figure 31 and described in the following pages.

Figure 31 Recommended Bicycle and Pedestrian Improvements



Sidewalk improvements on north side of High Street

Signage/pavement markings directing northbound cyclists and pedestrians to the path

With the long-term redevelopment of property, easement along River Street frontage could provide space for the Blackstone River Bikeway

Shoulder bikeway along short short stretch of River Street to connect path; pedestrian path-users to use sidewalk

Proposed path alignment through parking lot

Potential for Blackstone River Bikeway trail rest area

Tighten the turning radii at the intersection of S Main Street and River Street and strip high-visibility crosswalks

Enhance crossing to accommodate Blackstone River Bikeway connection

Reconfiguration of Monument Square to improve pedestrian crossings

On-street bike route to be a potential Blackstone River Bikeway spur to Social Street

Potential for greenway treatment and tree plantings along Blackstone River Bikeway

Tighten turning radii at the intersection of Main Street and Court Street and strip high-visibility crosswalks

Potential location for switch-back ramp creating an ADA/ pedestrian/bicyclist link from the Court Street Bridge to the Blackstone River Bikeway

New crosswalk at the bottom of the Main Street Park stairs

Option 1: eliminate easternmost travel lane and widen sidewalk to 10' with 5' buffer to accommodate path

Option 2: eliminate travel lanes on northbound side; convert remaining lanes to two-way travel Maintain existing sidewalk and construct 10' shared use path

On-street bike route to potentially include bike lanes on Bernon Street Bridge

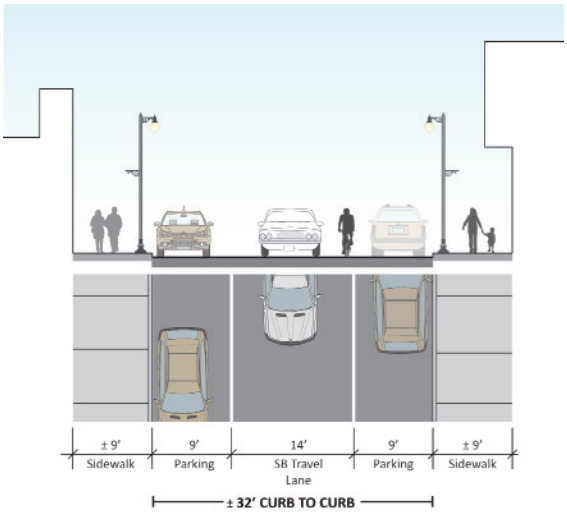
Improve access to River Island Park; create enhaned pathways through the park to the river

Utilize existing path (widen, if necessary, to min. 10')

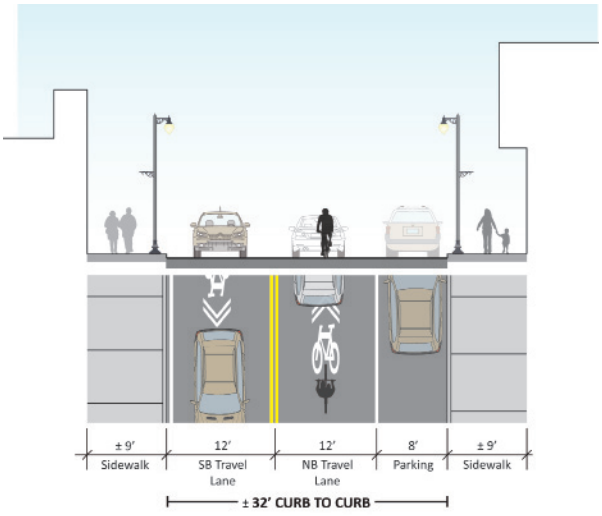
Shared Lane Markings

Shared lane markings (SLM), also known as sharrows, are used to help position bicyclists within the travel lane. These markings are often used on streets where dedicated bike lanes are desirable but are not possible due to physical or other constraints. Shared lane markings are placed strategically in the travel lane to alert motorists of bicycle traffic, while also encouraging cyclists to ride at an appropriate distance from the "door zone" of adjacent parked cars. Shared lane markings also encourage cyclists to ride in a straight line so their movements are predictable to motorists. In addition, they provide wayfinding cues along a designated bike route.

In order to to facilitate bicycle transportation through downtown Woonsocket - in addition to the development of the Blackstone River Bikeway - it is recommended that shared lane markings and/or signage should be applied to Main Street, Court Street, Clinton Street and a stretch of Social Street. Because lane widths are less than 13 feet wide, it is recommended that the shared lane markings be placed in the center of the lanes. The shared lane markings should be accompanied by signage indicating that cyclists may use full lane (see MUTCD sign R4-11). (Currently, there is an approved route for shared lane markings or sharrows on River Street, Main Street, Bernon Street, Front Street and Hamlet Avenue as part of the planned Blackstone River Bikeway. See the map on page 66.)



Existing conditions on Main Street between Monument Square and Depot Square



Proposed conversion of Main Street to two-way travel with future shared lane markings in each direction

Shared Lane Markings Design Guidance

Design Summary:

- Shared lane markings should not be used on roadways where speeds posted or 85th percentil exceed 35 mph
- Place in a linear pattern along a corridor (typically every 50-250 feet, depending on traffic volumes)
- Where SLMs are being used in both directions of travel, they may be staggered for maximum visibility
- Recommended placement depends on curb-side lane width and speeds of travel; see matrix below*
- Placement in the middle of the lane avoids vehicle tire tracks and will increase the life of the marking

Guidance:

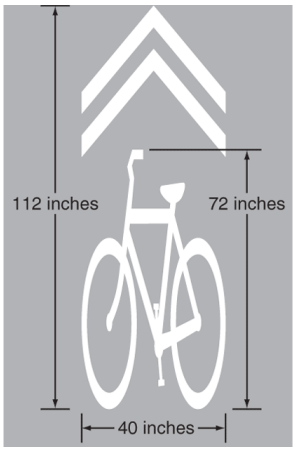
- Federal 2009 MUTCD
- AASHTO Guide for the Development of Bicycle Facilities
- NACTO Urban Bikeway Design Guide, Second Edition

Shared Lane Marking Placement Matrix

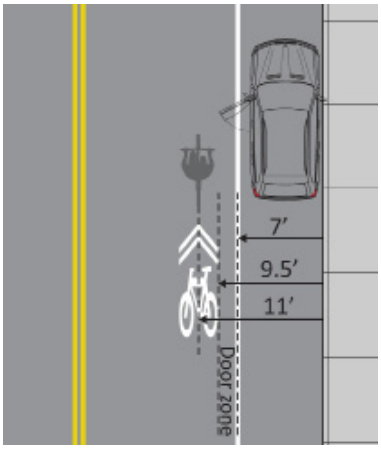
Posted or 85th percentile roadway speed (whichever is lower)	**Shared lane marking placement**	
	Curb-side travel lane < 13'	**curb-side travel lane ≥ 13'**
≤ 25 mph without parking	center of travel lane	4'-0" from curb
≤ 25 mph with parking	center of travel lane	11'-0" from curb
26 – 35 mph without parking	4'-0" from curb	4'-0" from curb
26 – 35 mph with parking	11'-0" from curb	11'-0" from curb
> 35 mph with or without parking	SLM not recommended	SLM not recommended

* Guidelines including the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Manual on Uniform Traffic Control Devices (MUTCD) include recommendations for shared lane marking placement but do not take into consideration traffic speeds

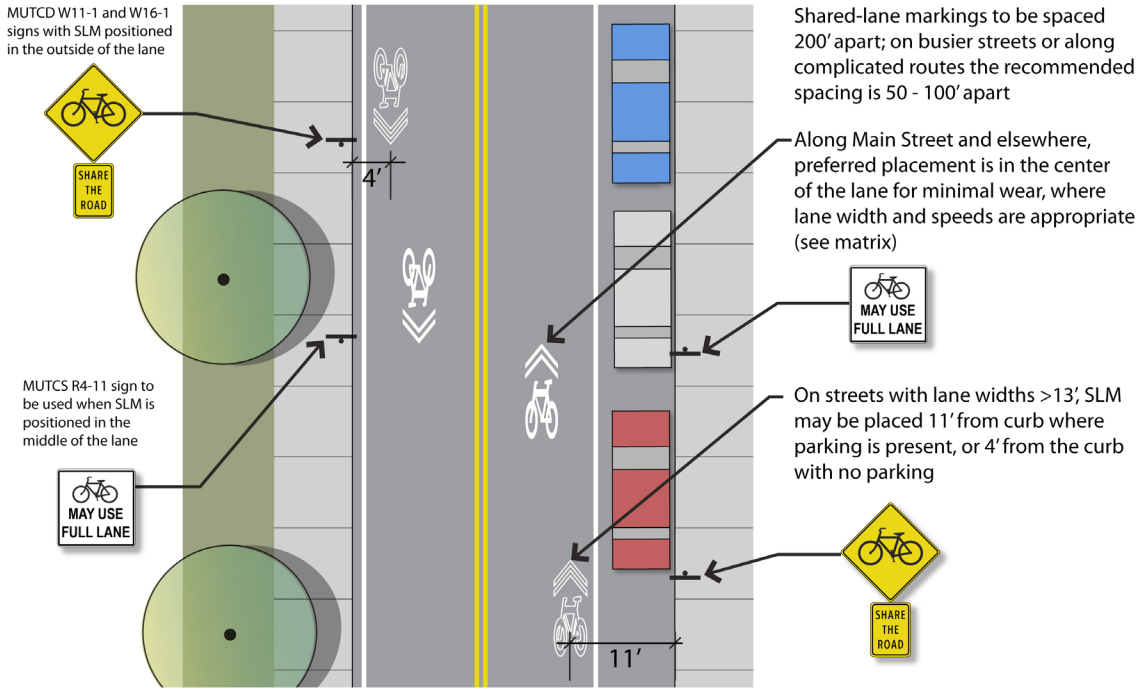
A shared lane marking adjacent to parking in Somerville, MA



MUTCD recommended dimensions for shared lane markings



Positioning the SLM 11 feet from the curb encourages cyclists to stay clear of the door zone



Placement of shared lane markings within the travel lane

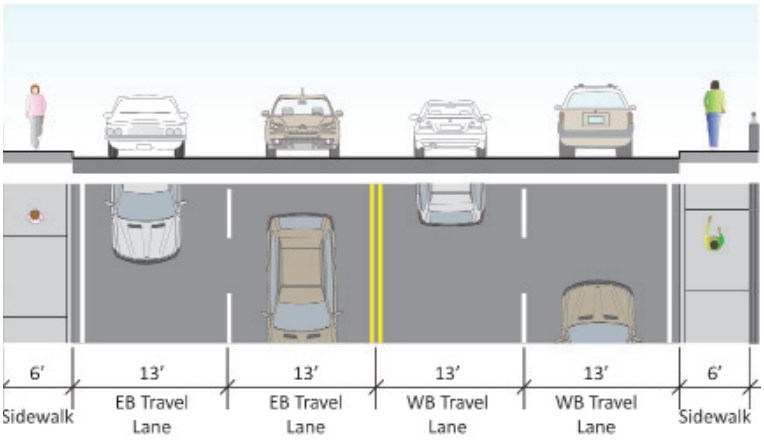
River Street will potentially be utilized as an on-street connection for a short stretch of the Blackstone River Bikeway between Thunder Mist Falls and just north of Sayles Street. It is recommended to stripe the existing 30-foot roadway with 11-foot travel lanes, creating a 4-foot shoulder along the curb. Although bicyclists have the legal right to ride in the travel lane, some will feel more comfortable in the shoulder. Bike route and Blackstone River Bikeway signage should be concentrated along this stretch. With potential long-term redevelopment, considerations may be made for constructing a path along River Street frontage.

Plan view of a 4-foot shoulder adjacent to an 11-foot lane

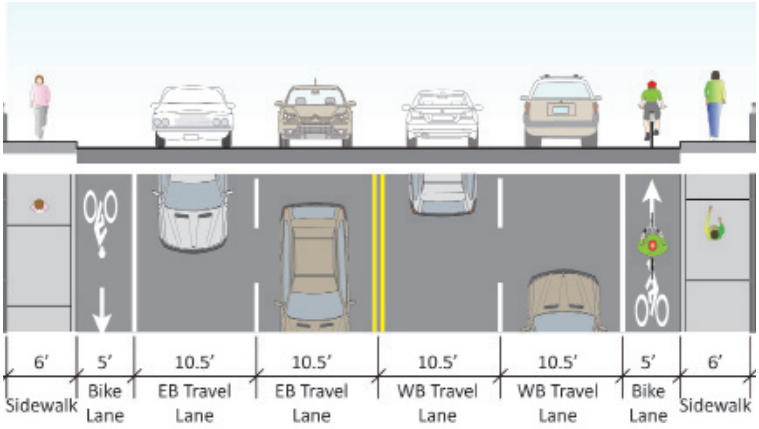
Bike Lanes

Designated exclusively for bicycle travel, bike lanes are designated with striping, pavement stencils and signage. Bike lanes are most appropriate on arterial and collector streets where higher traffic volumes and speeds warrant a separated space for cyclists. Bike lanes are striped adjacent to the edge of pavement, a curb or parked cars. A buffer may be added to offer greater separation from vehicular traffic or from the door zone of parked vehicles adjacent to the bike lane. Buffers 3-feet wide or greater should be hatched, either with diagonal lines or chevrons.

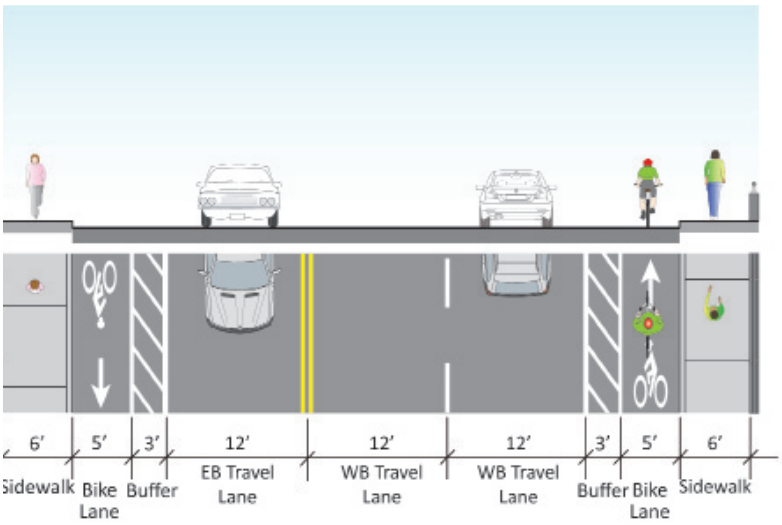
In Woonsocket with the future construction of the Blackstone River Bikway, the Bernon Street Bridge will become an important link to access the Bikeway as well as downtown Woonsocket. On the Bernon Street Bridge, travel lanes can be reduced to 10.5 feet in order to install five-foot bike lanes. If more detailed traffic studies indicate the viability of a three-lane cross section on the bridge, a buffered bike lane would be ideal to create separation from vehicular traffic (see next page). If, ultimately, a traffic roundabout is approved and implemented at the Truman Dr/Bernon St intersection, an appropriate transition for the bike lanes to and from the roundabout will be necessary.



Bernon Street Bridge existing conditions



Bernon Street Bridge bike lanes - narrowing travel lanes to create space for standard bike lanes



Bernon Street Bridge preferable option - removing one travel lane to create space for buffered bike lanes in both directions (further study needed)

Potential intersection of Bernon Street and Truman Drive if reduction of Bernon Street Bridge to three lanes is shown to be viable

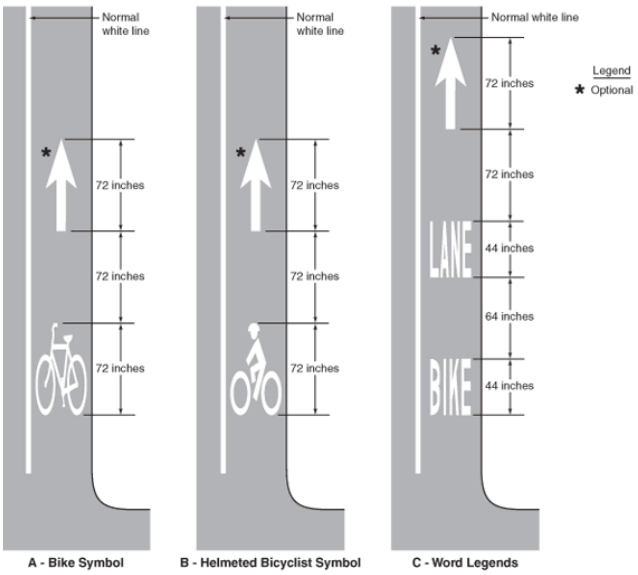
Bike Lanes Design Guidance

Recommended widths:

- 5 feet minimum
- Buffer zone minimum is 1.5'; 3' is preferred

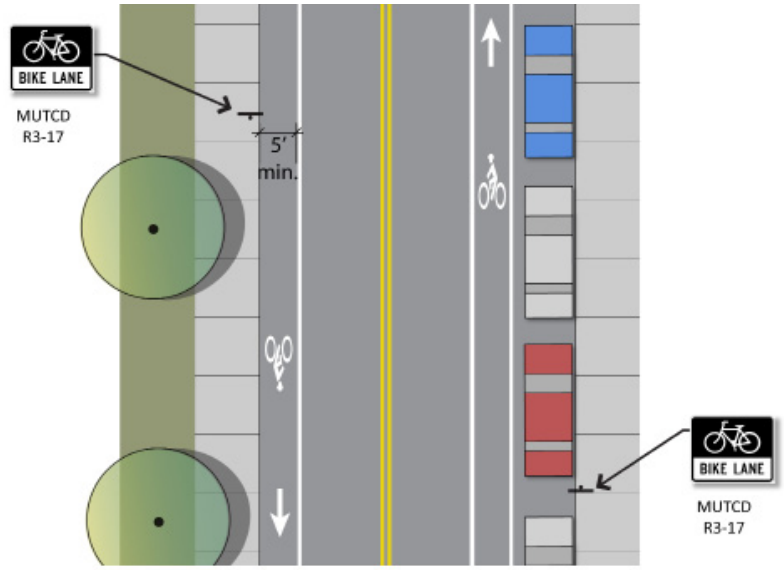
Guidance:

- Federal 2009 MUTCD
- AASHTO Guide for the Development of Bicycle Facilities
- NACTO Urban Bikeway Design Guide, Second Edition



MUTCD recommended dimensions for bike lane pavement markings

A bike lane on a bridge in Portland, Oregon



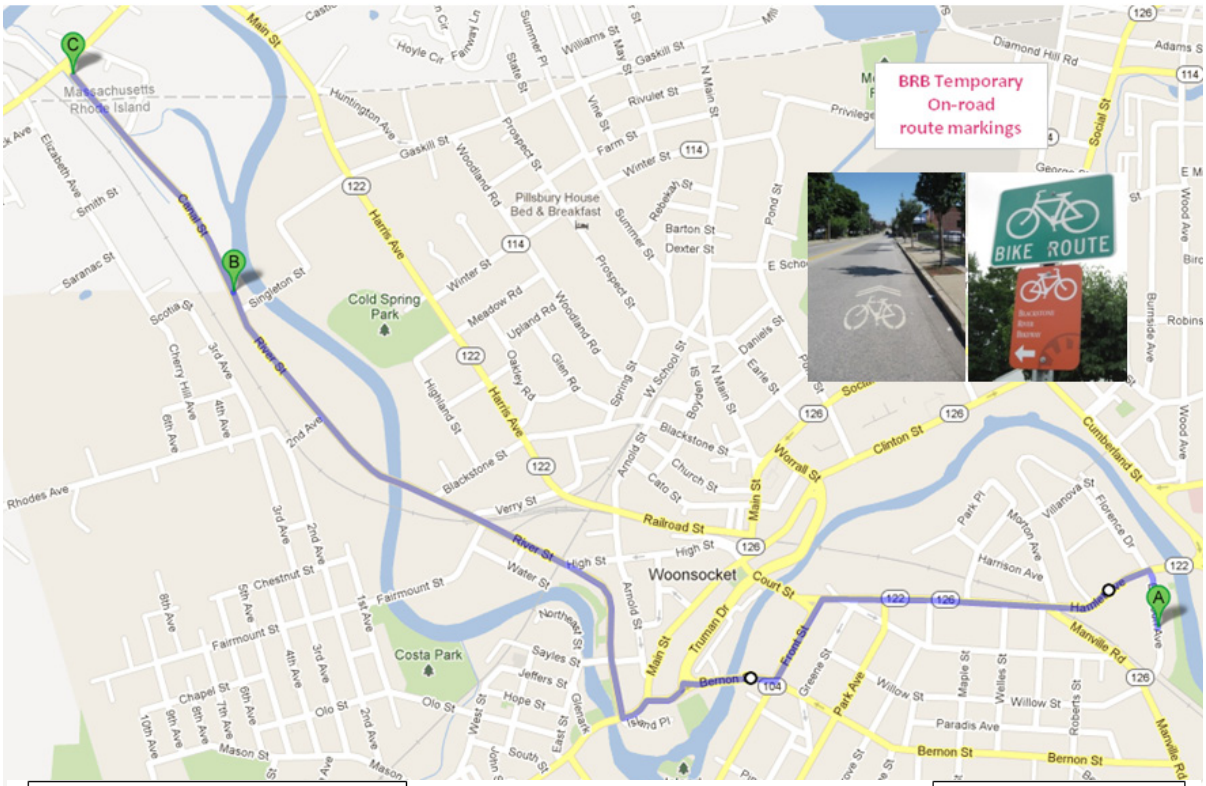
Plan view of standard bike lanes

Multi-use Path - Blackstone River Bikeway

The Blackstone River Bikeway currently consists of a segment of path near Worcester, Massachusetts and a segment between Woonsocket and Providence, Rhode Island. The goal is to develop a 48-mile path connecting Worcester and Providence. In Woonsocket, there is an opportunity to route the bikeway within the Truman Drive right-of-way. By removing a travel lane, space is created to convert the sidewalk into a 10-foot path with a 5-foot buffer against the nearest travel lane (option 1). It is recommended that this buffer include a physical barrier. (Currently, there is an approved route for shared lane markings or sharrows on River Street, Main Street, Bernon Street, Front Street and Hamlet Avenue as part of the planned Blackstone River Bikeway. See the map below, which was provided by the City of Woonsocket.)

Because of the low traffic volumes on Truman Drive, consideration should be made for eliminating two travel lanes and constructing a 12-foot path in addition to the existing sidewalk (option 2). This would better accommodate a variety of path-users and would create an opportunity for a greenway corridor with ample space on either side of the path for tree plantings, lighting and benches. The following page shows the existing conditions of Truman Drive as well as the two options for improving the roadway as described above.

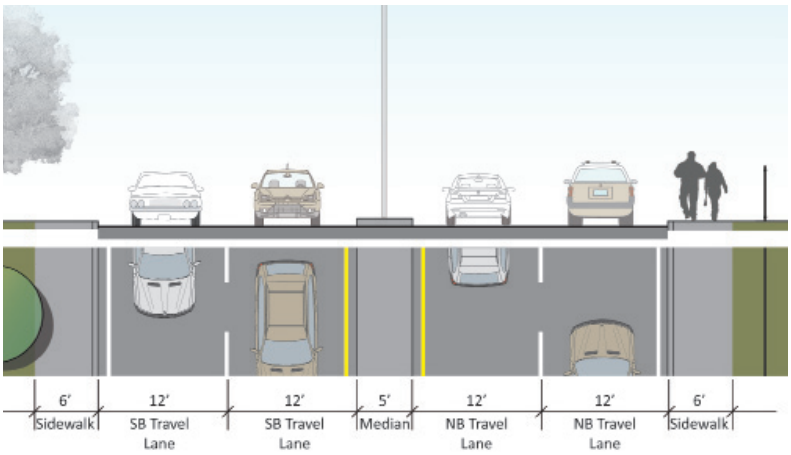
One of the key design elements with the Blackstone River Bikeway is its continuation to Main Street through the Truman Drive/Bernon Street intersection. Currently, there is a plan to develop a roundabout at this location in the future. If and when this is approved and implemented, care should be taken to insure a seamless connection through the roundabout for path users. In either case, the Bikeway's crossing should warrant additional signage and a wider crosswalk.



C = Approximate location where future Blackstone River Bikeway will cross Canal St., in Blackstone, MA

B = Woonsocket/North Smithfield line

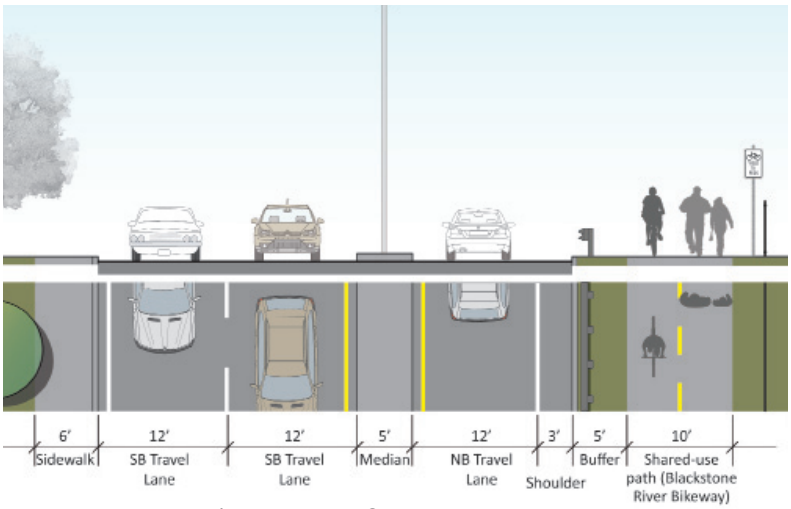
A = parking lot for BRB at Rivers Edge Soccer Fields



Truman Drive existing conditions

Truman Drive existing conditions:

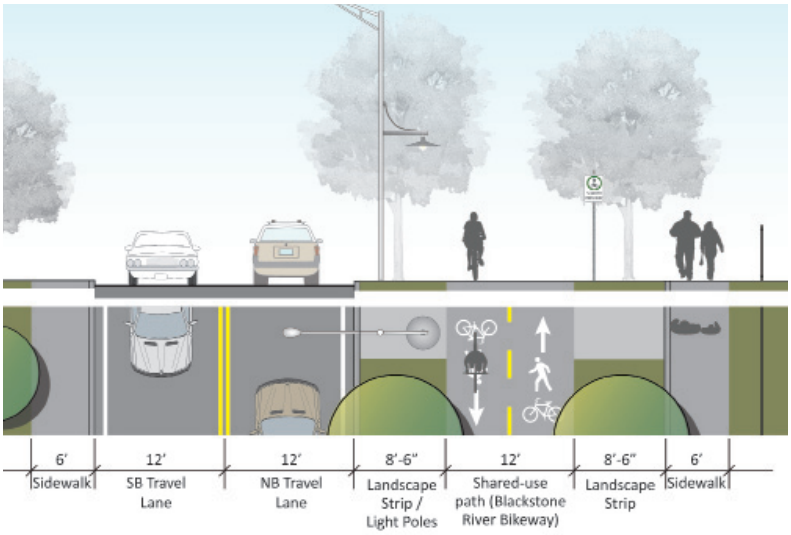
- Two travel lanes in each direction separated by a 5' median
- 6' sidewalks on either side
- Approximately 70' right-of-way



Truman Drive option 1 - current RIDOT proposed design

Truman Drive option 1:

- Eliminate easternmost travel lane
- Replace sidewalk with 10' shared use path to accommodate Blackstone River Bikeway
- 5' buffer between roadway and path with heavy timber rail



Truman Drive option 2 - enhanced greenway corridor

Truman Drive option 2

- Eliminate both northbound travel lanes
- Convert remaining lanes to two-way travel
- Maintain existing sidewalk
- Construct 12' shared use path with 8'-6" landscaped strips on either side

Multi-use Path Design Guidance

Recommended widths and clearances:

- Recommended width 10 feet; where volumes of and variety of users is expected to be high (i.e. pedestrians, jogger, cyclists, in-line skaters) , 12 - 14 feet is recommended
- A minimum of 2 feet of lateral clearance on either side of the path
- Overhead clearance should be 8 feet minimum with 10 feet recommended

A 4-inch wide yellow center line stripe to separate opposite directions of travel may be considered. This stripe should be broken where adequate passing sight distance exists, and solid in other locations or where passing by bicycles should be discouraged.

Multi-use paths within the road rights-of-way (sidepaths) should have a buffer of at least 5 feet from the curb of the roadway. If the buffer between the path and the roadway is less than 5 feet, then a barrier or railing is necessary. Sidepaths are considered appropriate where there are minimal cross streets and driveways to disrupt the path such as on Truman Drive.

Guidance:

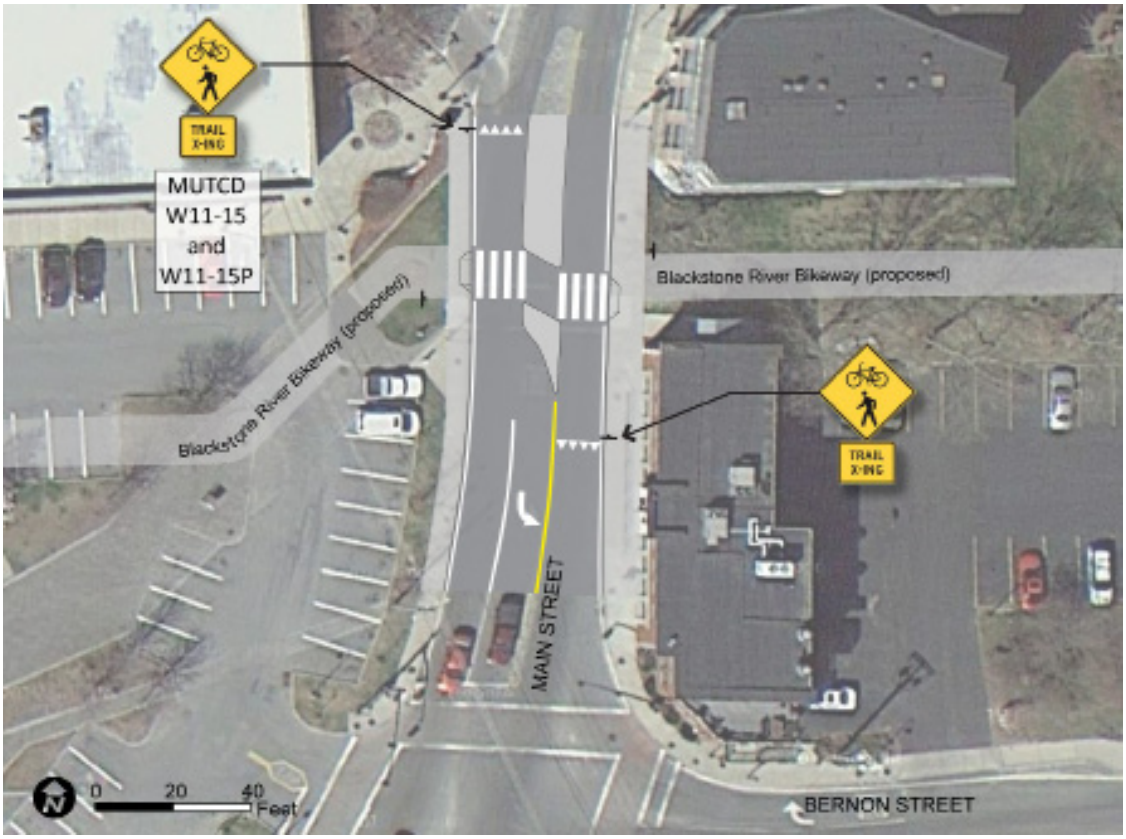
AASHTO Guide for the Development of Bicycle Facilities

Example of a shared use path along a river

Example of a sidepath configuration along the Charles River Basin in Newton, Massachusetts

Path Crossing

At the location where the proposed Blackstone River Bikeway would cross Main Street, there is currently a cobblestone median that could be converted to a refuge island for path users. There is adequate space to construct a 10-foot median, which would accommodate cyclists with trailers or tandem bikes. It is recommended that the refuge island be angled to provide path users with maximum visibility of oncoming traffic.



Potential Blackstone River Bikeway crossing of Main Street; an angled refuge island provides path-users with maximum visibility of oncoming traffic

Path Crossings Design Guidance

Design Summary:

In locations where a shared use path must cross a roadway, special attention should be given to road markings and signage. In addition, where space permits, construction of a median may be used to enhance safety for path users.

- At mid-block path crossings, pedestrian signals may be warranted depending on the traffic speeds, anticipated volume of pedestrians using the crossing, and site lines.
- Where space permits, an unsignalized crossing may include a refuge island, and it may be angled for path-users to have maximum visibility of ongoing traffic. In order to accommodate cyclists, it should be a minimum of 8-feet wide
- Signage and shark teeth markings on the road alert drivers that they are approaching a path crossing
- The approach to the crossing should remain unobstructed so that drivers have a clear view of path users

Guidance:

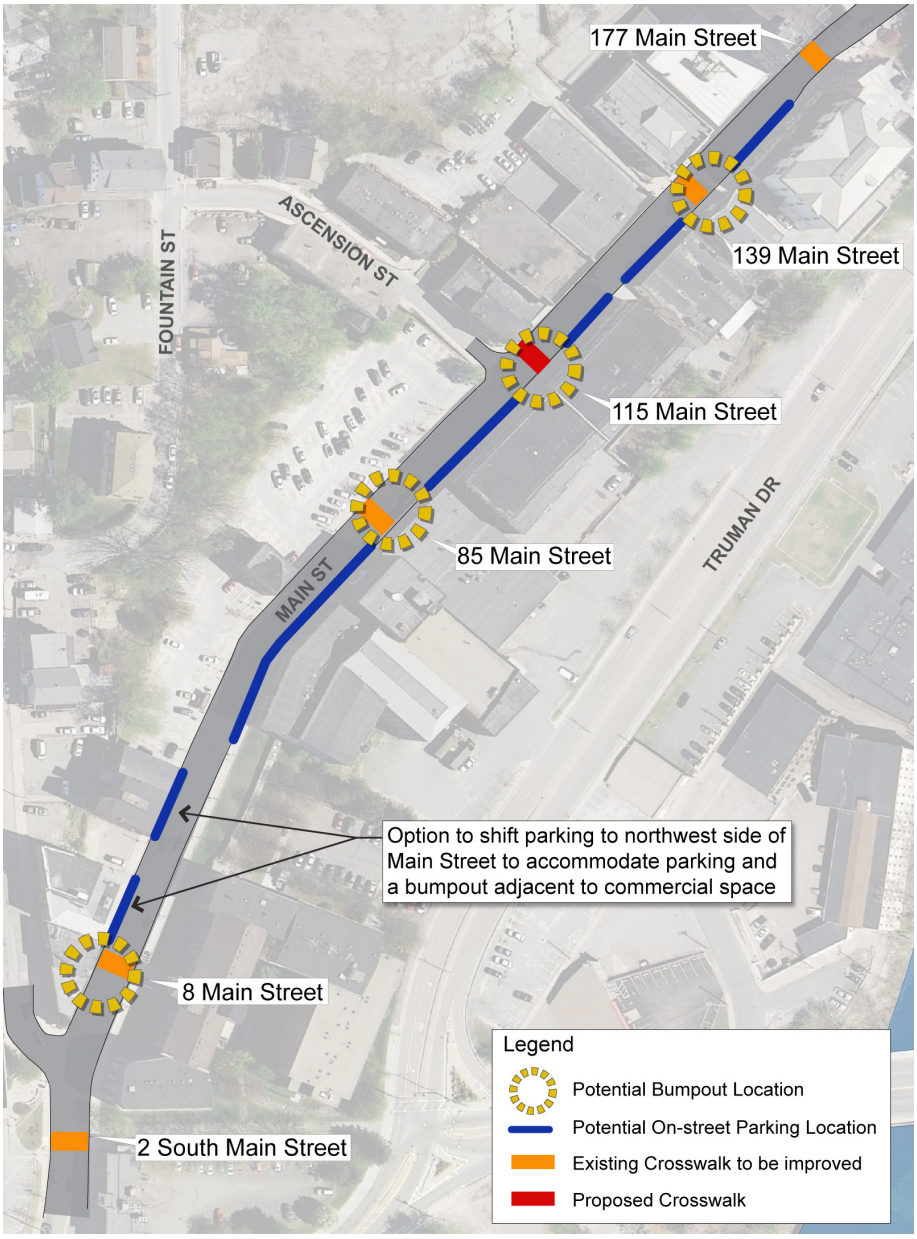
- Federal 2009 MUTCD
- AASHTO Guide for the Development of Bicycle Facilities

Offset median crossing for a path in Eugene, Oregon

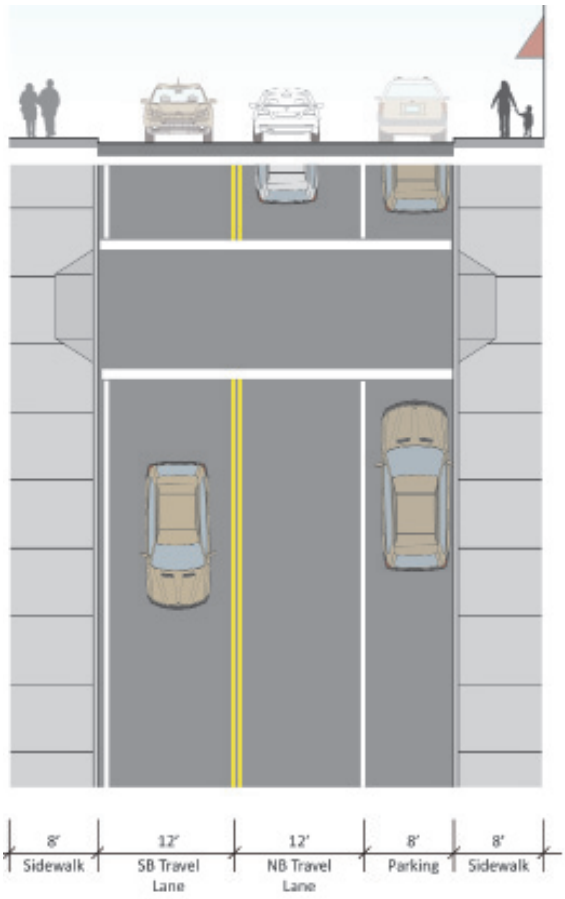
Pedestrian Improvements

It is recommended that the City install high-visibility crosswalks at key mid-block and uncontrolled intersection crossings. Both types of crosswalks are permitted under certain conditions according to MUTCD 2009 Edition, Section 3B.18 and AASHTO's Guide for Planning, Design and Operation of Pedestrian Facilities, Section 3.3.4.

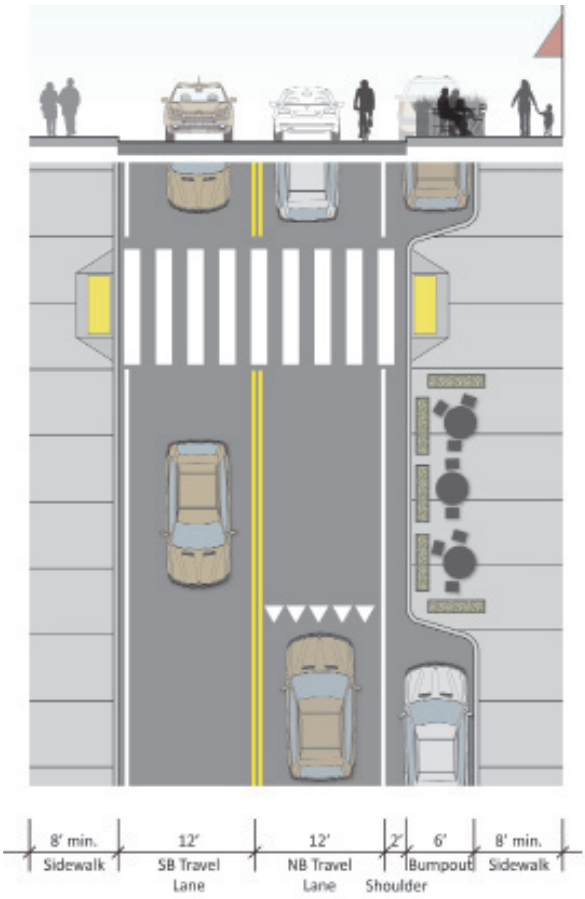
Sidewalk bumpouts are also proposed at four locations along Main Street as shown below. Their locations were selected based on their proximity to commercial store fronts and existing or proposed crosswalk locations. The following page shows the existing conditions of Main Street and a proposed bumpout on Main Street. A photo rendering of a proposed bumpout on Main Street has also been provided.



Proposed bumpout locations



Main Street existing conditions at mid-block crossing location



Main Street with a proposed bump out provides space for seating and a shortened crossing distance

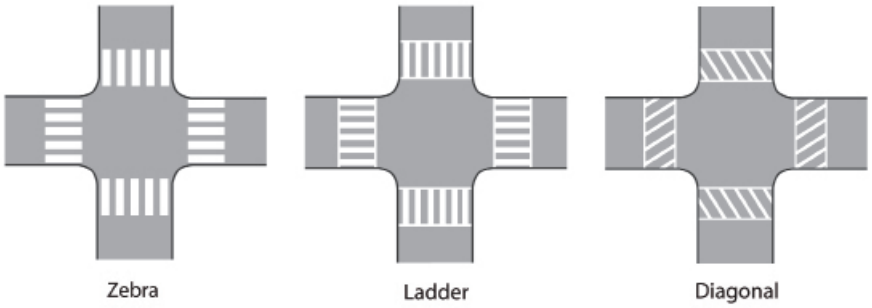
Elongated sidewalk bumpouts can provide space for cafe-style seating along Main Street

Pedestrian Improvements Design Guidance

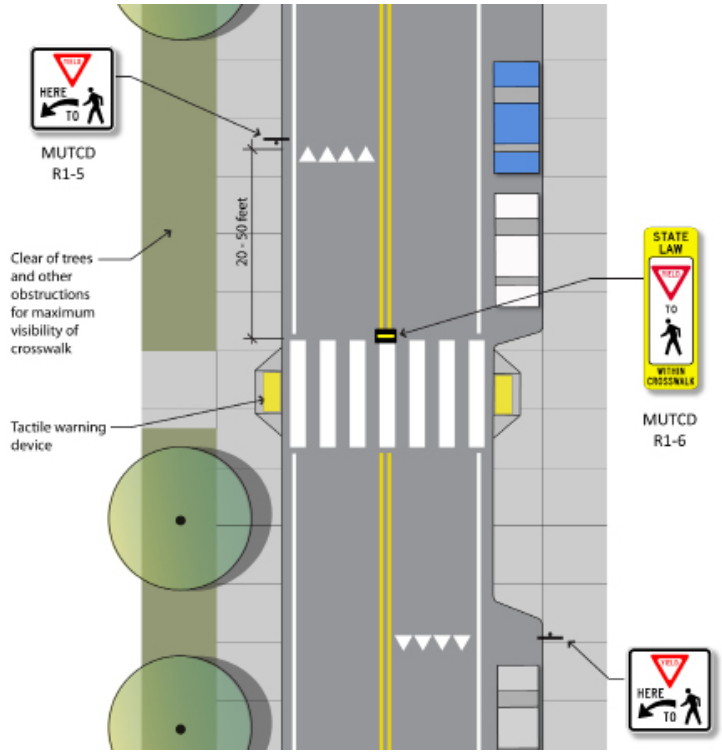
It is recommended that the City install high-visibility crosswalks at key mid-block and uncontrolled intersection crossings. As noted earlier, both types of crosswalks are permitted under certain conditions.

Sidewalk bumpouts are installed along streets with curb side parking in place of one or more parking space. Typically, they are used to shorten an uncontrolled crossing for pedestrians. Along Main Street, this plan recommends long bumpouts to expand the sidewalk for uses such as outdoor seating, landscape features, and bike parking.

At all proposed crosswalk locations, such as at the mid-block crossing of Truman Drive, more detailed engineering studies should be performed to determine which other safety improvements may be needed. This could include warning signage, refuge island, enhanced lighting, advanced yield markings (a.k.a. "shark's teeth") or potentially ped-activated flashing beacons.



Three types of high-visibility painted or thermoplastic crosswalks



Plan view of a high-visibility crosswalk, signage and bump out

Trail Rest Area

Trail rest areas provide path users - potential users of the planned Blackstone River Bikeway - with a designated place to rest and get information about the surrounding area. For those interested in using the path, it would include a map of the path route.

The existing plaza at the corner of the Main Street and Arnold Street is an optimal site for trail rest area for those arriving via the Blackstone River Bikeway. From this location, path users would obtain information about the businesses and attractions in downtown Woonsocket and would have a clear route up Main Street. The existing plaza could be supplemented with an informational kiosk, bike racks, additional seating and trash cans.

Potential trail rest area location for Blackstone River Bikeway users at the corner of Main Street and Arnold Street

Monument Square Pedestrian Improvements

Monument Square is positioned at the intersection of Main Street and Social Street at the northern boundary of downtown Woonsocket and is home to the Woonsocket Civil War Monument. In the current configuration, pedestrians do not have an option to cross directly through the square; instead, they must walk to the outer edges of the square for access to a crosswalk.

In its current configuration, Main Street to the south of Monument Square has one travel lane in the southbound direction with parking on both sides; north of the square, it is two-way. Social Street is one-way with two southbound travel lanes The only traffic control in the Square is a stop sign for motorists travelling south on Main Street.

By enlarging the island that contains the monument, adding traffic signals and converting Main Street and Social Street to two-way travel, pedestrians are able to follow a more direct line of travel through the square. In addition, pedestrians will cross at a signal, or at an uncontrolled location that requires crossing only one travel lane.

Proposed improvements include an enlarged island, two-way traffic and new crosswalks

Existing conditions in Monument Square

Pedestrian/Bicycle Ramp

Pedestrian/bicycle ramps may provide important connections where an at-grade connections are not an option. These ramps should be ADA compliant. In the 2010 plan, *Connecting our Heritage: A Wayfinding Master Plan for Downtown Woonsocket*, recommendations to connect Clinton St / Main St to Truman Dr and the riverfront include the following:

- A switchback ramp on City property north of the rail road trestle, connecting the parking lot on Clinton Street to the west side of Truman Drive
- A path on private property south of the railroad trestle, connecting Clinton Street to the west side of Truman Drive
- A switchback ramp through Main Street Park, connecting the park to the west side of Truman Drive

For additional consideration, a long-term solution for an ADA and bicycle connection from the Blackstone River Bikeway to Depot Square and the heart of Downtown could include a switchback ramp from the north (downriver) side of the Court Street Bridge down to the river and the bikeway. The impacts of such a ramp would need to be further studied before pursuing this solution. For example, negative impacts could include blocking viewsheds, while positive impacts could include providing a direct connection between the Bikeway and Main Street without requiring Bikeway users to cross Truman Drive. A coupling of the ramp project funding with the rehabilitation of the stairs in the Main Street Park should be considered. This would function in complement to the Truman Drive/Bernon Street intersection access point to the Bikeway, further upriver.

A ramp in Portland, Oregon provides pedestrians and bicyclists access over a rail line

Crime Prevention Through Environmental Design

This Plan recommends that the City consider Crime Prevention Through Environmental Design (CPTED) principals with the implementation of public and private-sector projects moving forward. CPTED is defined as "the proper design and effective use of the built environment that can lead to a reduction in the fear and incidence of crime and an improvement in the quality of life." The basic premise of CPTED is that the arrangement and design of buildings and open spaces can encourage or discourage undesirable behavior and criminal activity. All space should have a defined use and the use should be clearly legible in the landscape. The four key CPTED principals include the following:

- Natural Access Control, including the placement of entrances, exits, fencing, landscaping and lighting
- Natural Surveillance, including the placement of physical features, activities and people to maximize visibility
- Territorial Reinforcement, including the use of physical attributes such as fences, paving materials, public art, signage and landscaping to convey ownership of the space
- Maintenance to allow for the continued use of the space for its intended purpose

Specific design recommendations will need to be customized for each individual private development or public open space project in the future. Recommendations often include the following:

- Clearly defining access points
- Highly visible public walkways and paths
- Comprehensive wayfinding system
- Improved sight lines
- Implementing uniform and efficient lighting
- Routine maintenance program

Bicycle Parking

To complement the existing artistic bike racks, bike parking should also be installed at locations where demand will be highest, such as at businesses, schools and government buildings. In addition, they should be installed at local attractions, parks, and at key access points to the Blackstone River Bikeway. The small map below suggests potential locations for new bike racks downtown.

A bike rack adjacent to the Woonsocket City Hall at 169 Main Street that was painted by teen artists from Riverzedge Arts Project

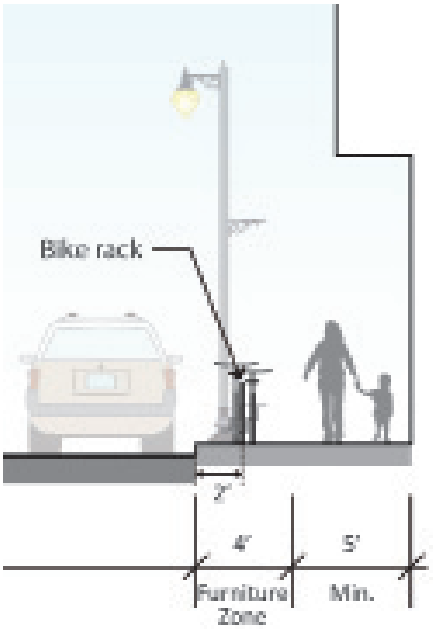
A bike rack at 1 Social Street, also painted by teen artists, maintains adequate sidewalk clearance

Bike Parking Design Guidance

It is important to provide adequate parking for cyclists in order to encourage visitors and commuters to travel downtown by bike and to prevent bikes being locked to trees, fences or other structures not intended for this use. Bike parking can be provided in the form of single racks, or when volumes of cyclists are significant, high-capacity racks. Providing secure, covered bike parking at transit stops creates new opportunities for commuters and other travelers to get to their destinations.

Design Summary:

- Bicycle racks should be designed in a way that is intuitive and easy to use.
- Bicycle racks should be securely anchored to a surface or structure.
- Empty racks should not pose a tripping hazard for visually impaired pedestrians. Position racks out of the walkway's clear zone.
- When installing multiple racks, position racks so that there is enough room between parked bicycles. Racks should be situated on 36-inch minimum centers.
- Racks installed in a sidewalk condition are typically positioned parallel to the curb with a minimum distance to the curb of 24 inches (from the nearest vertical element of the rack); sidewalks need to be a minimum of 9 feet to provide adequate pedestrian clearance.
- Racks should be located close to a main building entrance in a well-lit, highly-visible area.
- In a commercial corridor, it is important that bike racks are convenient to many business and storefronts; they should be placed at approximately 50 to 75-foot intervals or in an interval consistent with other streets furnishings.
- Where demand is high and space permits, install high-capacity racks, typically accommodating 4 to 8 bikes.



A bike rack positioned within the furniture zone, parallel to the curb

Streetscape Design Toolkit

A Streetscape Design Toolkit is provided for the City of Woonsocket to consider a variety of options to enhance the Main Street District. While many streetscape amenities can enhance a community or street's appearance, a good streetscape plan should also work well for all the users, including pedestrians, bikes, cars and transit incorporating a Complete Streets methodology. Each component of the toolkit should be carefully considered when adopting them to determine which options are most important and applicable to the City - how they will they impact City budgets and circulation in the downtown. For example, an important short-term goal should be to upgrade universal accessibility in all areas of the downtown. There are many ADA compliancy issues, and all pedestrian walkways should be brought up to the most recent code requirements. A longer-term strategy would include the introduction of curb extensions and street trees along the north ends of Main and Clinton Streets. While their "right of way" widths are very narrow and subsurface infrastructure challenges exist, there are still creative options to incorporate trees into a streetscape plan, which have been identified in the following Streetscape Design Toolkit diagrams.

The components of this toolkit support and advance the recommendations of the 2010 plan, *Connecting our Heritage: A Wayfinding Master Plan for Downtown Woonsocket.* All of the streetscape elements mentioned in this toolkit are quite important for developing a successful streetscape. The City should understand that these elements along with a commitment to a Complete Streets approach are the key ingredients to a truly successful streetscape. Smart Growth America outlines four key steps to successfully implementing a Complete Street's policy, including the following:

1. Restructure and revise related procedures, plans, regulations and other processes to accommodate all users.

2. Develop new design policies and guides or revise existing to reflect the current state of best practices in transportation design.

3. Offer workshops and other training opportunities to staff and the public

4. Develop and institute better ways to measure performance and collect data for street and pedestrian use.

STREETSCAPE TOOL KIT: OVERALL CONCEPT

Streetscape Amenities

Extending streetscape amenities along Main Street and Clinton Streets will enhance the character and safety of the downtown area.

Parking Lot Edges

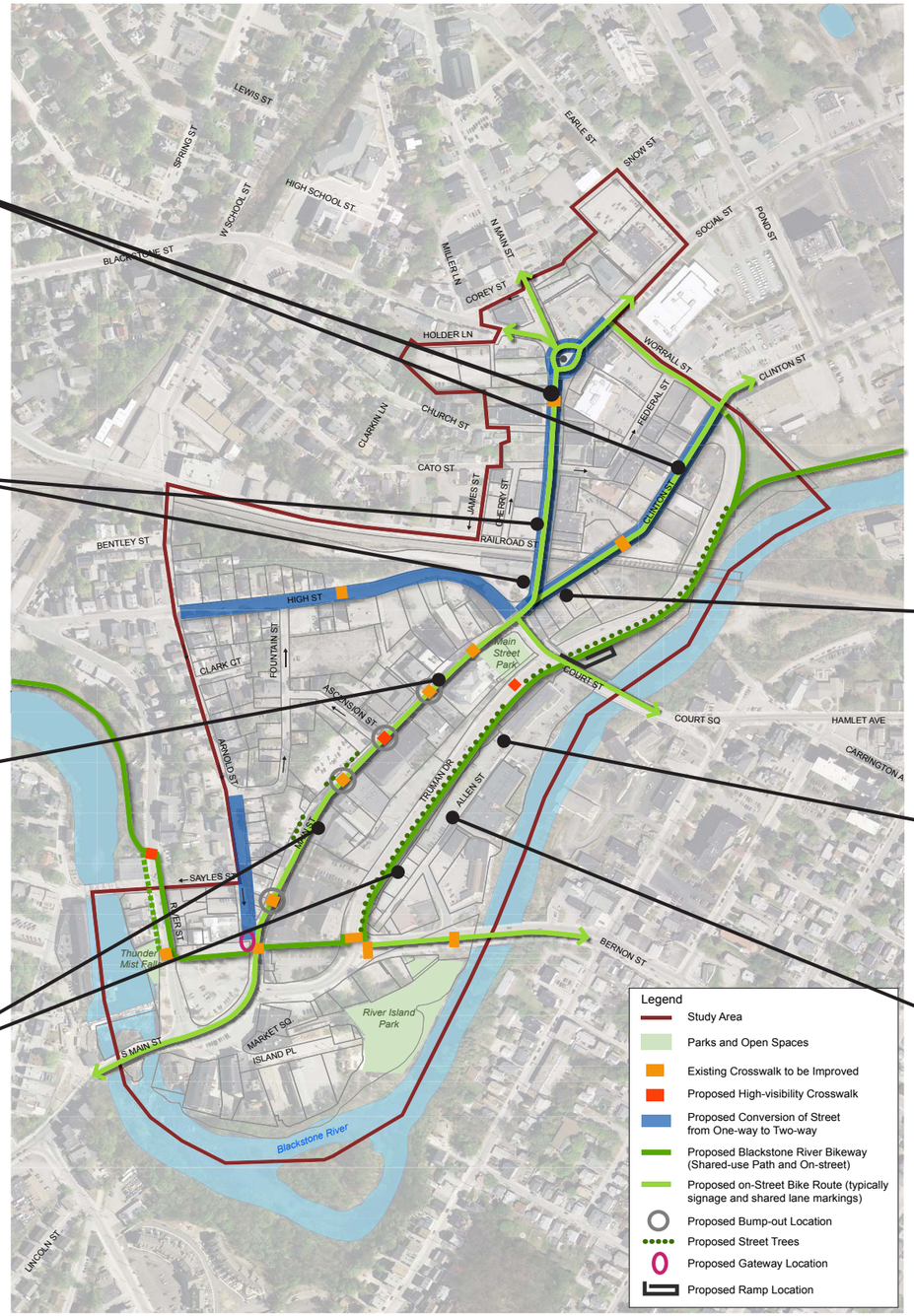
Many of the adjacent parking lots can be screened with creative landscape treatments that will further enhance the streetscape theme and pedestrian experience.

Curb Bumpouts and Street Trees

Curb extensions could provide a more attractive and safer streetscape environment while also accomodating more spacious sidewalk space for pedestrian seating, plantings and amenities especially within limited right of ways.

Wayfinding / Signage

Wayfinding and signage are key elements to be considered within the overall streetscape theme, and they should be coordinated with the 2010 Wayfinding Master Plan by VHB, Inc.



STREET DESIGN DIAGRAM

NTS

Improved Intersections

Decorative crosswalks, pedestrian refuge islands and curb extensions at Monument Square would significantly improve the appearance, pedestrian safety and vehicular movements.

Landscaped Strips

Landscaped strips on Truman Drive will enhance the roadway appearance and scale while effectively seperating pedestrians, bicyclists and vehicular traffic.

Sidewalk Improvements

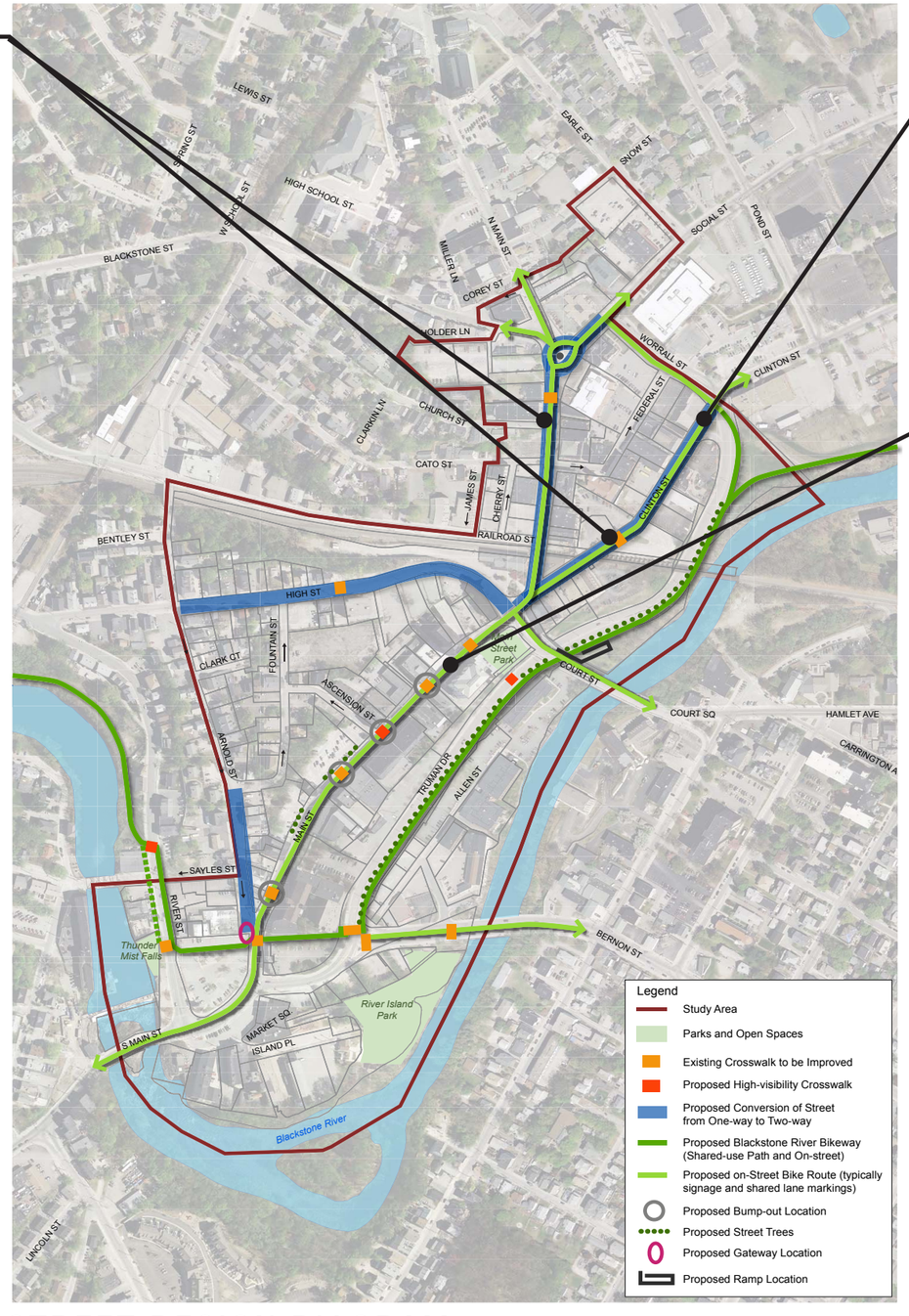
Improved sidewalks with brick accent bands, updated ADA ramps and scored concrete walks will create a more pleasant and safer experience for all pedestrians.

STREETSCAPE TOOL KIT: STREETSCAPE AMENITIES

Streetscape Amenities

A combination of streetscape furniture, planters, lighting and street trees creates an inviting streetscape appeal.

Bike racks, trash receptacles and bollards are functional elements that strengthen the continuity and theme of a streetscape.



STREET DESIGN DIAGRAM

NTS

Wayfinding / Signage

Wayfinding and signage by Merk, Inc.

Improved Sidewalks

Well-defined sidewalks containing brick bands and scored concrete walkways make accessibility more universal for all users.

Interesting paving patterns can help to create a unique identity.

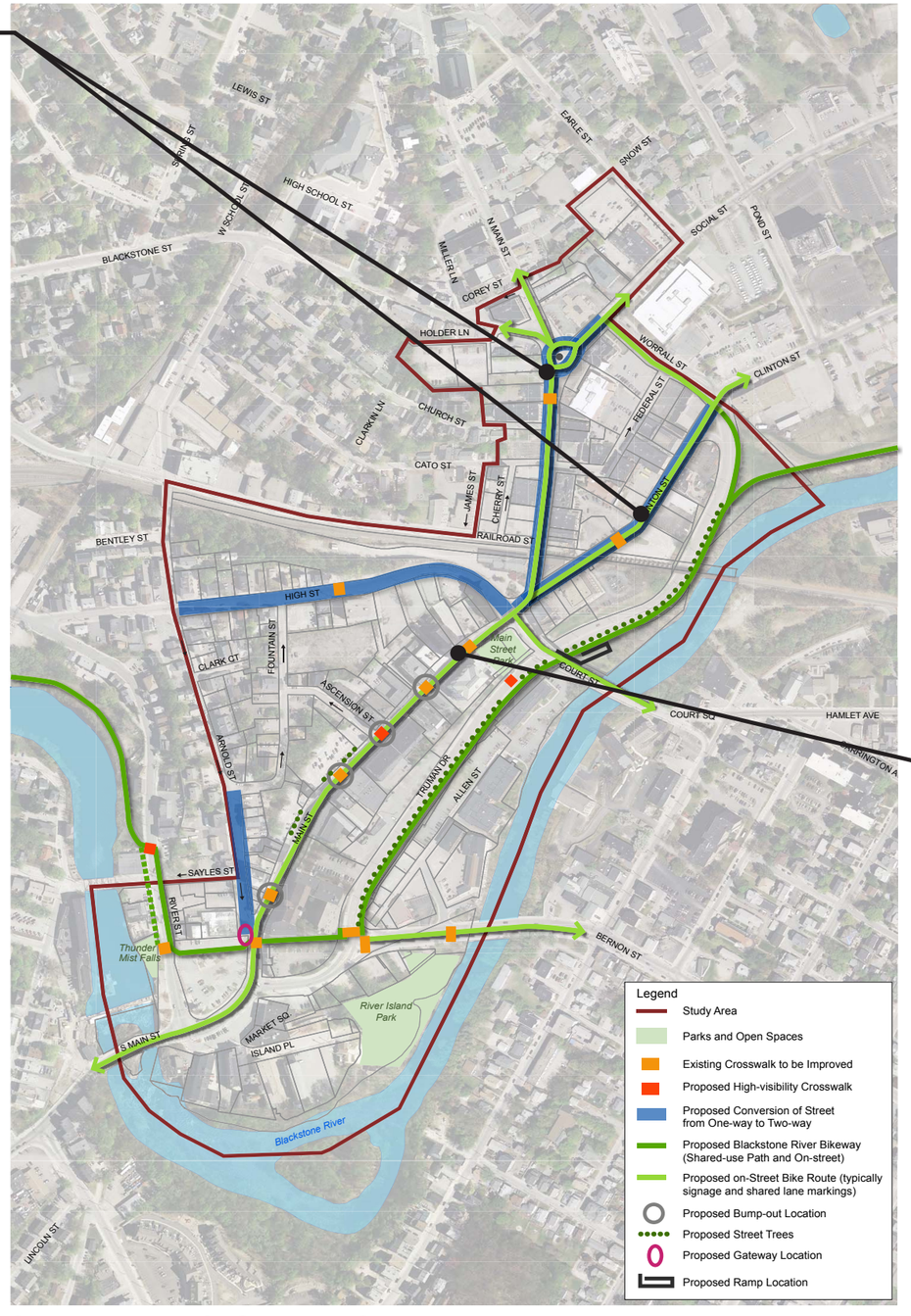
STREETSCAPE TOOL KIT: CURB EXTENSIONS

For Pedestrian and Stormwater Use

Bumpouts can be utilized to accomodate bio-infiltration as a Low Impact Development (LID) strategy for treating stormwater runnoff.

Bumpouts create valuable opportunites for accomodating many amenities and valuable use areas.

Parklets are a temporary form of bumpouts that provide attractive spaces at key locations along a streetscape.



STREET DESIGN DIAGRAM

NTS

Bumpouts can also accomodate street trees, light poles, utilites and other streetscape amenities when walkways are too narrow.

For Street Trees

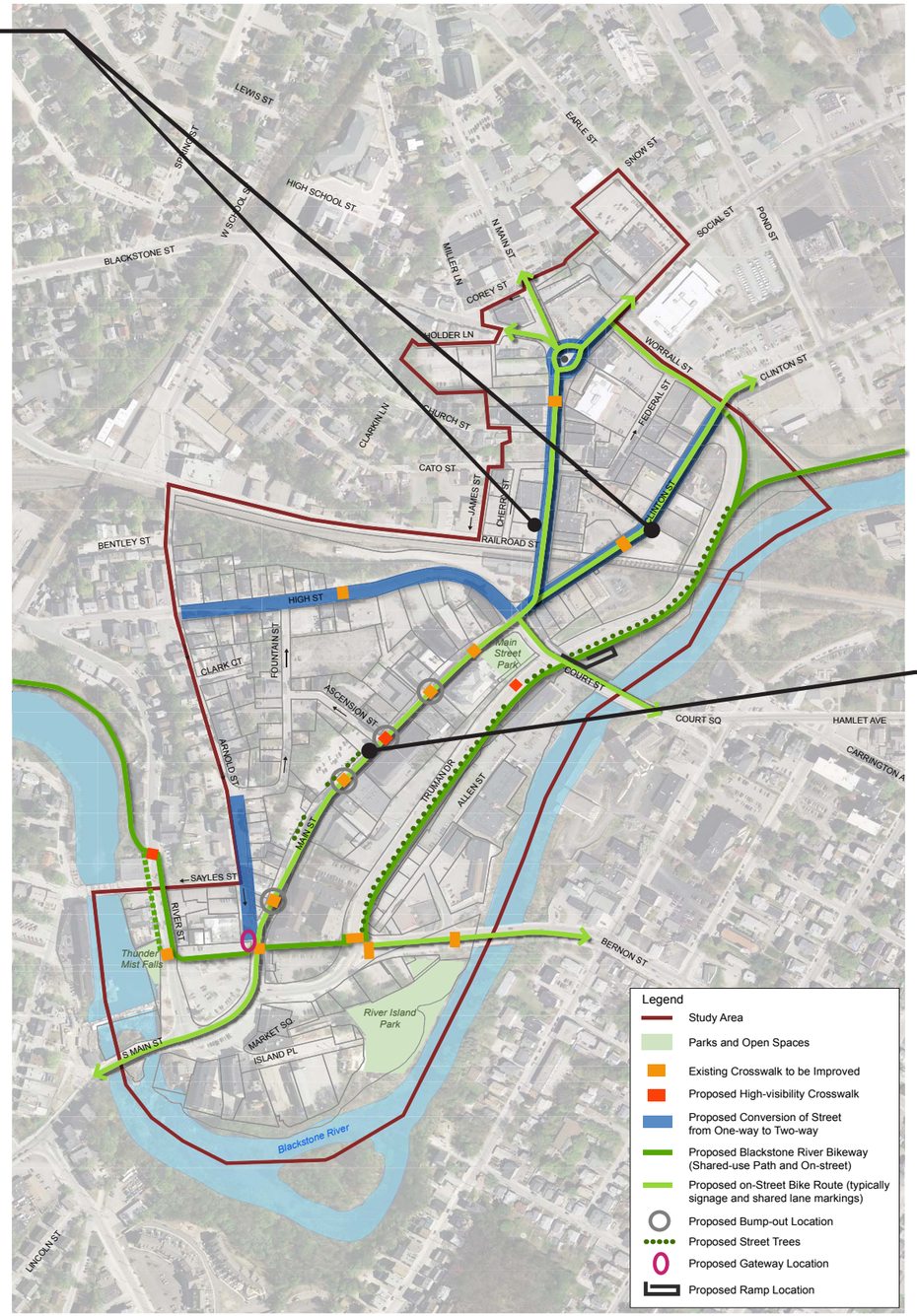
Bumpouts containing trees should be protected with verticle elements appropriate for streetscape applications, including attractive and durable bollards.

STREETSCAPE TOOL KIT: PARKING LOT EDGES

Parking Lot Edges

Native and durable plants can be used to soften or buffer adjacent parking lots.

A combinaiton of hardscape features and plants provide a more durable and attractive edge while also enhancing the streetscape theme.



STREET DESIGN DIAGRAM

NTS

Portable planters are a convenient screening alternative, especially when they must be located outside of the right of way.

Improved Sidewalks

Decorative fence structures that support native vines are effective screening treatments within very narrow landscape strips.

Concept Cost Estimates

The consultant team developed order-of-magnitude cost estimates for many of the recommended infrastructure improvement concepts. A summary of the cost estimates is provided in Chart 9, and detailed breakdown has been provided in Appendix G.

The consultant team has also provided in Appendix H a list of funding sources that could be used to complete some of the recommendations in this report.

Chart 9 Cost Estimates

Project	Estimated Cost
Truman Drive Conversion*	$2,394,642
Bike/Ped. Ramp to Court St. Bridge	$7,500,000
One-way to Two-way Conversions	$1,273,125
Parking and Bike/Ped. Wayfinding	$24,960
Main St. Bike/Ped. Improvements**	$365,550
Clinton St. Bike/Ped. Improvements	$5,925
Bernon St. Bike Lanes	$10,752

Source: Fitzgerald & Halliday, Inc. and Alta Planning + Design

* *The roundabout alternative for Monument Square is expected to be comparable in cost to the signalized intersection included in this cost estimate. While the roundabout would require additional roadway and sidewalk modification, these costs would be offset by savings due to the lack of a need for a new signal system.*

** *This includes $200,000 for four proposed bumpouts on Main Street ($50,000 each).*

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V. Implementation

To help advance the recommendations in this plan, the consultant team has provided an Implementation Matrix on the following page. The matrix summarizes the key recommendations described in this plan and provides champions, other key organizations, timeframes and potential resources as described below. References to the associated section and/or page number in this WMSPL are also provided. Woonsocket City Planner Jennifer Siciliano and members of the Steering Committee assisted in the development of the Implementation Matrix.

- Champion: This is the lead City of Woonsocket department, board, official or committee that should be involved in making decisions or carrying out actions to advance the associated recommendation.
- Other Key Organizations: These are private or non-profit entities or organizations that could work with the City of Woonsocket to complete the associated recommendation.
- Timeframe: This is the expected timeframe for completing each recommendation. The timeframes reflect the level of priority for each recommendation and should be used to phase the recommendations over time. Short-term recommendations are to be identified and completed in one to two years, mid-term recommendations are to be completed in three to five years, and long-range recommendations are likely going to take more than five years to complete. Recommendations shown in the implementation matrix as short-, mid- *and* long-term represent efforts that should be ongoing.
- Potential Resources: These are funding sources that could potentially support the associated recommendation. These funding sources are subject to change, and additional funding sources could also be available.

In the Implementation Matrix, the abbreviations mean the following:

Abbreviation	Organization
DPD	Woonsocket Department of Planning and Development
CC	Woonsocket City Council
PB	Woonsocket Planning Board
EDD	Woonsocket Economic Development Department
WMSLP Steering Committee	Woonsocket Main Street Liviability Plan Steering Committee
DPW	Public Works and Engineering
MSRI	Main Street Riverfront Initiative
RIDOT	Rhode Island Department of Transportation
RI DEM	Rhode Island Department of Environmental Management
RIPTA	Rhode Island Public Transit Authority
Corridor	Blackstone River Valley National Heritage Corridor Inc.

Implementation Matrix

Recommendation	Reference	Champion	Other Key Organizations	Timeframe			Potential Resources
				Short-Term	Mid-Term	Long-Term	
Land Use and Zoning							
Refine and approve proposed Main Street Overlay District and incorporate into Zoning Ordinance	Proposed Overlay District, p. 36-40	DPD	DPD/ PB/ CC	●			
Refine and adopt design guidelines as part of the proposed Main Street Overlay District or existing Design Review Overlay District	Design Guidelines, p. 40	WMSLP Steering Committee	DPD/ PB/ MSRI/ Corridor	●			
Investigate, draft and approve demolition delay regulations	Historic Preservation, p. 41-42	DPD	PB/ CC			●	
Promote the City's Commercial Facade Restoration Grant Program for Main Street	Historic Preservation, p. 42	DPD	EDD/ Website Branding Partners	●			CDBG/ NeighborWorks/ EDD
Establish plan to activate usable open space on City-owned property	Open Space and River Access, p. 42	WMSLP Steering Committee	DPD/ PB/ EDD/ MSRI		●		
Create additional paths from Main Street to the river	Open Space and River Access, p. 42	DPW	DPD/ PB/ EDD/ MSRI		●		CDBG funds
Address safety and other social issues through increased police presence, strengthened partnerships, increased code enforcement and other means	Other Improvements, p. 44	Woonsocket Police Department	WMSLP Steering Committee	●	●	●	CDBG funds
Establish a landscaping and beautification plan		WMSLP Steering Committee	DPD/ PB/ EDD/ MSRI		●		
Traffic							
Conduct feasibility study for one-way to two-way street conversions.	Proposed One-way to Two-way Traffic Conversions, p. 46-53	DPD	RIDOT	●			
Convert High Street to two-way circulation if feasible	High Street, p. 50	DPW	RIDOT		●		CMAQ, STP
Convert Main Street to two-way circulation if feasible; include Depot Square and Monument Square modifications	Main Street, p. 48-49	DPW	RIDOT			●	CMAQ, STP
Convert Clinton Street to two-way circulation if feasible	Clinton Street, p. 50	DPW	RIDOT			●	CMAQ, STP
Convert Arnold Street to two-way circulation if feasible	Arnold Street, p. 51	DPW	RIDOT		●		CMAQ, STP
Conduct road diet on Truman Drive	Truman Drive Road Diet, p. 55	DPW	RIDOT/ RI DEM/ DPD/ EDD/ MSRI		●		TAP, STP

Recommendation	Reference	Champion	Other Key Organizations	Timeframe			Potential Resources
				Short-Term	Mid-Term	Long-Term	
Transit							
Design and construct bus pull-outs and new bus shelters	Bus Accommodation, p. 53-54	DPW	RIPTA/ WMSLP Steering Committee/ PDP		●		RIPTA TransArt Program
At the two main bus stop locations under the railroad line at Depot Square, install new signage, seating and trash receptacles	Bus Accommodation, p. 53-54	DPW	WMSLP Steering Committee/ PDP	●			
Make minor improvements to other bus stops as space permits	Bus Accommodation, p. 53-54	DPW	RIPTA/ WMSLP Steering Committee/PDP	●			
Parking							
Design and implement wayfinding and parking signage	Wayfinding, Parking Facility Branding, Facility Signage, p. 56	WMSLP Steering Committee	DPW/ DPD/ PB/ EDD/ MSRI	●			CDGB
Create parking facility map and guidance	Wayfinding, Parking Facility Branding, Facility Signage, p. 56	WMSLP Steering Committee	DPD/ EDD/ MSRI	●			
Bicycle/Pedestrian							
In conjunction with Truman Drive reconstruction and addition of Blackstone River Bikeway, install new crosswalk on Truman Drive at Main Street Park stairs	p. 58	DPW	RIDOT/ RI DEM/ DPD		●		
Extend Truman Drive treatment along Worrall Street to accommodate a Blackstone River Bikeway/Trail spur connection to Social Street	p. 58	DPW	RIDOT/ RI DEM/ DPD			●	
Add a bike route on the Court Street Bridge, potentially signage and shared lane markings	p. 58	DPW	PDP/ EDD/ MSRI/ WMSLP Steering Committee		●		
Infill sidewalk on the north side of High Street	p. 58	DPW				●	
At the intersection of Main St and Court St, tighten turning radii and stripe high-visibility crosswalks	p. 58	DPW			●		
At the intersection of S Main St and River St, tighten turning radii and stripe high-visibility crosswalks	p. 58	DPW			●		
Improve pathways from Bernon Street through River Island Park to water, and add amenities such as seating, lighting and signage	p. 58	DPW	PDP/ EDD/ MSRI/ WMSLP Steering Committee		●		
Add on-street bike routes to streets feeding into Monument Square (Blackstone St, N Main St and Social St) - potentially signage and shared lane markings	p. 58 and 60-61	DPW	PDP/ EDD/ MSRI/ WMSLP Steering Committee	●			
Add shared lane markings and signage on the South Main Street Bridge	p. 58 and 60-61	DPW	PDP/ WMSLP Steering Committee		●		
Add shared lane markings and/or signage along Main Street from Market Square to Monument Square	Shared Lane Markings, p. 59-61	DPW	PDP/ EDD/ MSRI/ WMSLP Steering Committee		●		

Recommendation	Reference	Champion	Other Key Organizations	Timeframe			Potential Resources
				Short-Term	Mid-Term	Long-Term	
Bernon Street Bridge Option A - narrow traffic lanes and strip 5-foot bike lanes or shoulders	Bike Lanes, p. 63-65	DPW	RIDOT	●			
Bernon Street Bridge Option B - after further study, reduce traffic lanes to three and stripe buffered bike lanes	Bike Lanes, p. 63-65	DPW	RIDOT		●		
Construct Blackstone River Bikeway in conjunction with reduction of travel lanes on Truman Drive	Multi-use Path - Blackstone River Bikeway, p. 66-68	DPW	RIDOT/ RI DEM/ DPD		●		
At the intersection of Bernon St and Truman Dr, add pedestrian and bicycle enhancements in conjunction with Blackstone River Bikeway; if a roundabout is implemented, develop appropriate transition for bicyclists	Multi-use Path - Blackstone River Bikeway, p. 66	DPW	RIDOT/ RI DEM/ DPD		●		
Stripe high-visibility crosswalks at existing crosswalk locations on Main Street	Pedestrian Improvements, p. 71-73	DPW	Woonsocket Police Department, DPD	●			
Stripe new crosswalk at Main St / Ascension St	Pedestrian Improvements, p. 71-73	DPW	Woonsocket Police Department, DPD	●			
Install elongated bumpouts at four locations along Main Street: 8 Main St, 85 Main S, 115 Main St, and 139 Main St	Pedestrian Improvements, p. 71-73	DPW	DPD/ EDD/ MSRI/ Local Business Owners		●		Private
Create Blackstone River Bikeway trail rest area on Main St at Arnold St	Trail Rest Area, p. 74	DPW	PDP/ EDD/ MSRI/ WMSLP Steering Committee		●		Private
Reconfigure Monument Square to improve pedestrian crossings, including a large "refuge" island around the monument and high-visibility crosswalks	Monument Square Pedestrian Improvements, p. 75	DPW	DPD/ WMSLP Steering Committee/ Stadium Theatre/ Beacon Charter School			●	

Appendix A

Public Workshop Presentations and Results

Woonsocket
Main Street Livability Plan

The Cecil Group
Fitzgerald & Halliday, Inc.
Alta Planning + Design

Public Meeting
Dec. 12, 2012

Agenda

- Overview
- Public Workshop Results
- Recommendations
- Discussion and Feedback
- Next Steps

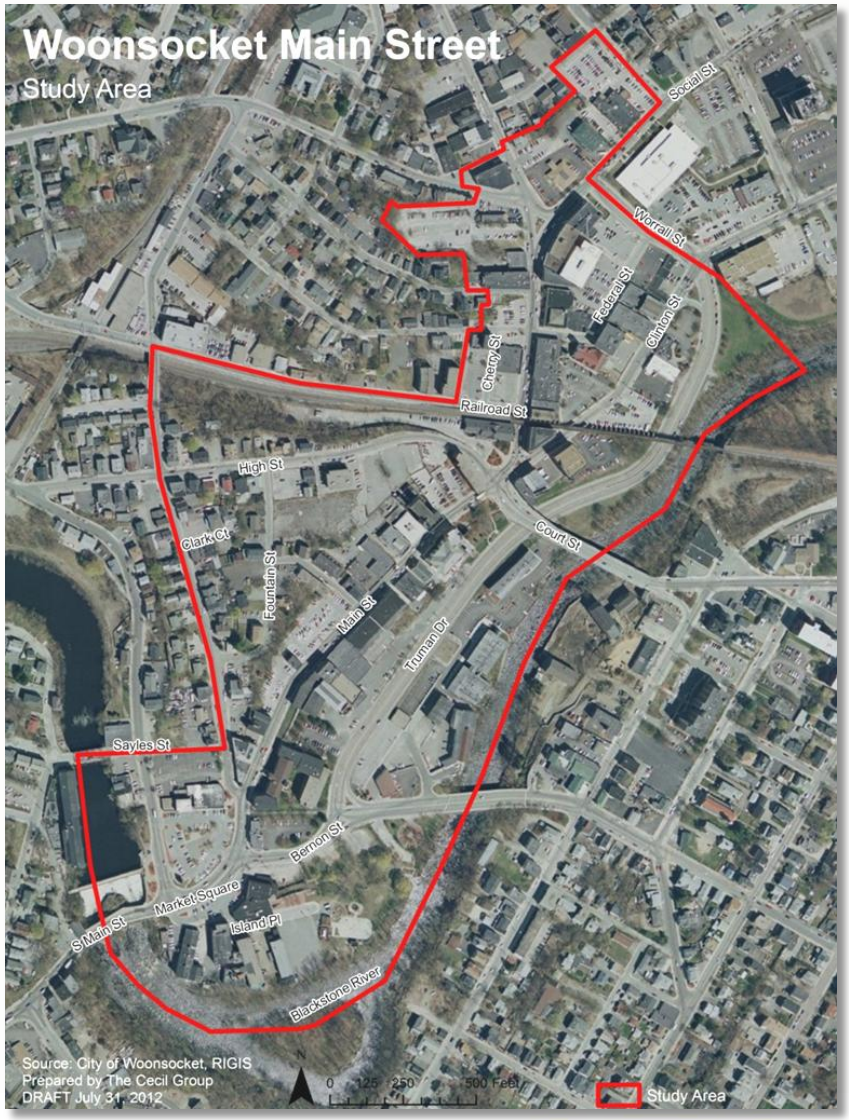
The Cecil Group
Fitzgerald & Halliday, Inc.
Alta Planning + Design

Overview

- Process
  - Existing Conditions
  - Public Workshop *(September)*
  - Alternatives
  - Recommendations
  - Public Workshop *(December)*
  - Refine Recommendations
  - Draft Plan
  - Final Plan

Overview

- Study Area
  - > 200 properties
  - Roughly 82 acres
  - Borders the Blackstone River



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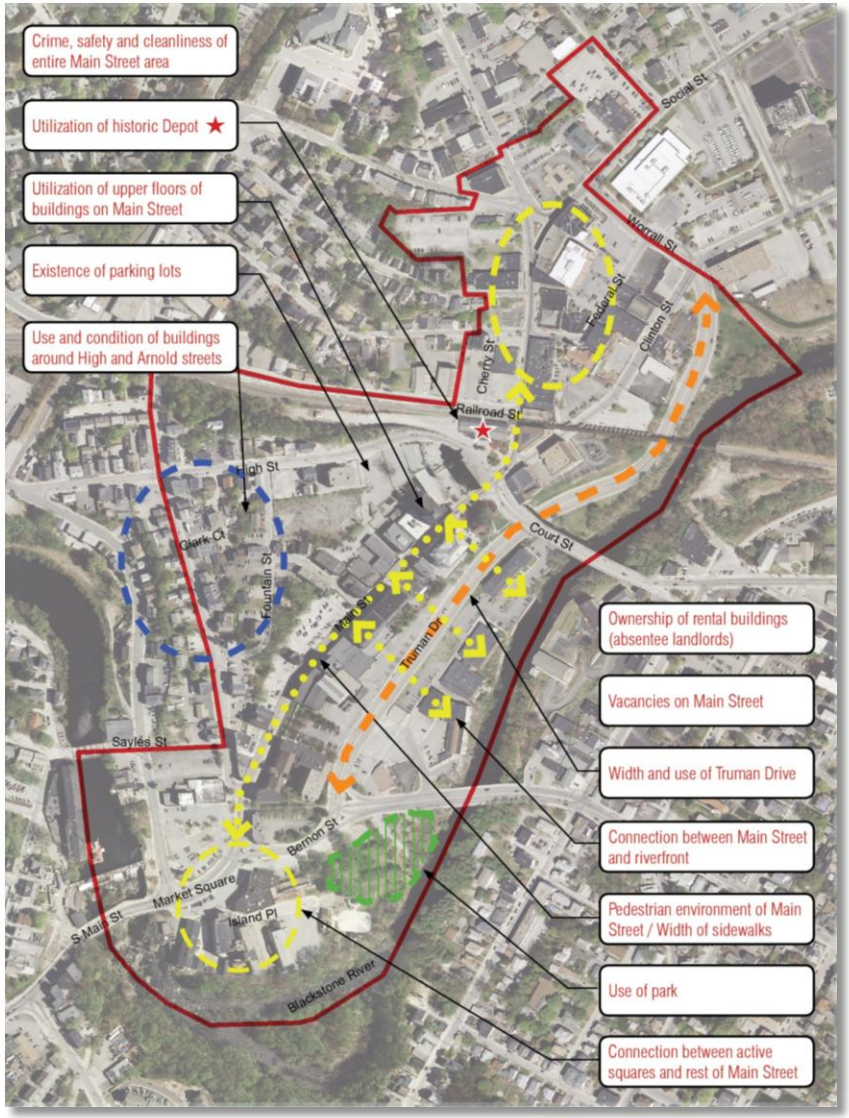
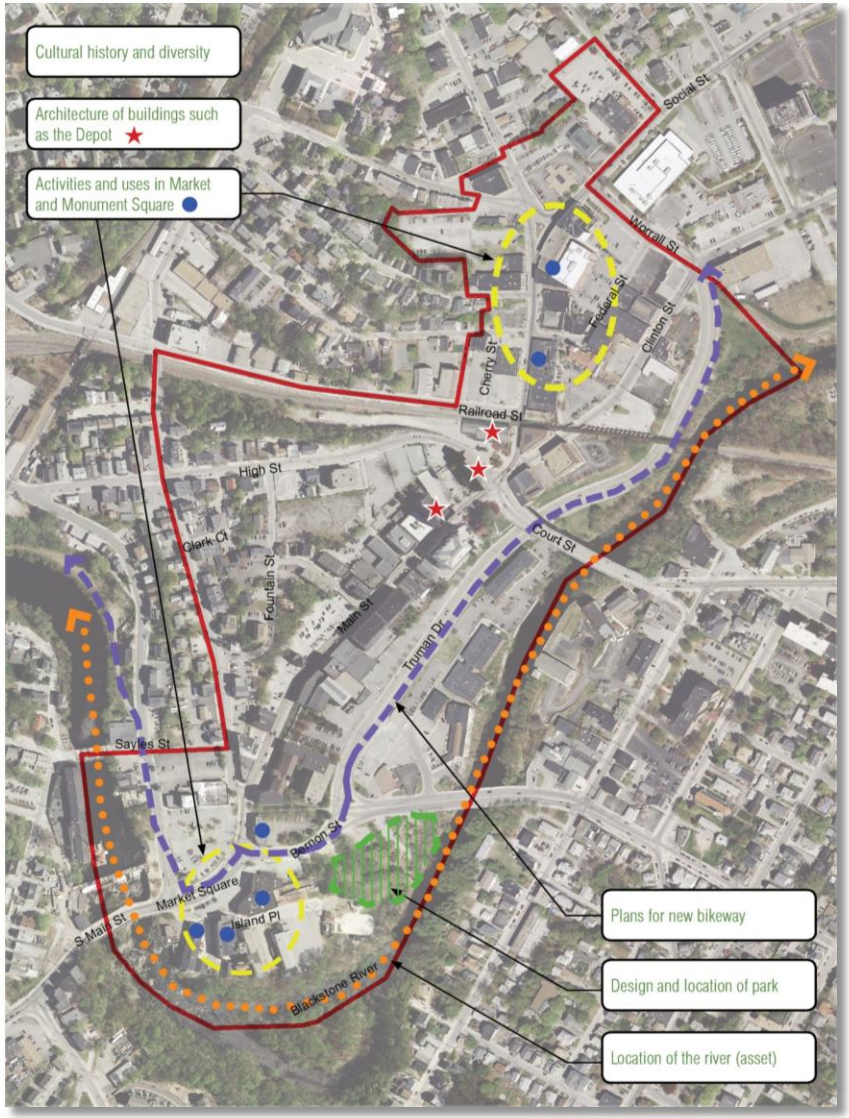
Public Workshop Results

- Should Change
  - Vacancies on Main Street
  - Width/use of Truman Drive
  - Connection between Main Street and riverfront
  - Use and condition of buildings in High Street area
  - Crime, safety and cleanliness throughout area



Public Workshop Results

- Should Not Change
  - Architecture of buildings such as the Depot
  - Key activities and uses in Market and Monument Squares
  - Cultural history and diversity
  - Plans for a new bikeway
  - Design and location of River Island Park



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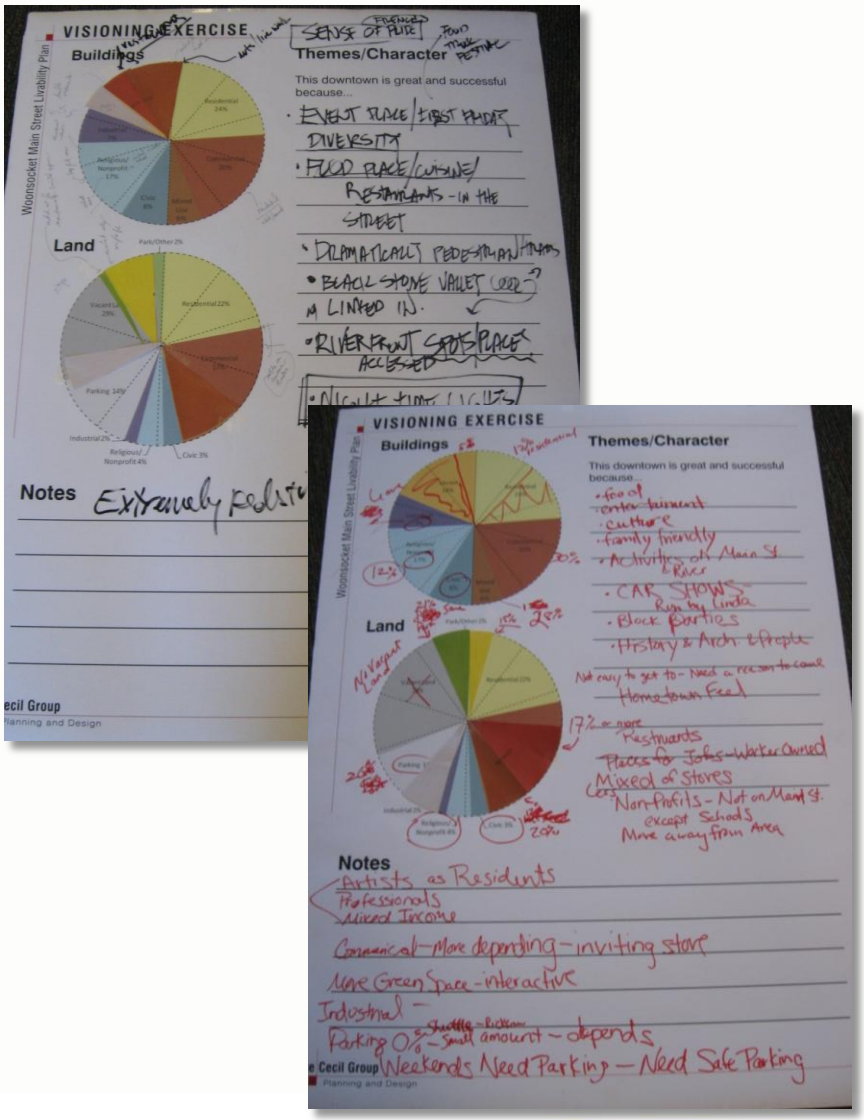
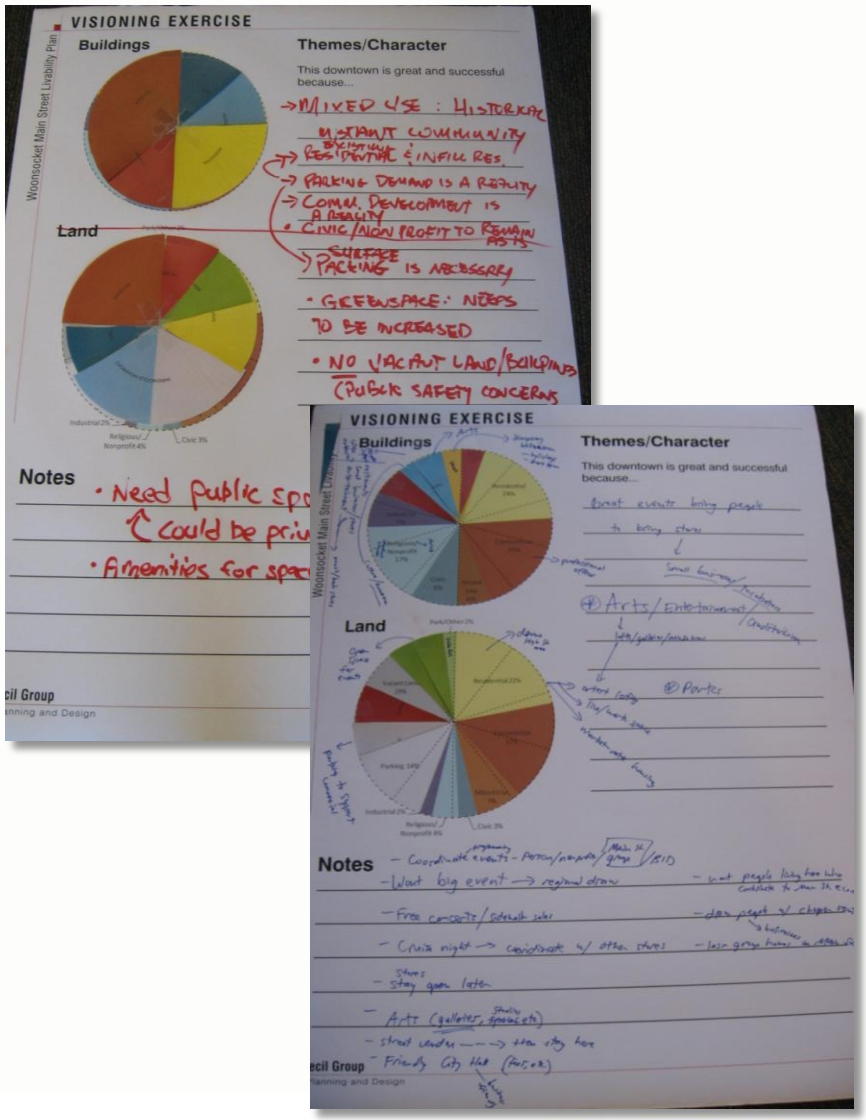
Public Workshop Results

- Building Uses
  - 4 out of 5 groups wanted more commercial uses
  - 3 groups wanted more mixed uses
  - 3 groups wanted similar amounts of residential uses



Public Workshop Results

- Land Uses
  - All 5 groups wanted more parks or open space
  - 3 groups wanted more mixed uses
  - Groups were split on residential uses
  - All 5 groups wanted more parking



Public Workshop Results

- Themes and Character
  - Arts and entertainment
  - “Experience”
  - Creative economy
  - Mixed uses
  - Cultural center
  - Food place
  - Active night life

Recommendations

Identity and Role: Main Street District

Arts and Entertainment

New Enterprises and Historic Buildings

Living and Working

Culture and History

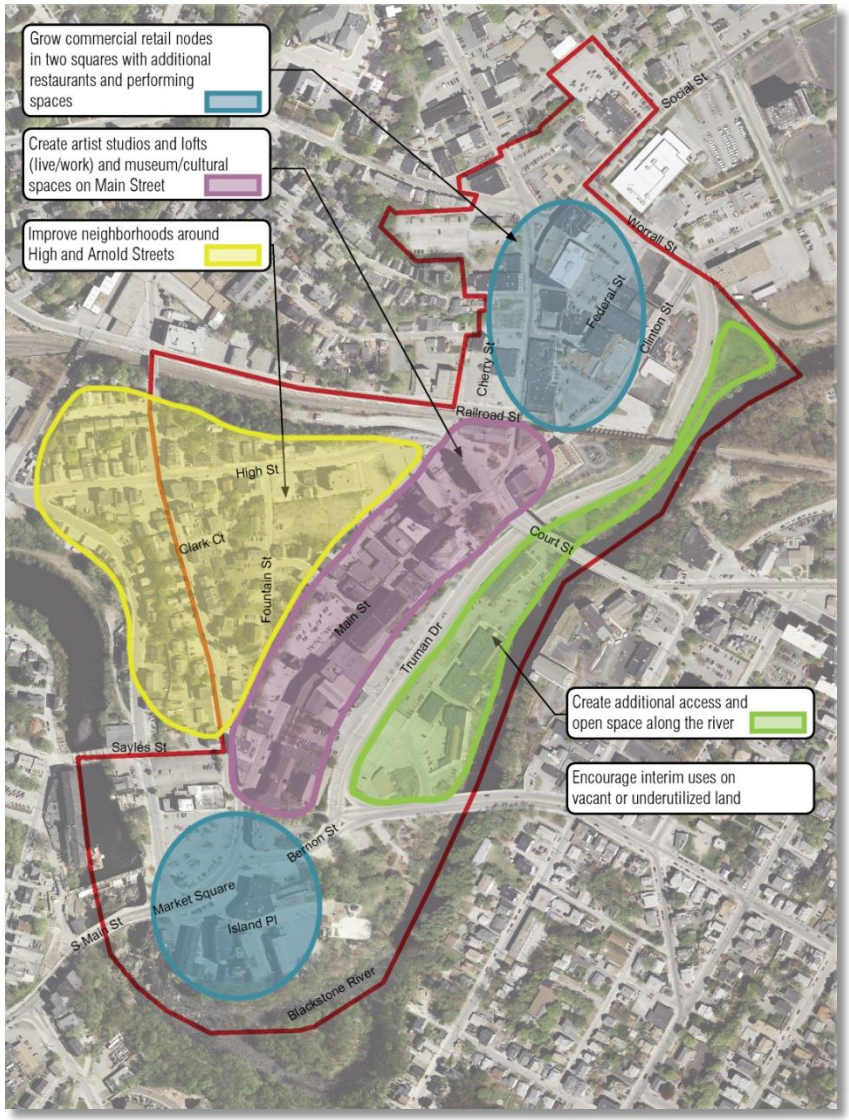
Walking and Biking

Convenient and Accessible

Safe and Attractive

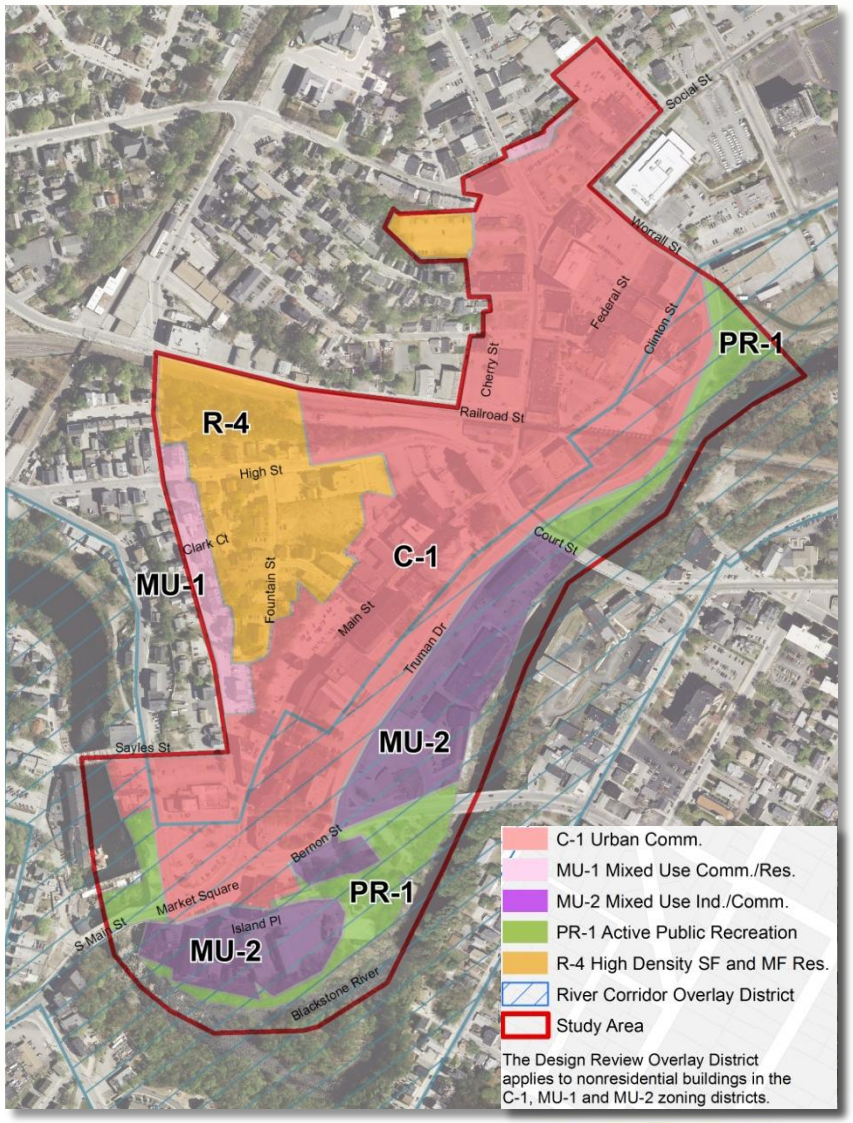
Recommendations

- Land Use
  - Grow commercial nodes in squares with more restaurants and performing spaces
  - Create artist studios, live/work spaces and cultural spaces
  - Encourage temporary uses on vacant and underutilized land
  - Create additional open space
  - Improve residential neighborhoods



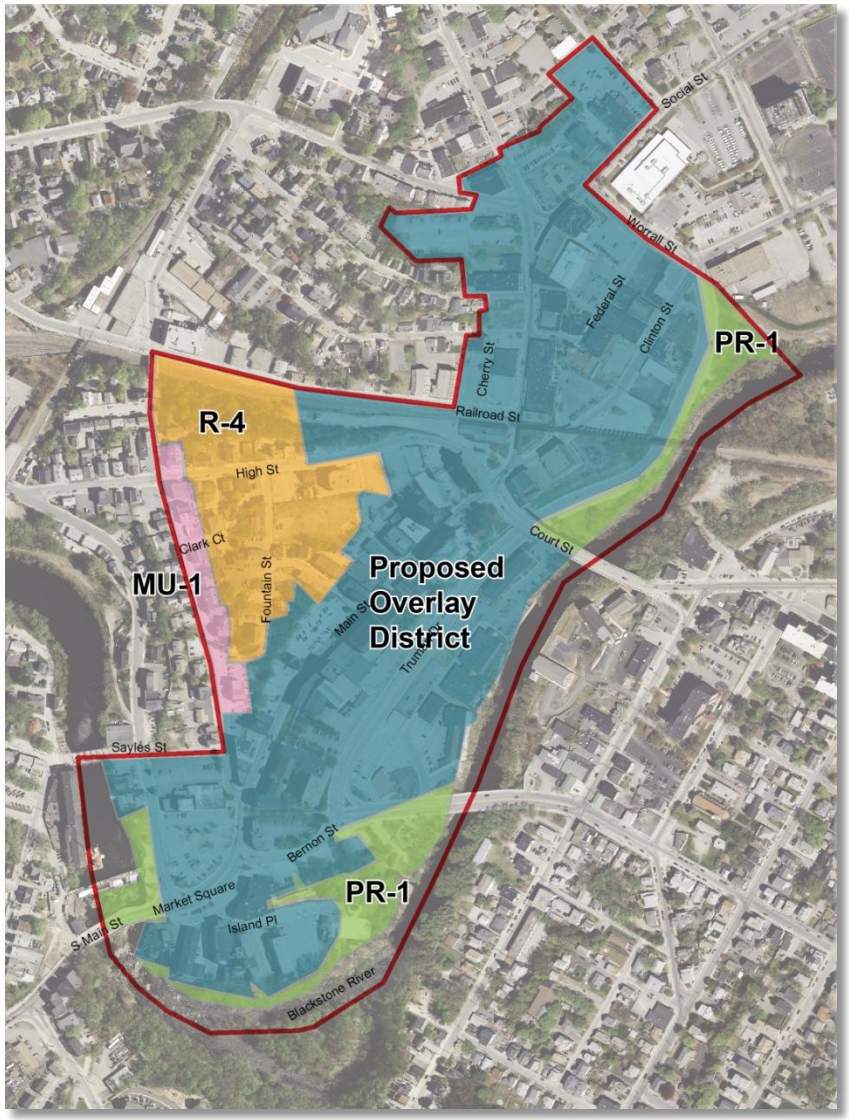
Recommendations

- Zoning Strategy
  - Existing zoning
    (5 districts)
  - Proposed overlay district
    (overlays C-1 and MU-2 districts)



Recommendations

- Proposed Overlay District
  - Allows changes to permitted uses without changing the underlying zoning
  - Does not affect zoning outside of the Main Street area
  - Adds layer of regulations



Recommendations

- Proposed Overlay District
  - Allow additional uses:

    Live/work units

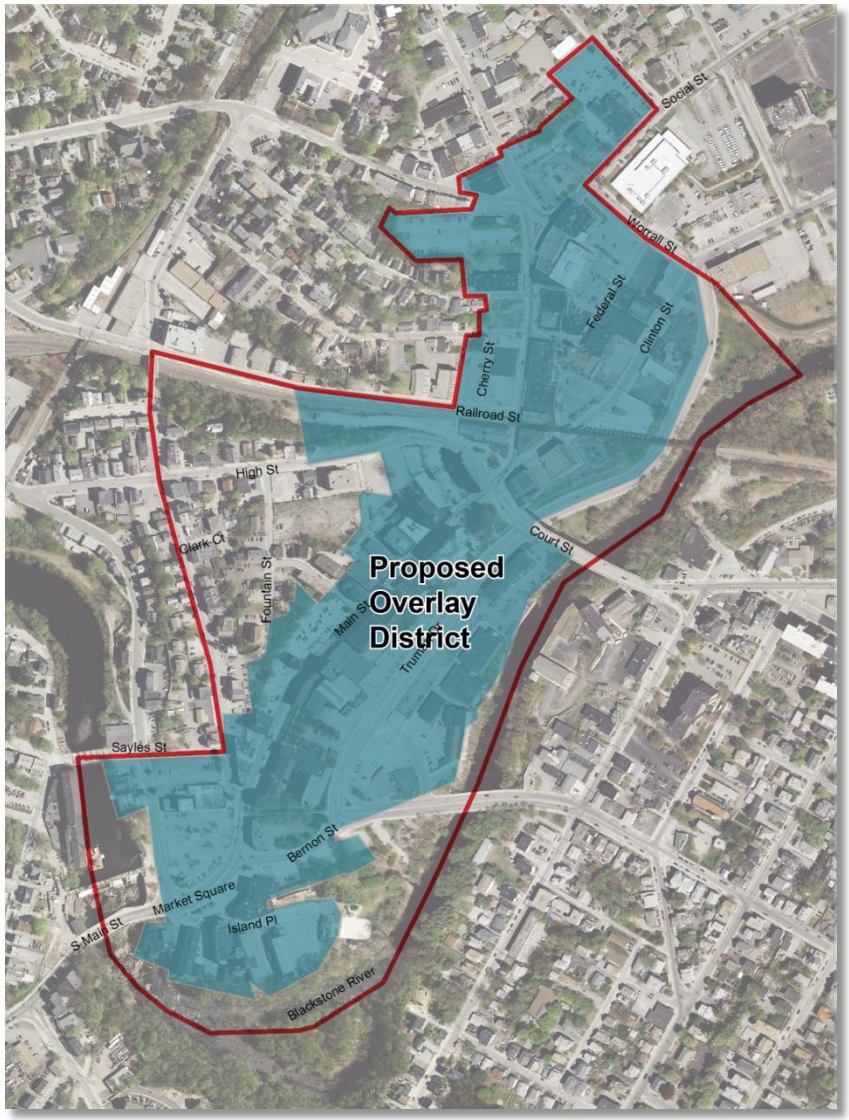
    Artists studios and galleries

    Sidewalk cafes/outdoor seating

  - Incentivize desired uses

    (e.g., arts, entertainment, restaurants)

  - Allow interim uses on vacant or underutilized property



Recommendations

- Potential Interim Uses
  - “Pop-up” retail
  - Food trucks/carts
  - Farmers’ markets
  - Art and cultural installations
  - Passive/active recreational open space
  - Outdoor theater and performance
  - Urban agriculture

Source: http://www.panoramio.com/photo/11265633
http://analisfirstamendment.blogspot.com/2010/11/fun-blog-post-ideas-tutorial-on.html

Recommendations

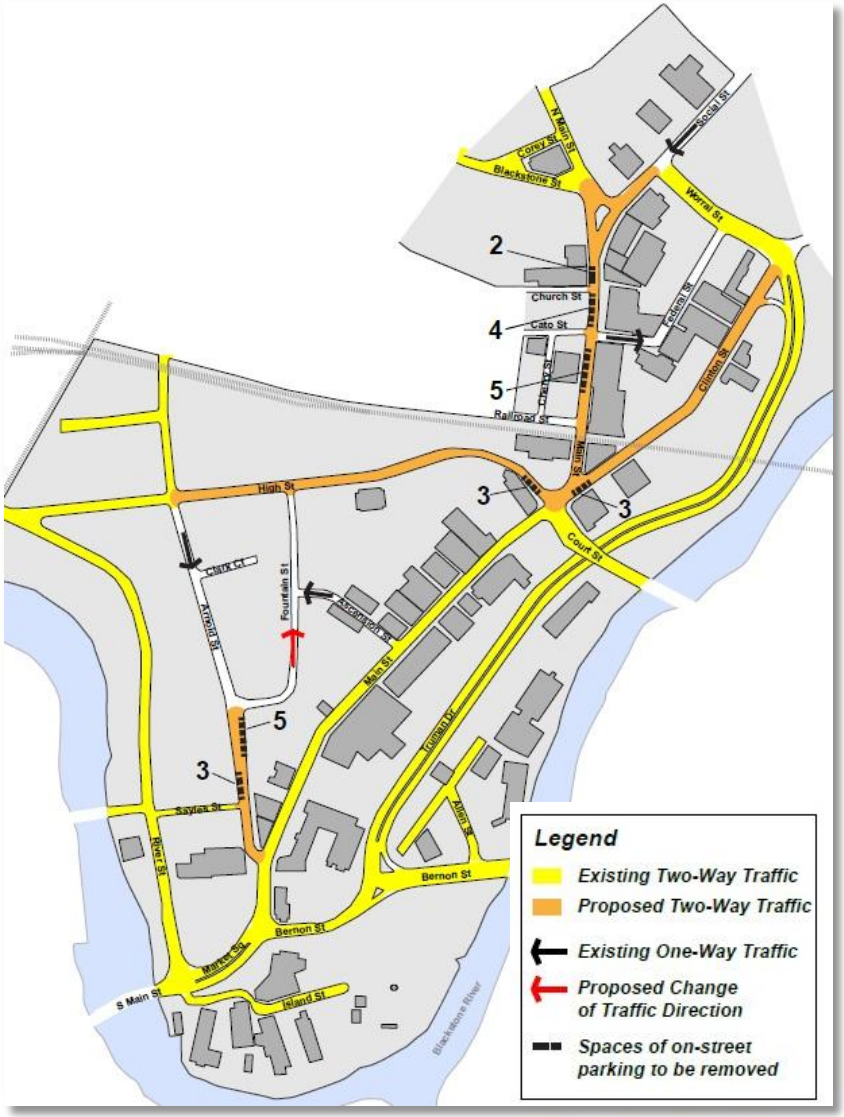
- Traffic and Circulation
  - Maintain Main Street as a two-way street
  - Convert several one-way streets to two-way traffic

    High Street

    Upper Main Street and Social Street (segment)

    Clinton Street

    Arnold Street (segment)



Recommendations

- Conversion of Upper Main and Social Streets

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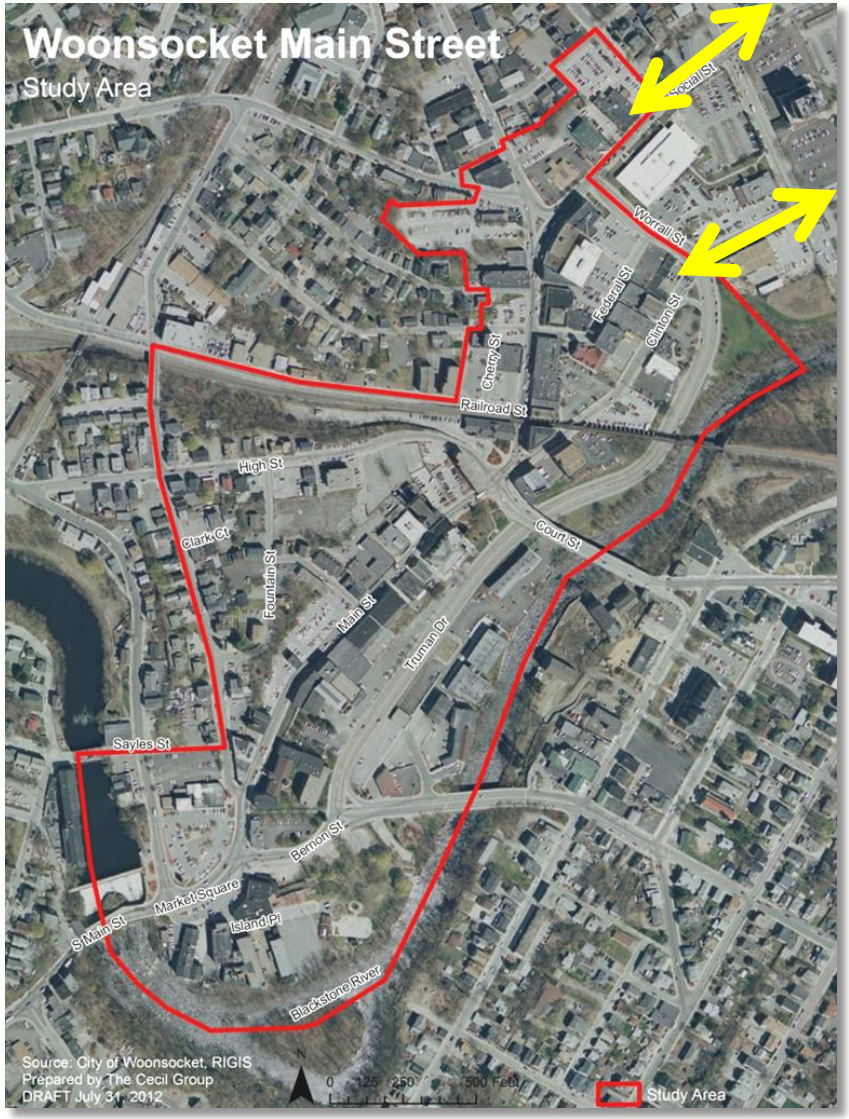
Recommendations

- Conversion of Main, Clinton and High Streets

Recommendations

- Traffic and Circulation
  - Convert Social and Clinton Streets to two-way traffic
    (outside study area)

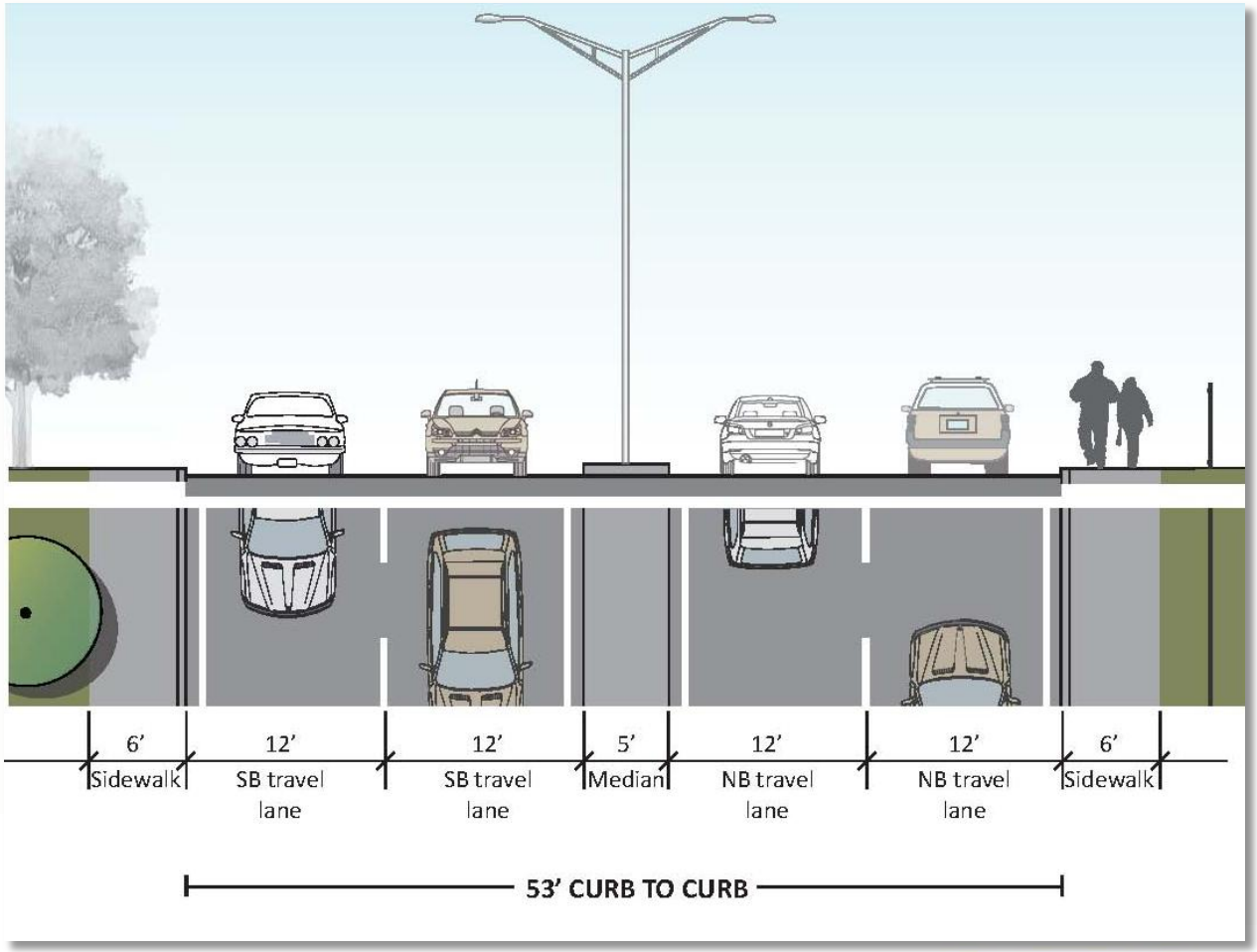


Recommendations

- Truman Drive
  - Existing conditions

Recommendations

- Truman Drive
  - Existing conditions



Recommendations

- Truman Drive
  - Proposed conditions

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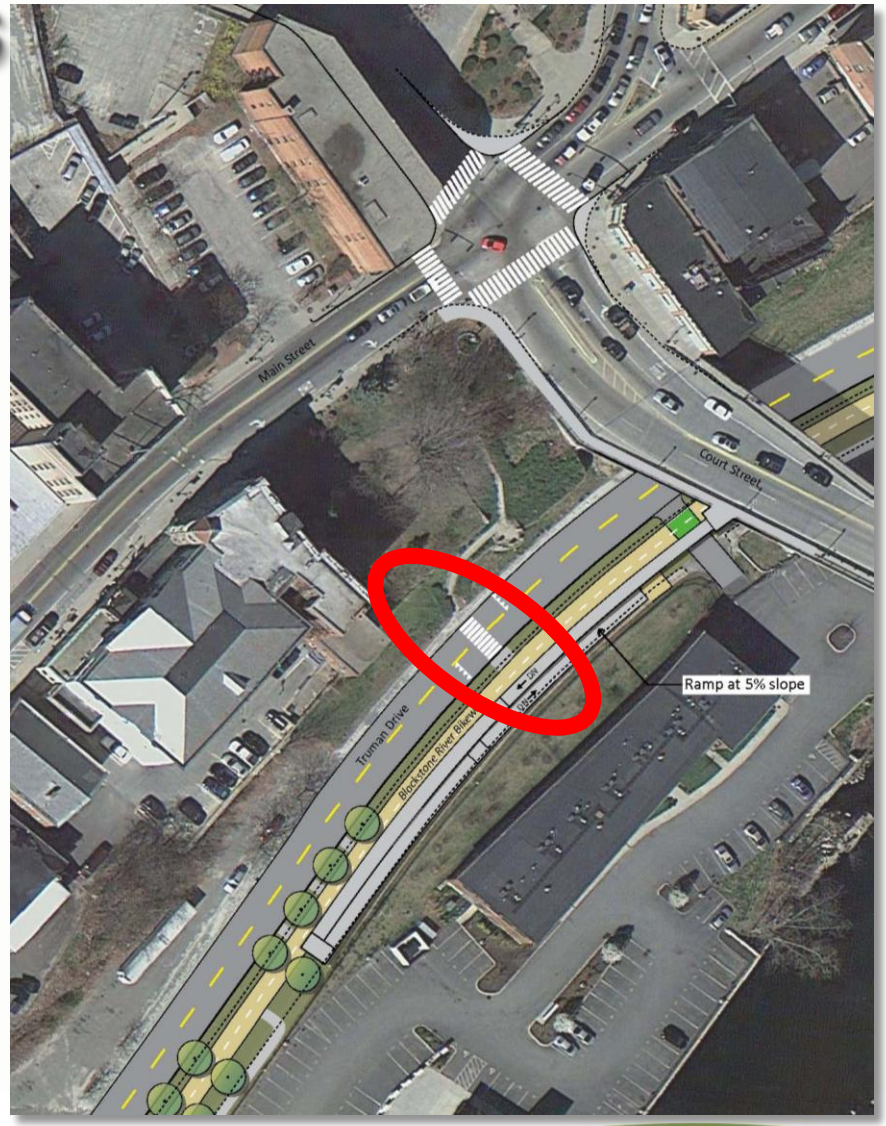
Recommendations

- Traffic and Circulation
  - Reduce Truman Drive to 2 lanes and develop planned bikeway

    (and expand it to Social Street)

Recommendations

- Bike/Pedestrian Improvements
  - Create pedestrian connections from Main and Clinton Streets to the river
  - Develop bike/ADA ramp connection from Court Street bridge to Truman Drive *(long-term)*



Recommendations

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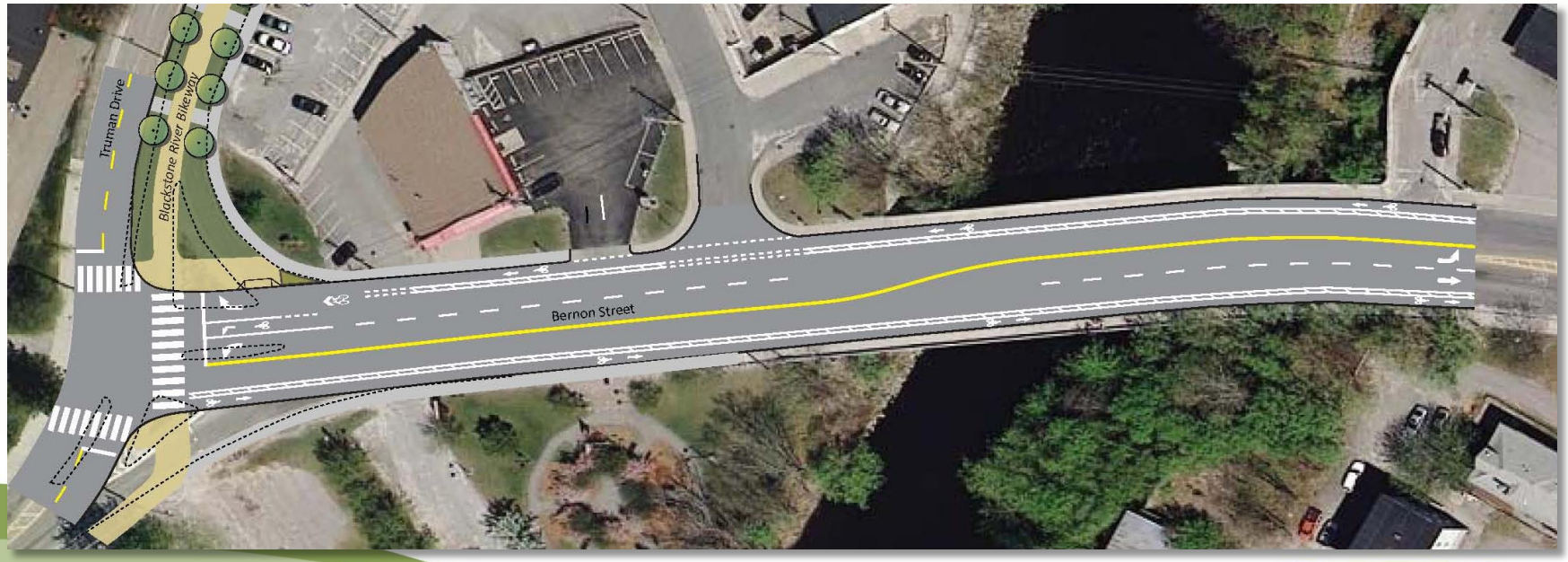
Recommendations

- Traffic and Circulation
  - Reduce Bernon Street bridge to three lanes with bike lanes



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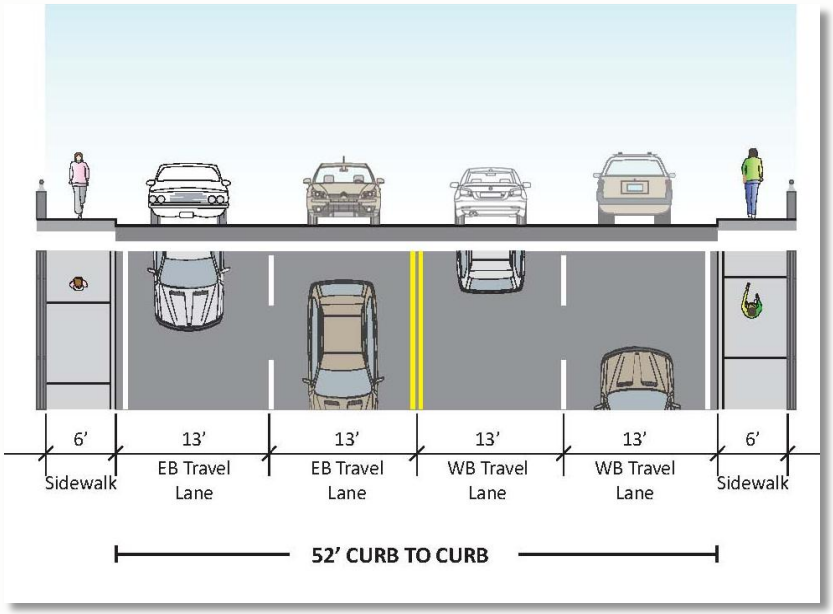
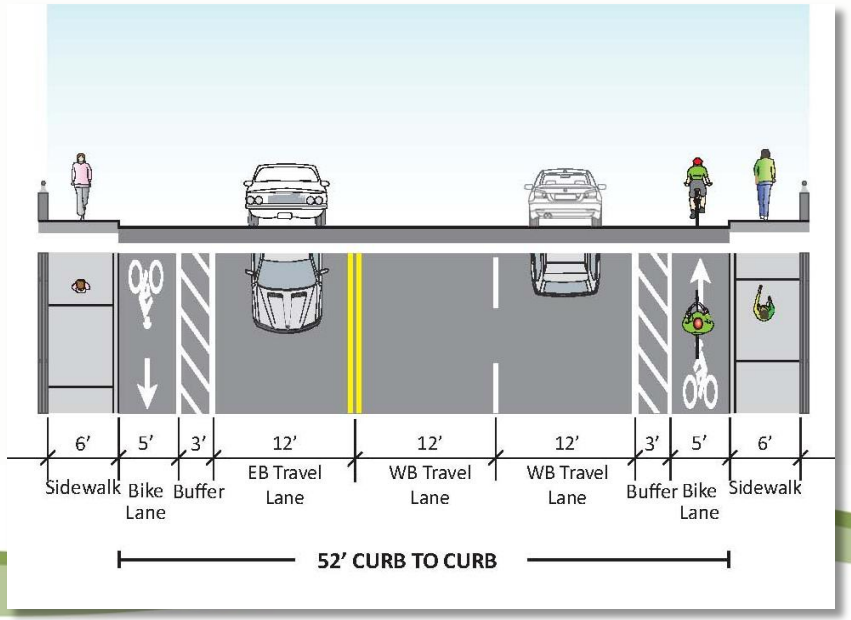
Recommendations

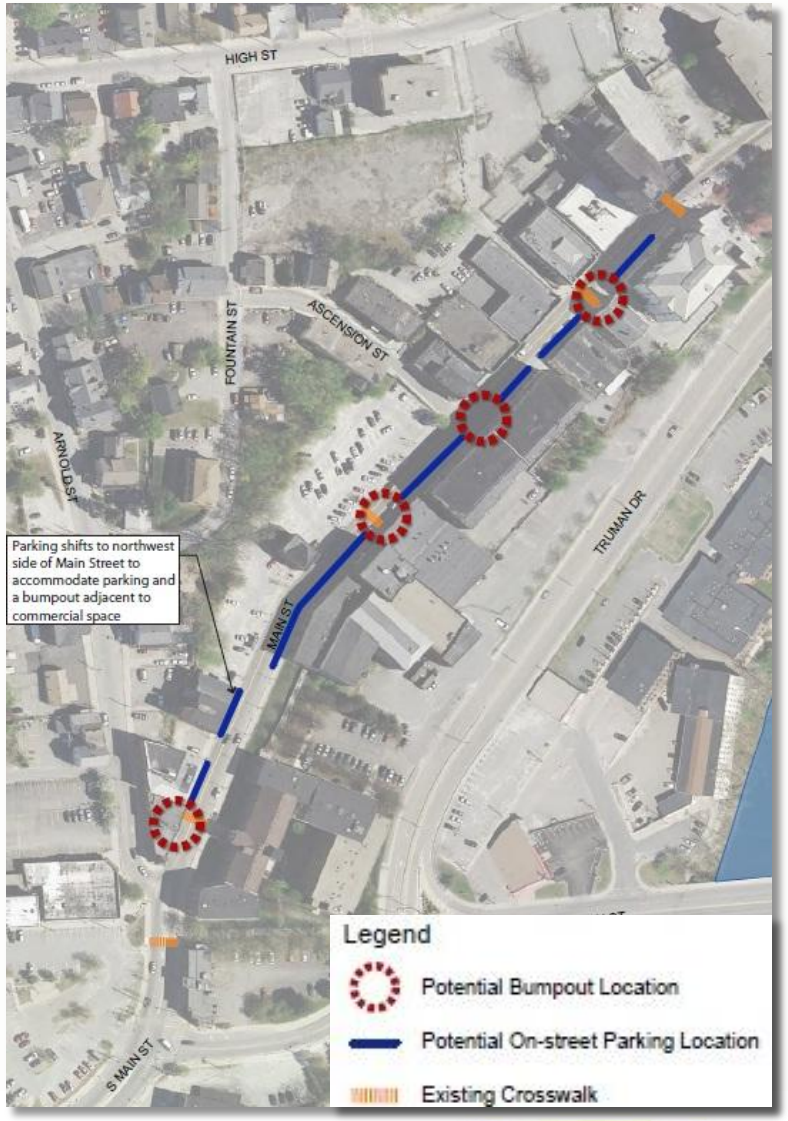
- Bernon Street
  - Short-term bike lanes





Recommendations

- Bike/Pedestrian Improvements
  - Remove on-street parking in <u>select</u> locations on Main Street
  - Provide space for bump-outs *(wider sidewalks, outdoor seating)*



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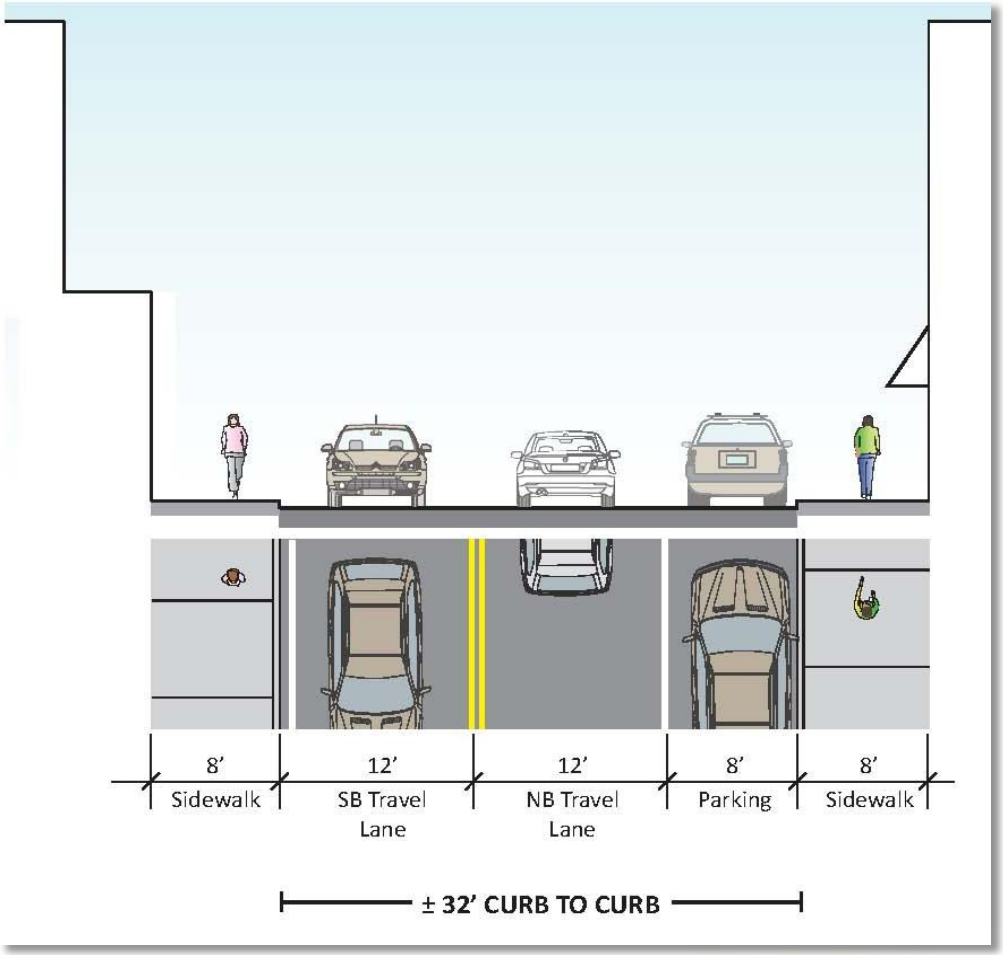
Recommendations

- Main Street
  - Existing conditions



Recommendations

- Main Street
  - Proposed bump-out

Recommendations

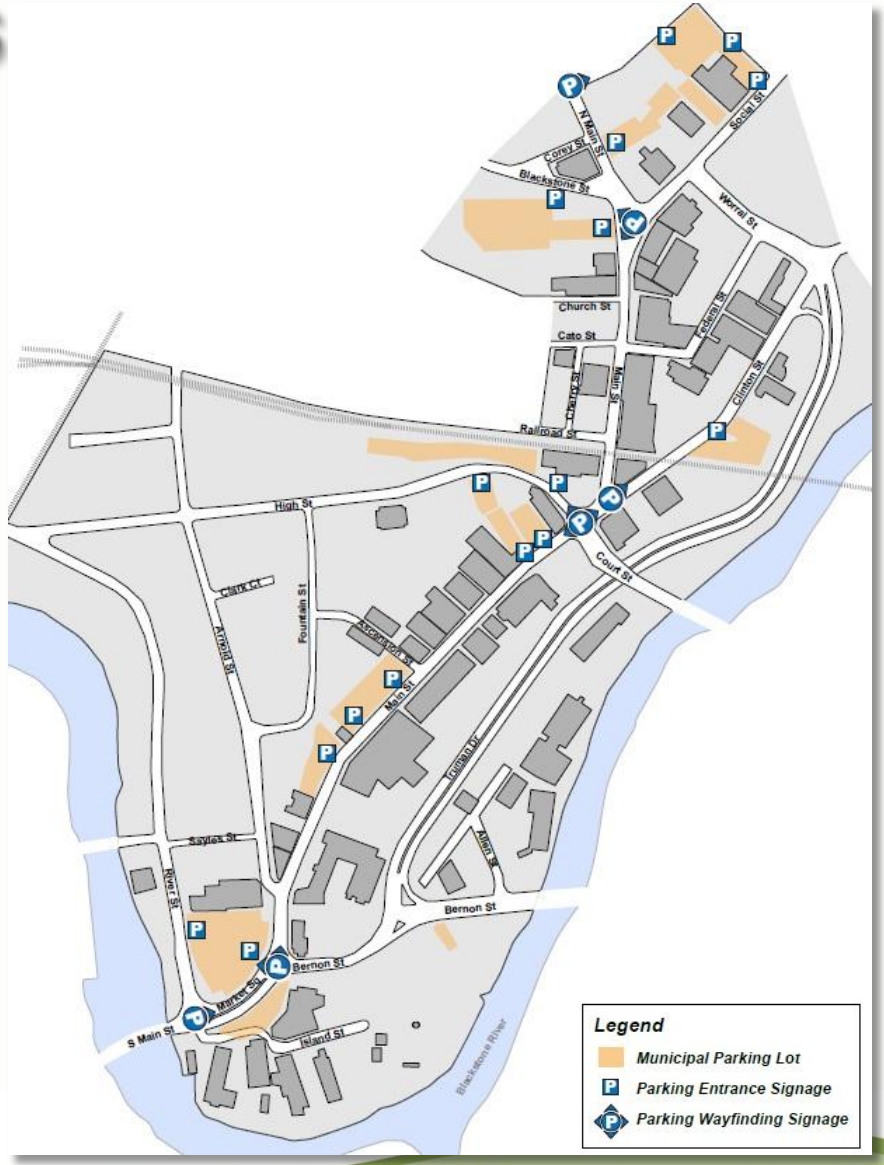
- Main Street
  - Proposed bump-out with outdoor seating

Recommendations

- Bike/Pedestrian Improvements
  - Retrofit Monument Square with larger refuge island
  - Make pedestrian and/or bicycle improvements at key intersections

Recommendations

- Parking
  - Improve municipal parking lot signage and wayfinding

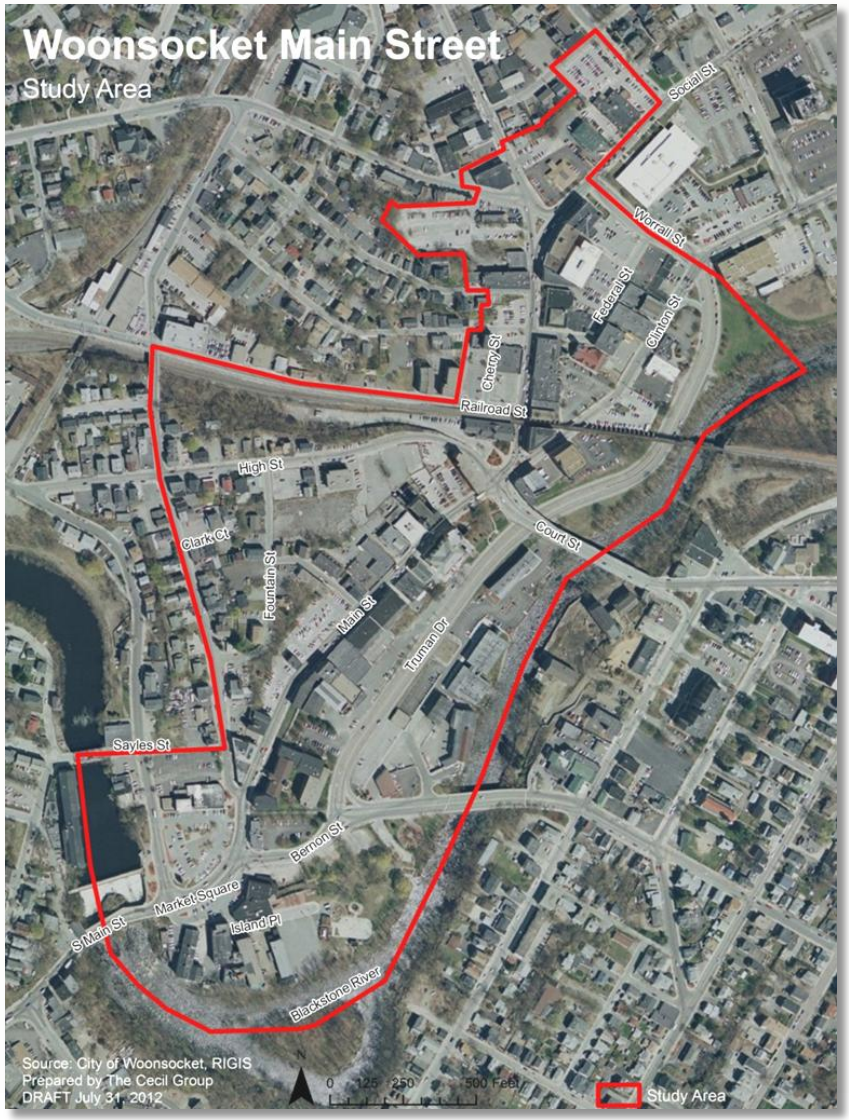


Recommendations

- Parking
  - Improve municipal parking lot signage and wayfinding

Discussion

- Feedback
- Questions



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Next Steps

- Refine Recommendations
- Draft Plan
- Final Plan

Woonsocket
Main Street Livability Plan

The Cecil Group
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Alta Planning + Design

Dec. 12, 2012

The Cecil Group
Planning and Design

Workshop Results

Meeting:	Public Workshop: Woonsocket Main Street Livability Plan RiverzEdge Art Project, 68 South Main Street
Meeting Date:	September 19, 2012
Prepared by:	Steven Cecil AIA ASLA
Attendees	Steering Committee members City of Claremont officials and staff members Project Consultant Team members

On September 19, approximately 50 people attended a public workshop for the Woonsocket Main Street Livability Plan at RiverzEdge on South Main Street. The City of Woonsocket and The Cecil Group put on the two-and-a-half hour, interactive workshop, which started at 6 p.m. The purpose of the workshop was to engage all community members and other stakeholders in discussing a community vision and goals for streetscape, transportation patterns, land use and zoning in the Main Street area. The workshop built on previous visioning work already completed, and it explored areas where consensus about the future of the Main Street area likely existed or where there were differing views.

The workshop began with City Planner/Deputy Director of Community Planner Jennifer Siciliano providing an overview of the Main Street Livability Plan. Then Steve Cecil, principal of the Cecil Group, gave a presentation that included a brief history of the Main Street area as well as a short discussion of zoning. Case studies were also presented during the evening to illustrate different ways in which downtowns throughout New England have been revitalized and improved.

During the workshop, attendees participated in two breakout group exercises. The attendees were divided into five groups, each led by a facilitator. The first exercise asked participants to identify aspects of the Main Street area (land uses, traffic/circulation, public realm elements, etc.) that should change and should not change. Each group was given an aerial map of the Main Street area to visual the area and make notes.

During the next group activity, participants were asked to help create their vision for the future of the Main Street area. Specifically, they were asked to determine the desirable mix of uses for the area, both land uses and building uses. To provide context for the exercise, a breakdown of existing land uses and building uses – in pie charts – were provided to the group on large boards. These charts showed the existing amount of vacant land and vacant buildings. Each group was given circular pies of different colors, each representing a different type of use, and then the groups created pie charts representing the desirable mix of land and building uses. Key themes and characteristics for this future Main Street area were also noted. (Photos of the resulting pie charts and notes are provided later in this memorandum.)

The second activity resulted in a range of results among the five groups. Some of the results from the exercise on building uses are as follows:

- 4 groups wanted more commercial uses (desirable types include restaurants, small businesses/fabricators, entertainment, retail, offices and worker-owned spaces)

241 A Street Suite 500
Boston, MA 02210
tel: 617.426.5050
fax: 617.426.5051

- 3 groups wanted more mixed uses
- 3 groups wanted similar amounts of residential uses (desirable types include live/work space, artist lofts, mixed-income and market-rate housing)
    - 1 group wanted significantly less housing
    - 1 group wanted significantly more housing

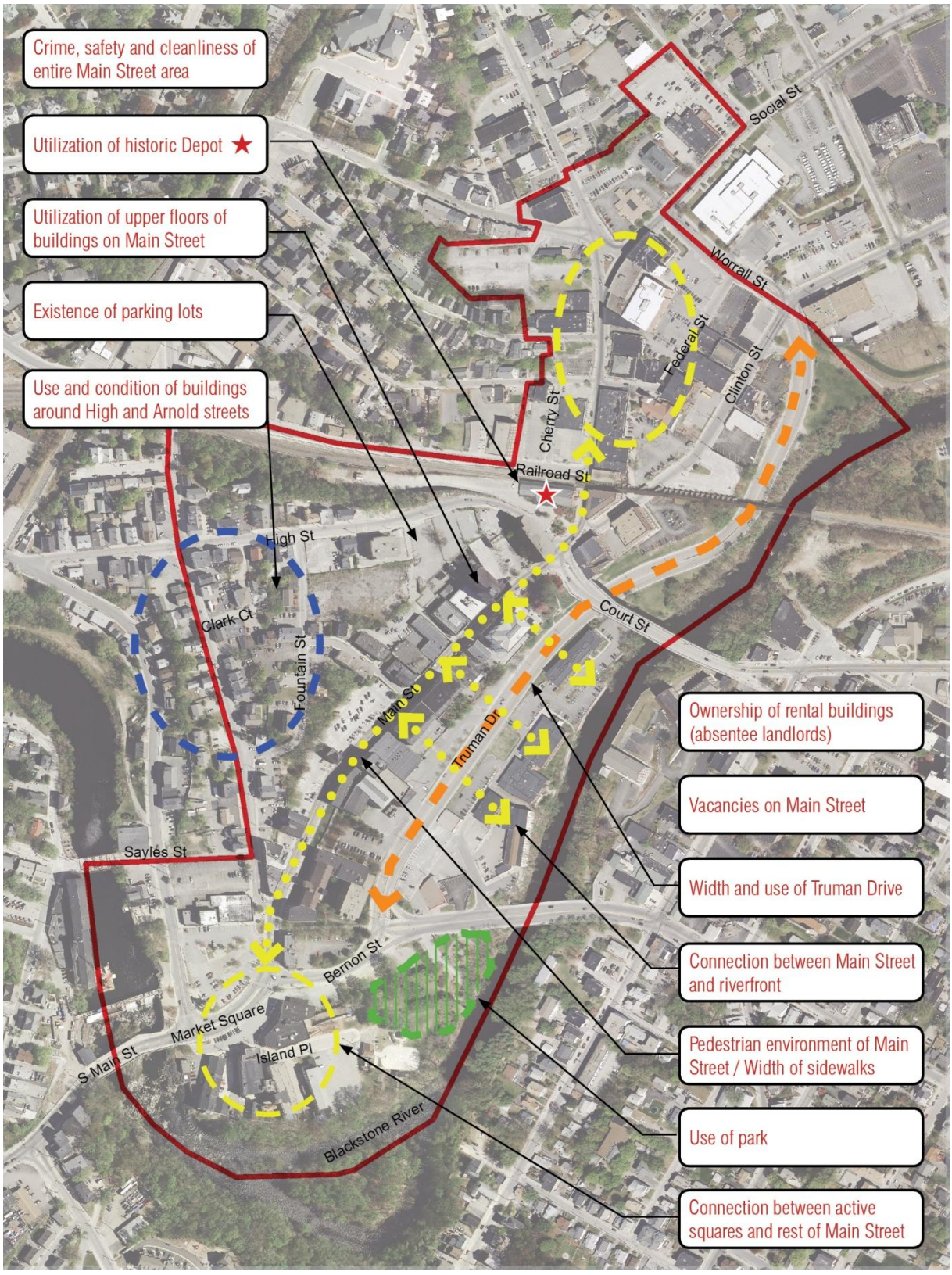
Some of the results from the exercise on land uses are as follows:

- All 5 groups wanted more parks or open space (green space, privately-maintained open space, outdoor areas for events, other public spaces)
- All 5 groups wanted more parking
- 3 groups wanted vacant land to remain
- 3 groups wanted more mixed uses
- 2 groups wanted less residential uses
    - 1 group wanted more residential uses
    - 2 groups did not want changes in the amount of residential land

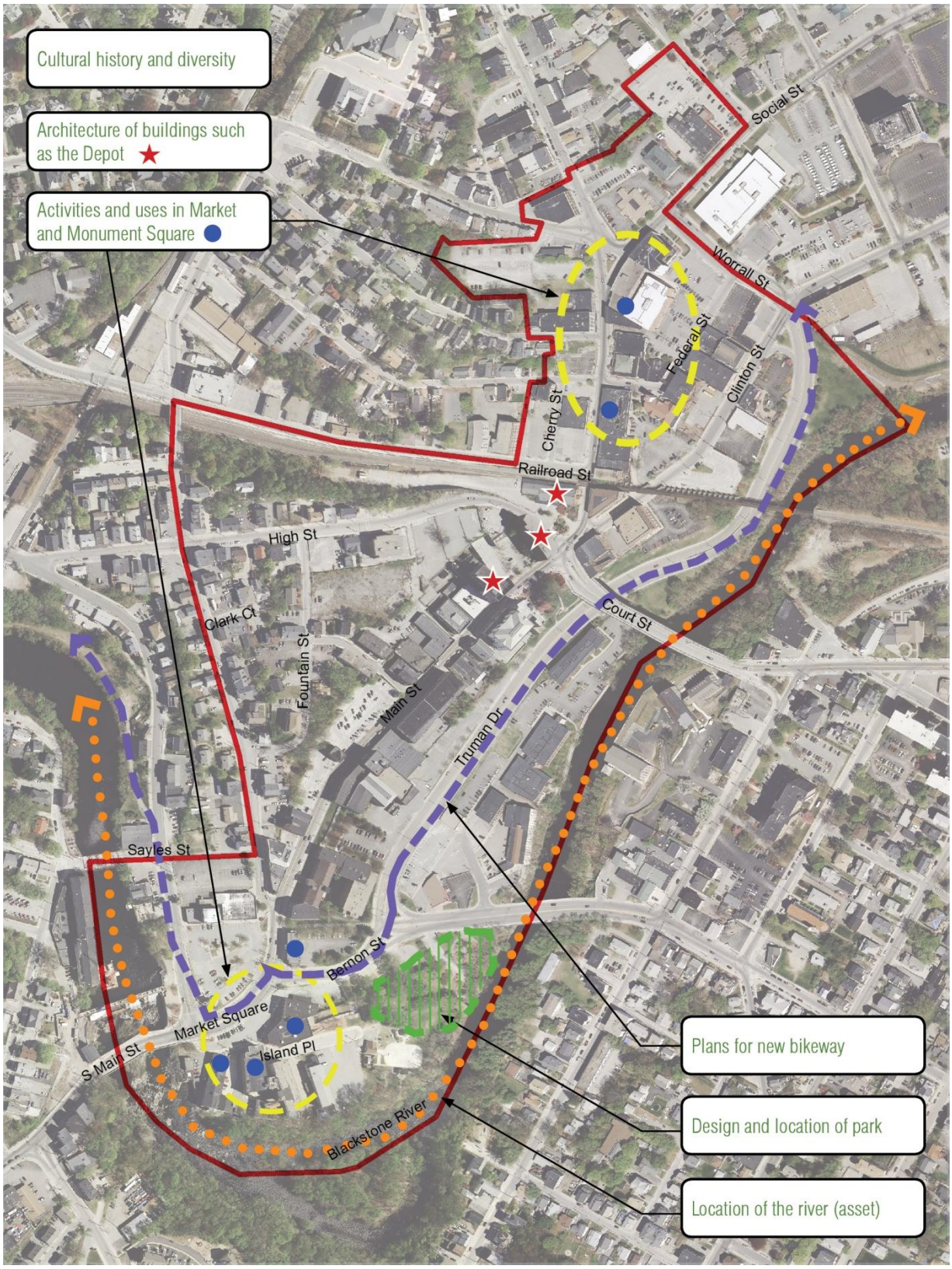
The following section contains a summary of participant feedback during the breakout group sessions. These notes are not intended to provide a comprehensive account of the workshop but instead are meant to identify common themes of discussion and to highlight the findings that are most relevant and helpful in advancing the Main Street Livability Plan in the project team's professional opinion.

Some of the overall comments and discussion points from the groups have been summarized in the two maps on the following pages. The maps combine key ideas regarding aspects of the Main Street area that should be changed or should not be changed. It should be noted that many ideas were expressed, and the summary maps are an interpretation of these comments and may not reflect all of the points or occasional differing opinions that arose.

Should Change



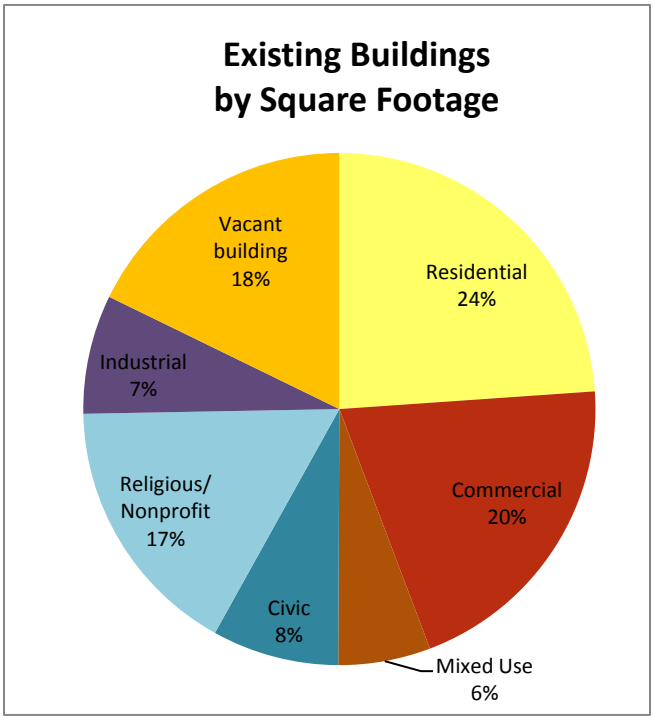
Should Not Change

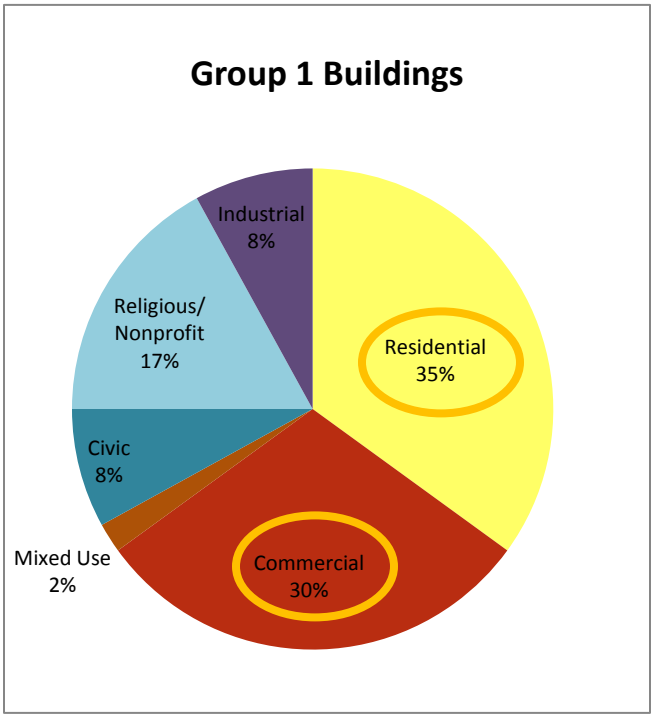


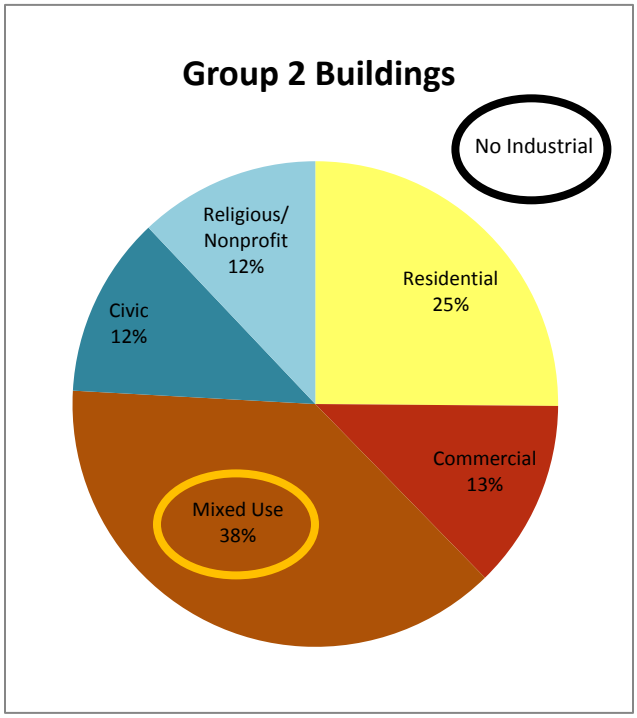
Visioning Exercise Results

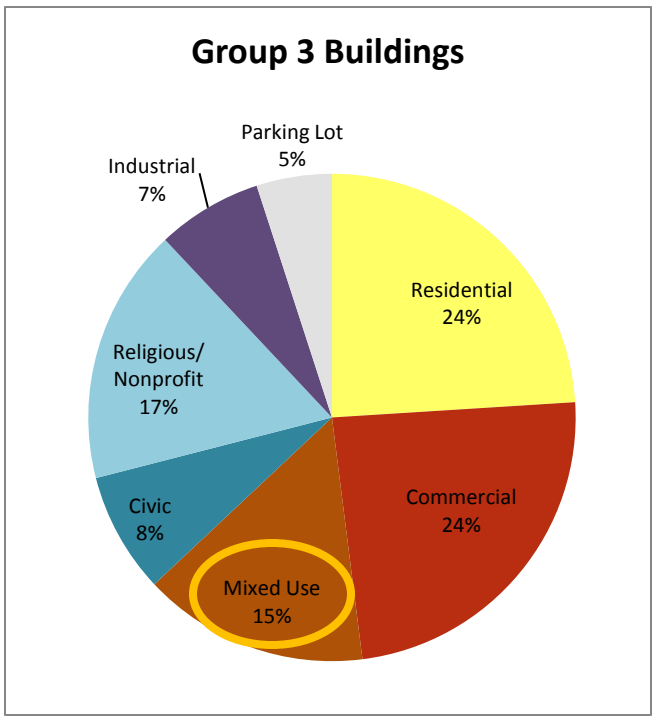
Below are *representations* of each group's visioning pie charts for buildings and land use. The existing conditions are also shown. The uses that make up a significantly larger portion in the vision charts than existing conditions are circled in ORANGE, and the uses that are significantly less are circled in BLACK.

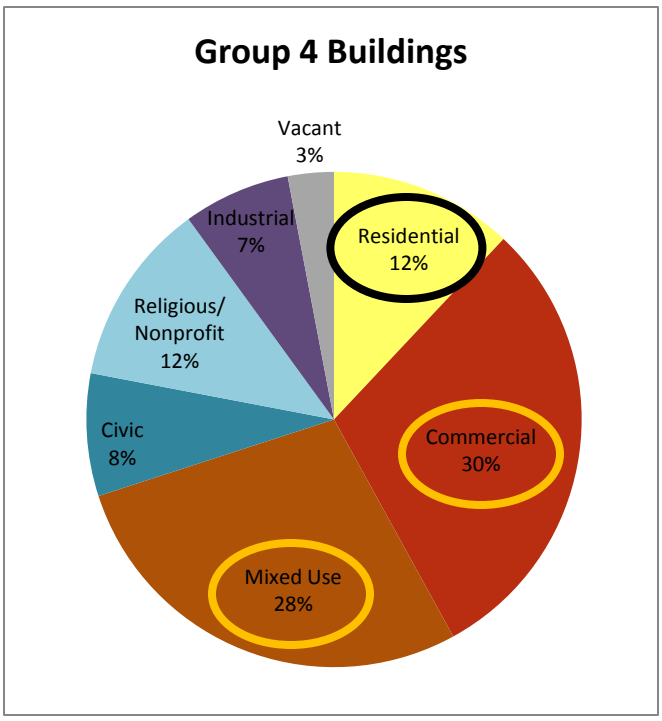
Building

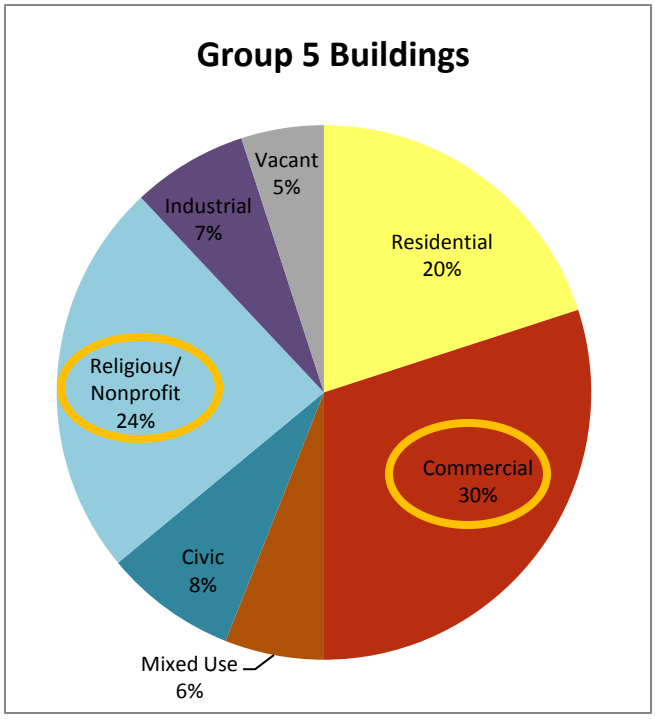




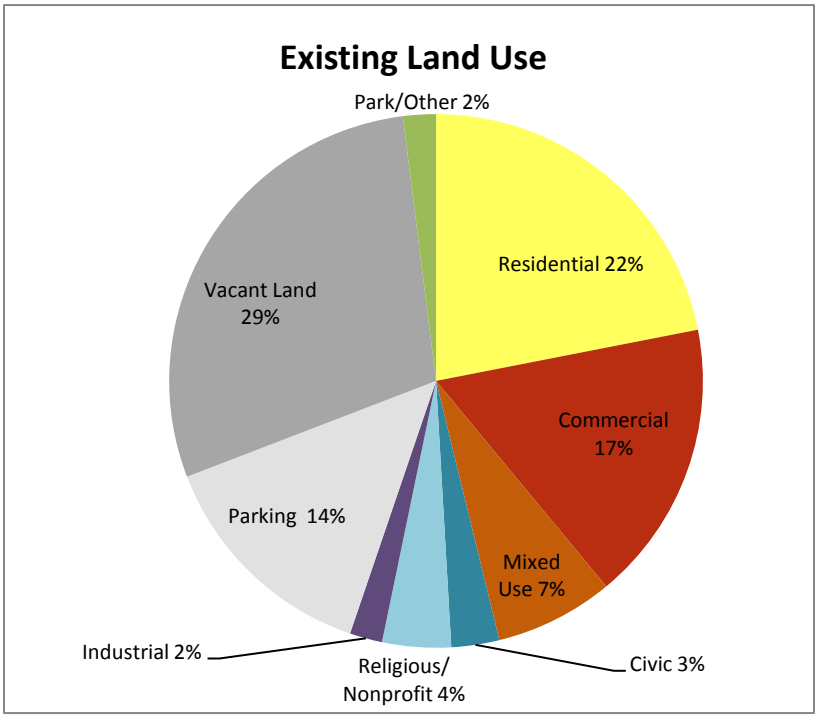


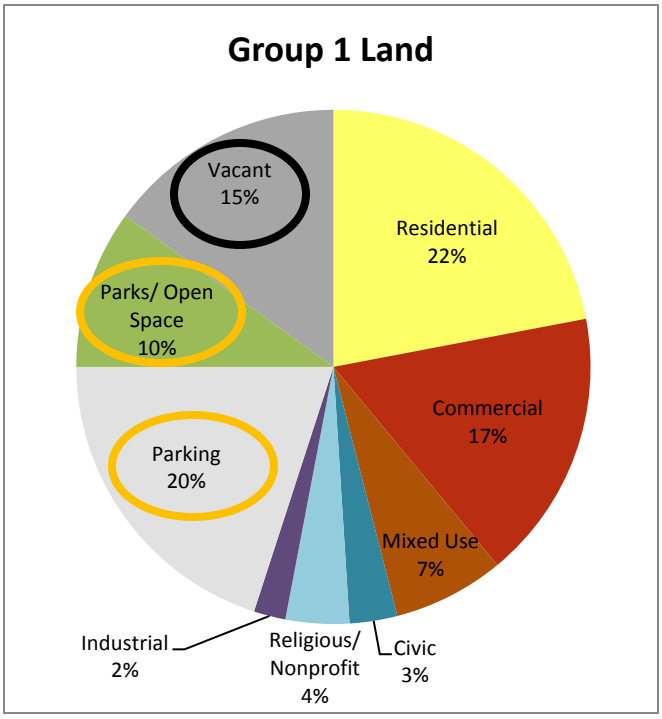

Group 3 Buildings
Parking Lot 5%
Industrial 7%
Residential 24%
Religious/ Nonprofit 17%
Civic 8%
Commercial 24%
Mixed Use 15%

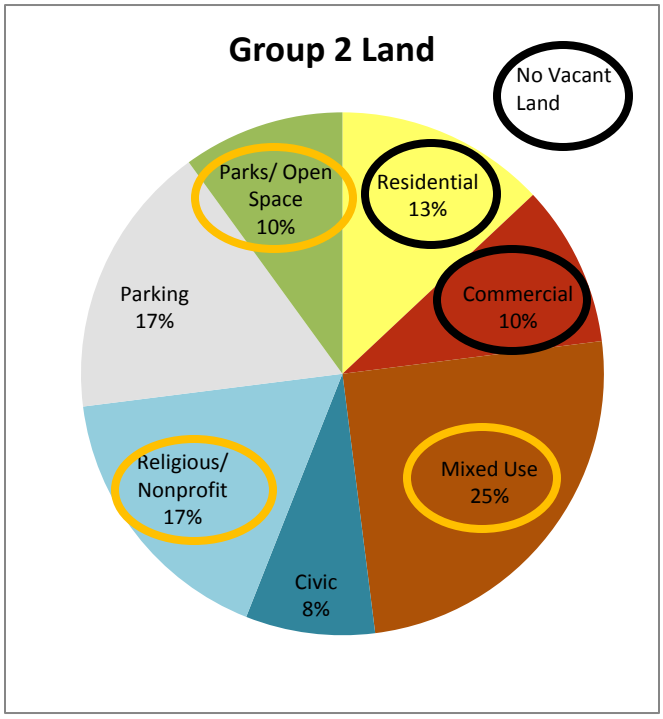

Group 4 Buildings
Vacant 3%
Industrial 7%
Residential 12%
Religious/ Nonprofit 12%
Civic 8%
Commercial 30%
Mixed Use 28%

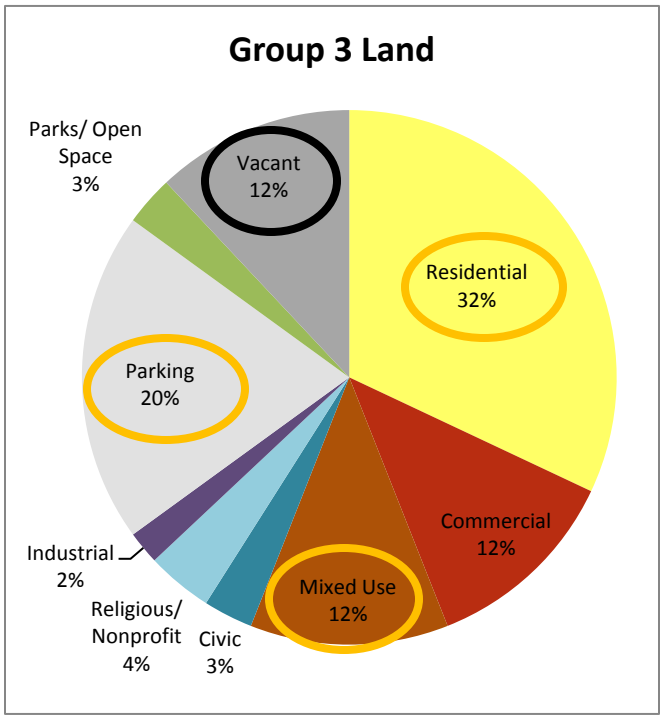

Group 5 Buildings
Vacant 5%
Industrial 7%
Residential 20%
Religious/ Nonprofit 24%
Commercial 30%
Civic 8%
Mixed Use 6%

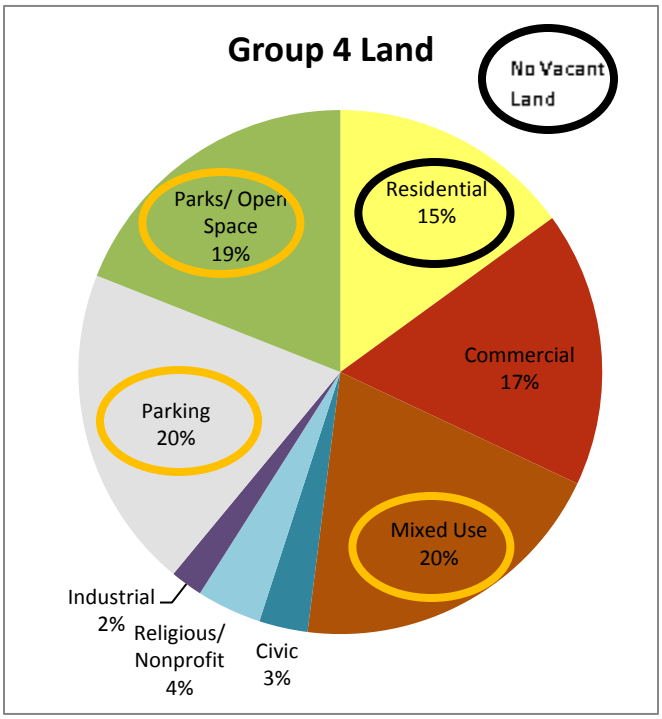
Land

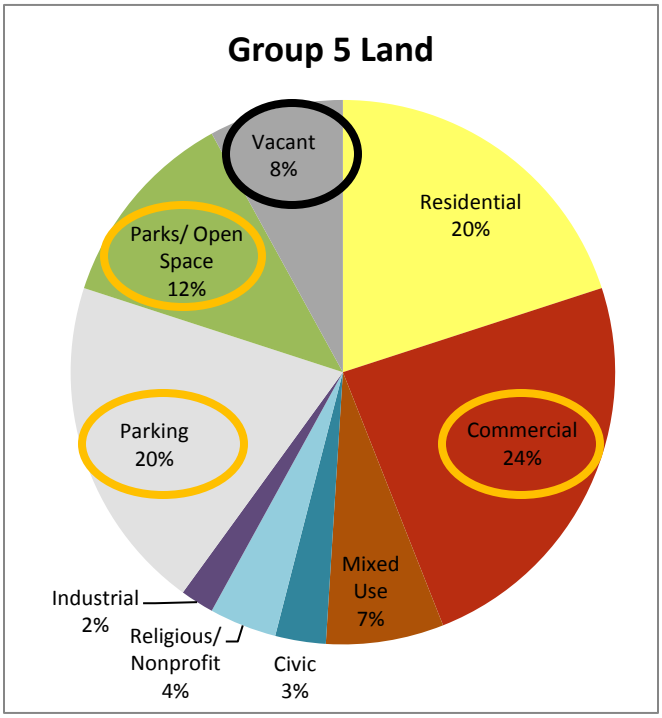

Existing Land Use
Park/Other 2%
Residential 22%
Commercial 17%
Mixed Use 7%
Civic 3%
Religious/ Nonprofit 4%
Industrial 2%
Parking 14%
Vacant Land 29%


Group 1 Land
Vacant 15%
Residential 22%
Parks/ Open Space 10%
Commercial 17%
Parking 20%
Mixed Use 7%
Industrial 2%
Religious/ Nonprofit 4%
Civic 3%


Group 2 Land
No Vacant Land
Parks/ Open Space 10%
Residential 13%
Commercial 10%
Parking 17%
Religious/ Nonprofit 17%
Mixed Use 25%
Civic 8%


Group 3 Land
Parks/ Open Space 3%
Vacant 12%
Residential 32%
Parking 20%
Commercial 12%
Industrial 2%
Mixed Use 12%
Religious/ Nonprofit 4%
Civic 3%

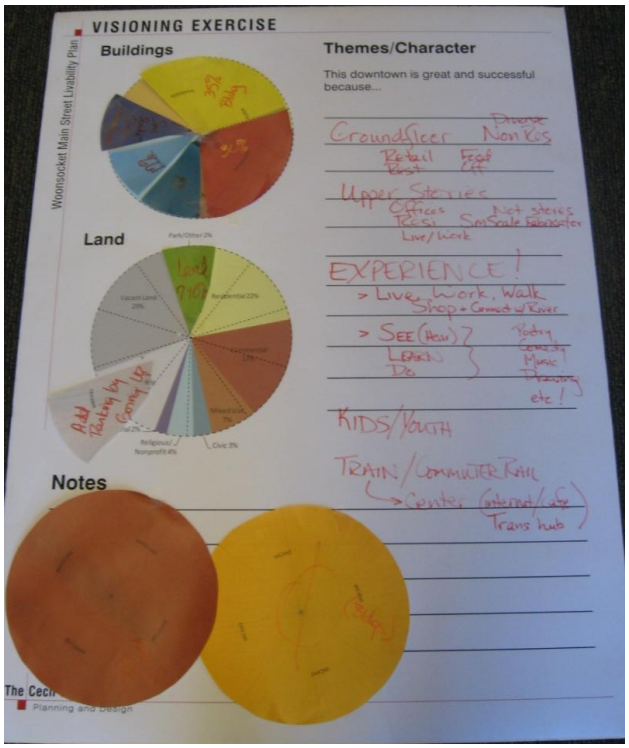

Group 4 Land
No Vacant Land
Parks/ Open Space 19%
Residential 15%
Commercial 17%
Parking 20%
Mixed Use 20%
Industrial 2%
Religious/ Nonprofit 4%
Civic 3%

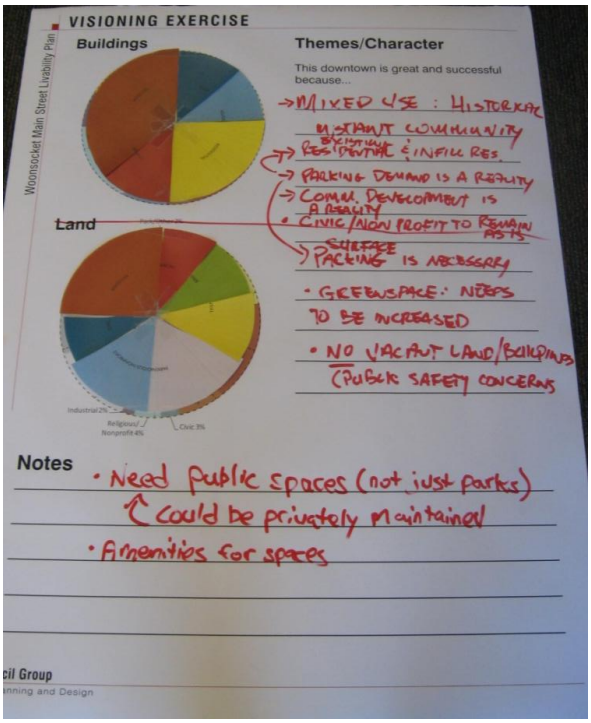

Group 5 Land
Vacant 8%
Residential 20%
Parks/ Open Space 12%
Parking 20%
Commercial 24%
Mixed Use 7%
Industrial 2%
Religious/ Nonprofit 4%
Civic 3%

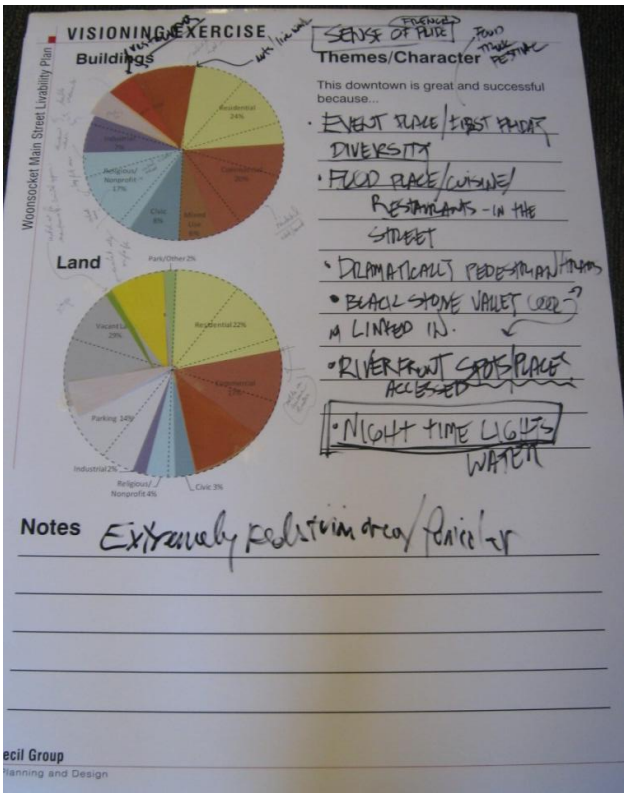
Themes/Character

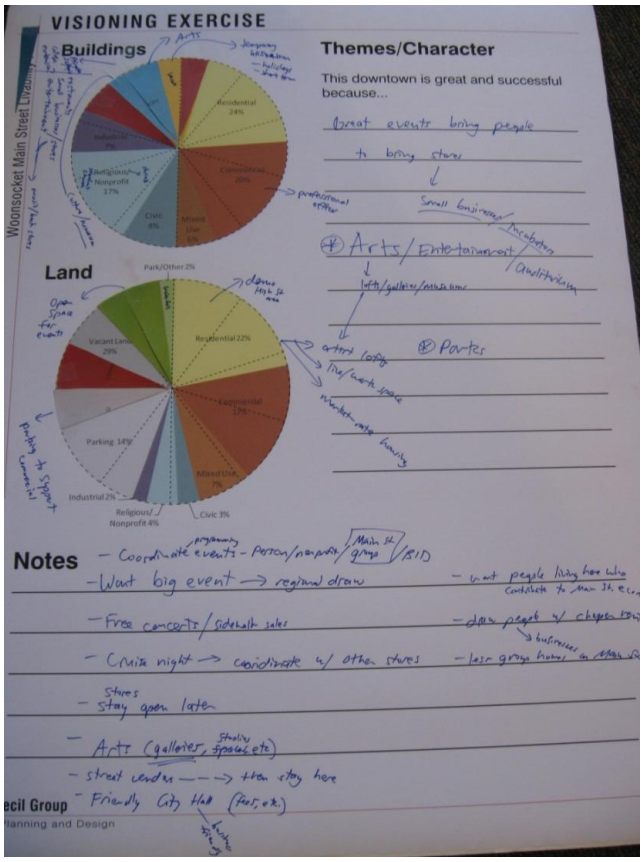
- Arts and entertainment center – events and activities, artist lofts, museums, galleries, studios and auditoriums
- "Experience" – live, work, walk, shop and connect to the river; see, learn and do
- Creative economy – live/work spaces, incubators for entrepreneurs, small businesses and small-scale fabricators
- Mixed-use downtown – diversity of uses that are mixed both vertically and horizontally
- Cultural center – uses that highlight area's diversity and history
- Food place – more restaurants
- Active night life – business open later at night, events and activities at night

Visioning Exercise Maps








VISIONING EXERCISE
Buildings
Residential 24%
Commercial 20%
Religious/ Nonprofit 17%
Civic 8%
Mixed Use 6%
Park/Other 2%
Land
Residential 22%
Commercial 17%
Parking 14%
Mixed Use 7%
Civic 3%
Religious/ Nonprofit 4%
Industrial 2%
Vacant Land 29%
Themes/Character
This downtown is great and successful because...
great events bring people
to bring stores
Small business/ Incubator
Arts/ Entertainment
Auditorium
Parks
Notes
- Coordinate events - Person/nonprofit/ Main St group/ BID
- Want big event → regional draw
- Free concerts/ sidewalk sales
- Cruise night → coordinate w/ other stores
- Stay open late
- Arts (galleries, studio spaces etc)
- street vendors → then stay here
- Friendly City Hall (Pets, etc)
- want people living here who contribute to Main St. ec...
- draw people w/ cheaper rent
- lose group homes
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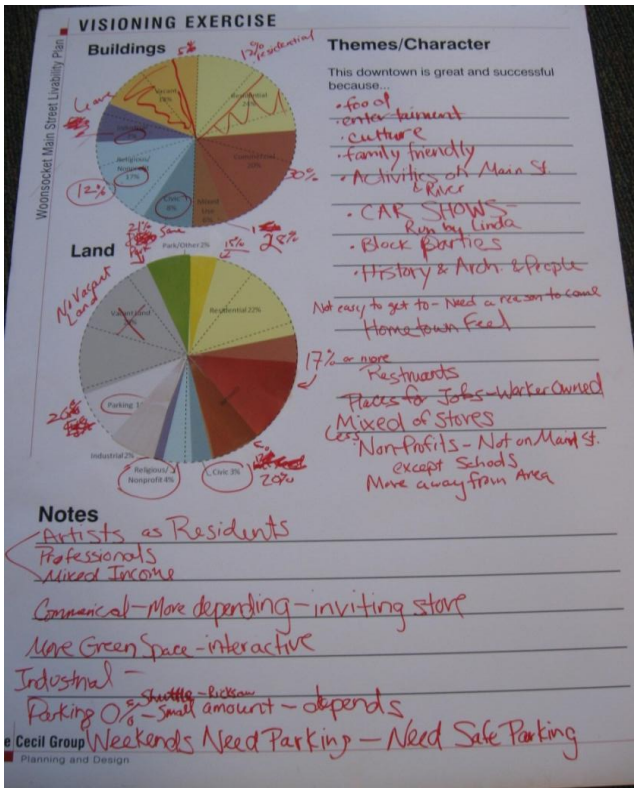
VISIONING EXERCISE
Buildings
Land
Themes/Character
This downtown is great and successful because...
• food
• entertainment
• culture
• family friendly
• Activities on Main St. & River
• CAR SHOWS Run by Linda
• Block Parties
• History & Arch. & People
Not easy to get to - Need a reason to come
Home town Feel
17% or more Restaurants
Places for Jobs - Worker Owned
Mixed of Stores
Less Non-Profits - Not on Main St. except Schools
More away from Area
Notes
Artists as Residents
Professionals
Mixed Income
Commercial - More depending - inviting store
More Green Space - interactive
Industrial -
Parking 0% - Small amount - depends
Weekends Need Parking - Need Safe Parking
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Woonsocket
Main Street Livability Plan

The Cecil Group
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Alta Planning + Design

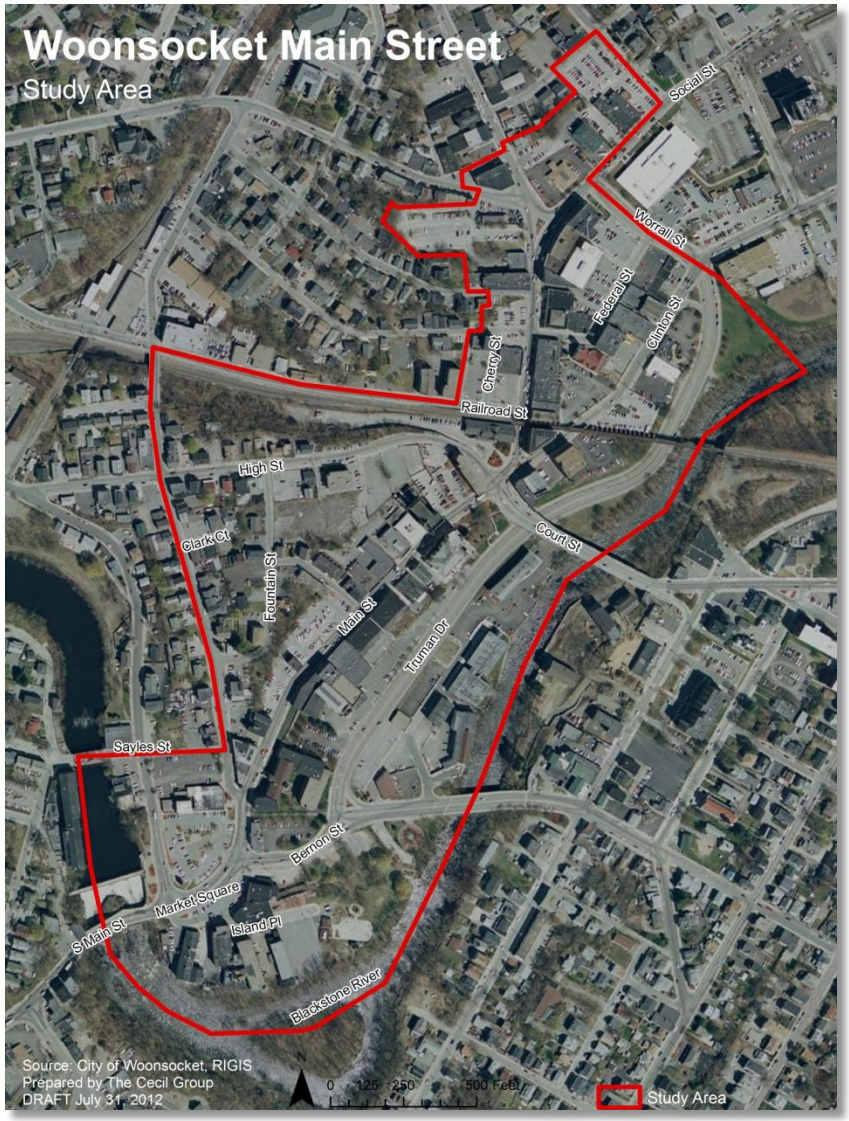
Public Meeting
Sept. 19, 2012

Agenda

- 6:00 – 6:30 Introduction/Workshop Overview
- 6:30 – 7:00 Groups: Mapping Exercise
- 7:00 – 7:15 Report Back
- 7:15 – 7:45 Presentation
  - Case Studies
- 7:45 – 8:15 Groups: Visioning Exercise
- 8:15 – 8:30 Report Back and Wrap Up

Study Area

- Main Street Area
  - > 200 properties
  - Roughly 82 acres
  - Borders the Blackstone River



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History

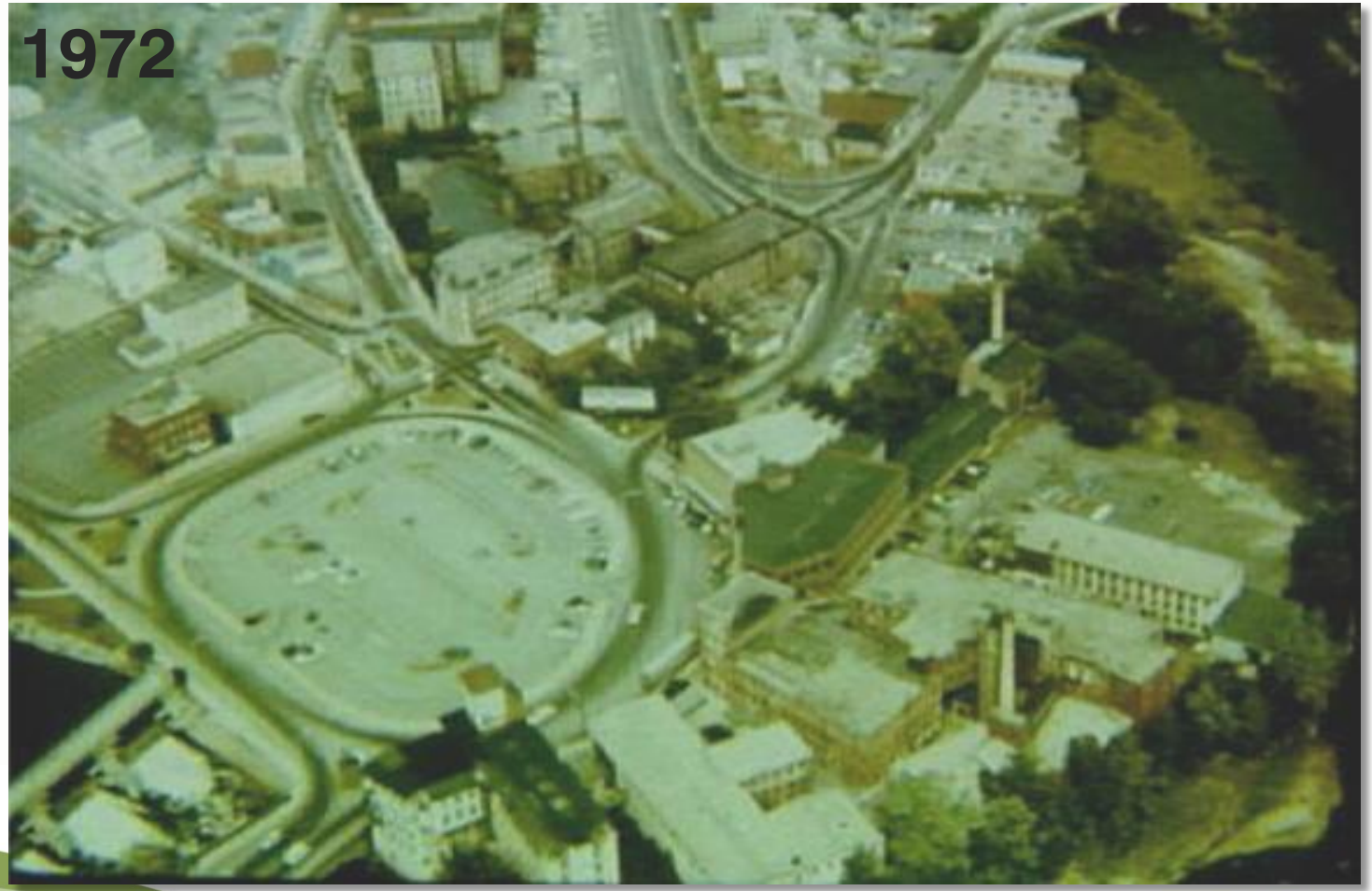
1890 August Aerial view of Main Street looking across towards Hamlet and Bernon Heights. Patriot Block in foreground.

c. 1930 Aerial view of Market Square, Main Street, River Street, Transit Street and Front Street areas of Woonsocket.
Source of both photos: http://www.quickpix.com/Woonsocket.htm, Woonsocket Harris Public Library, Karrow Associates Inc.

History

1960 Main Street
Source: Woonsocket Call, Woonsocket Historical Society

History



1972 August Aerial view of Market Square and Main Street area.
Source: http://www.quickpix.com/Woonsocket.htm,
Woonsocket Harris Public Library, Karrow Associates Inc.

Today

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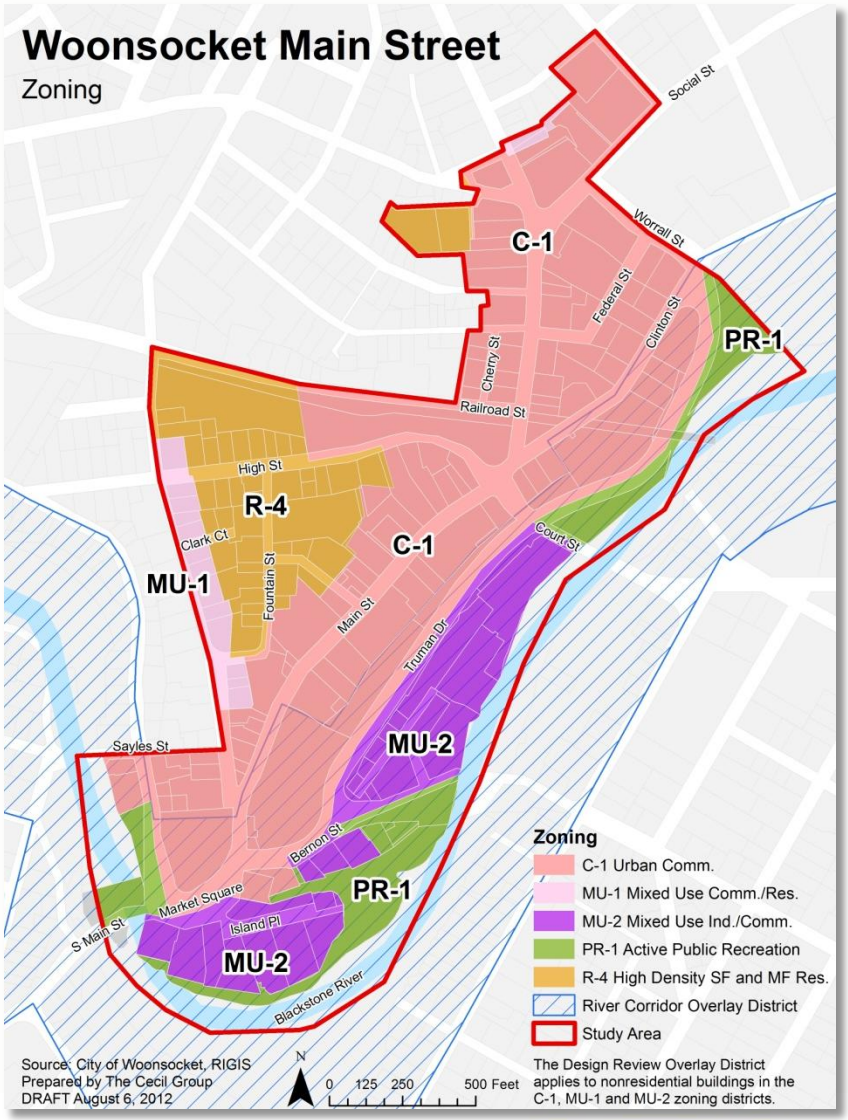
Zoning

- Zoning Shapes the Community
- 5 Zoning Districts in Main Street Area



Mapping Perspectives

- Breakout Groups
  - What **Should** Change?
  - What **Should Not** Change?

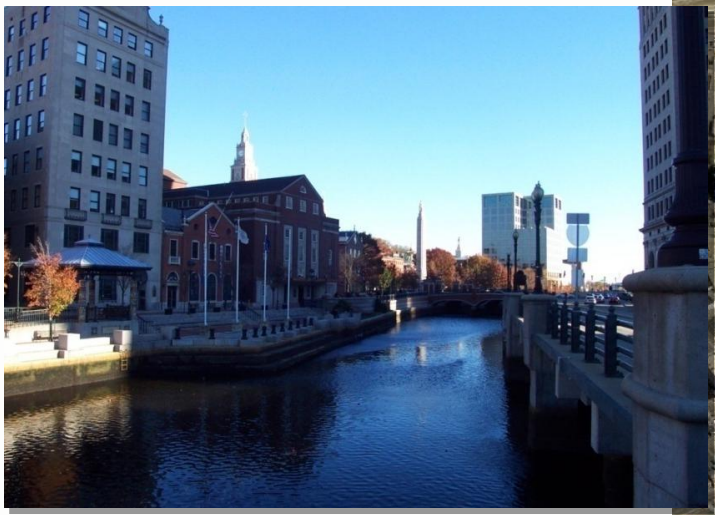
    (Land use, public realm, parking/circulation)

Case Studies

- Providence, RI
- Pawtucket, RI
- Portsmouth, NH
- Lowell, MA
- Salem, MA
- Waltham, MA
- New Bedford, MA
- Holyoke, MA

Case Studies

- Providence, RI



Source: Bing Maps

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Case Studies

- Pawtucket, RI

Source: http://www.destination360.com/north-america/us/rhode-island/pawtucket, Bing Maps

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Case Studies

- Lowell, MA

Source: http://lowell.org/Pages/ExploreLowell.aspx , Bing Maps

Case Studies

- Portsmouth, NH

Source: http://lowell.org/Pages/ExploreLowell.aspx, Bing Maps

Case Studies

- Salem, MA

Source: Bing Maps

Case Studies

- Waltham, MA

Source: http://www.genesworlds.com/2012/03/27/finding-food-around-waltham/, Bing Maps

Case Studies

- New Bedford, MA

Source http://www.nerycorp.com/saleopportunities.htm, Bing Maps

Case Studies

- Holyoke, MA

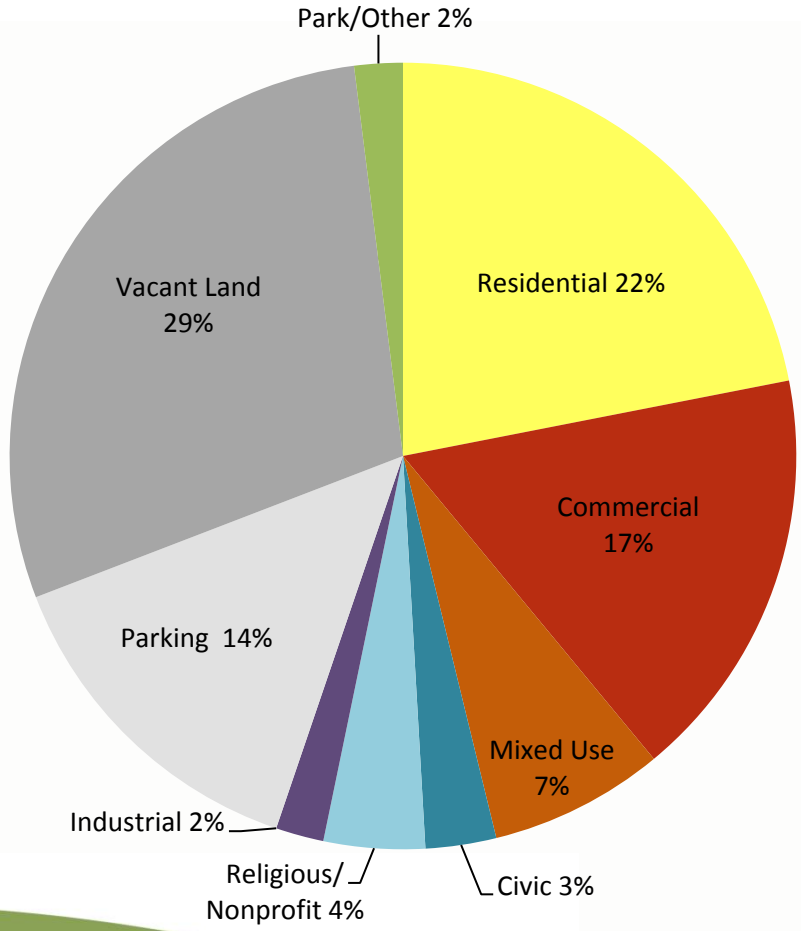
Source: http://holyoke.ning.com/group/economicdevelopmentsummit , Bing Maps

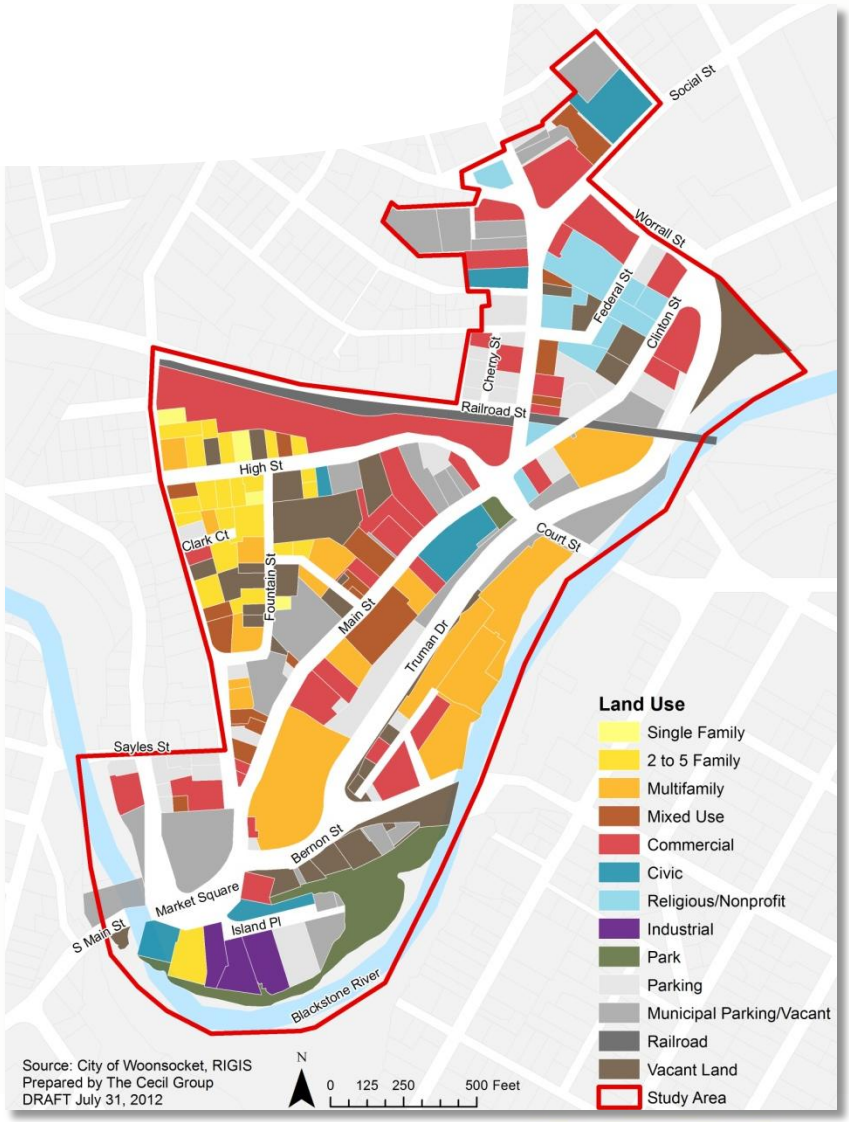
Woonsocket

- Main Street Area

Source: Bing Maps

Land Use Today





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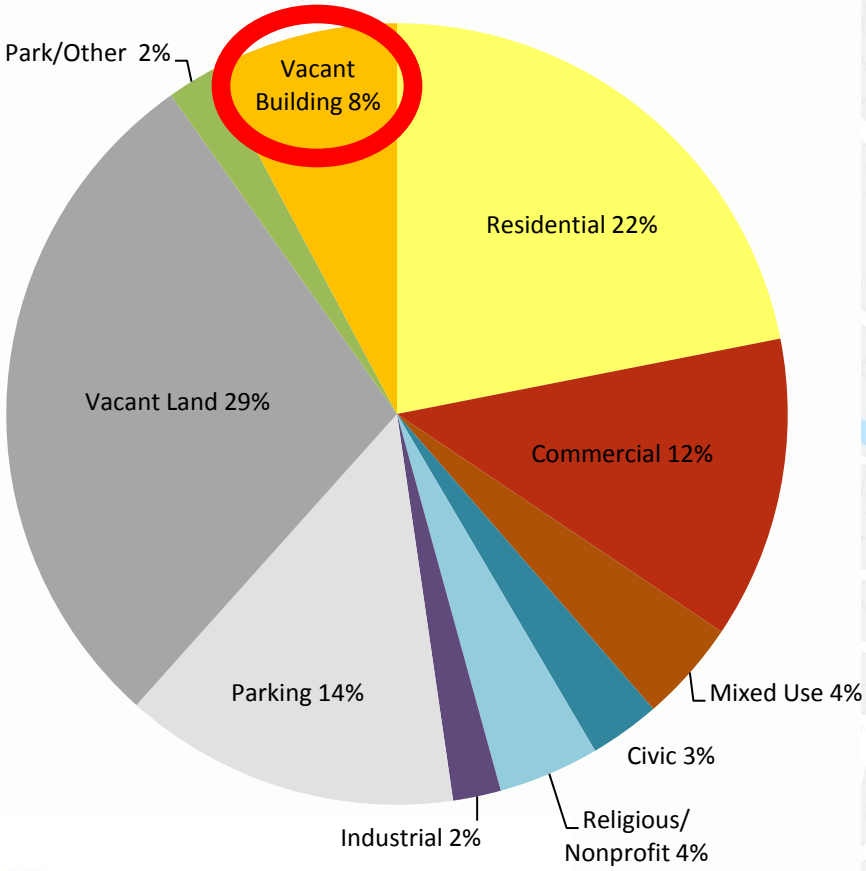
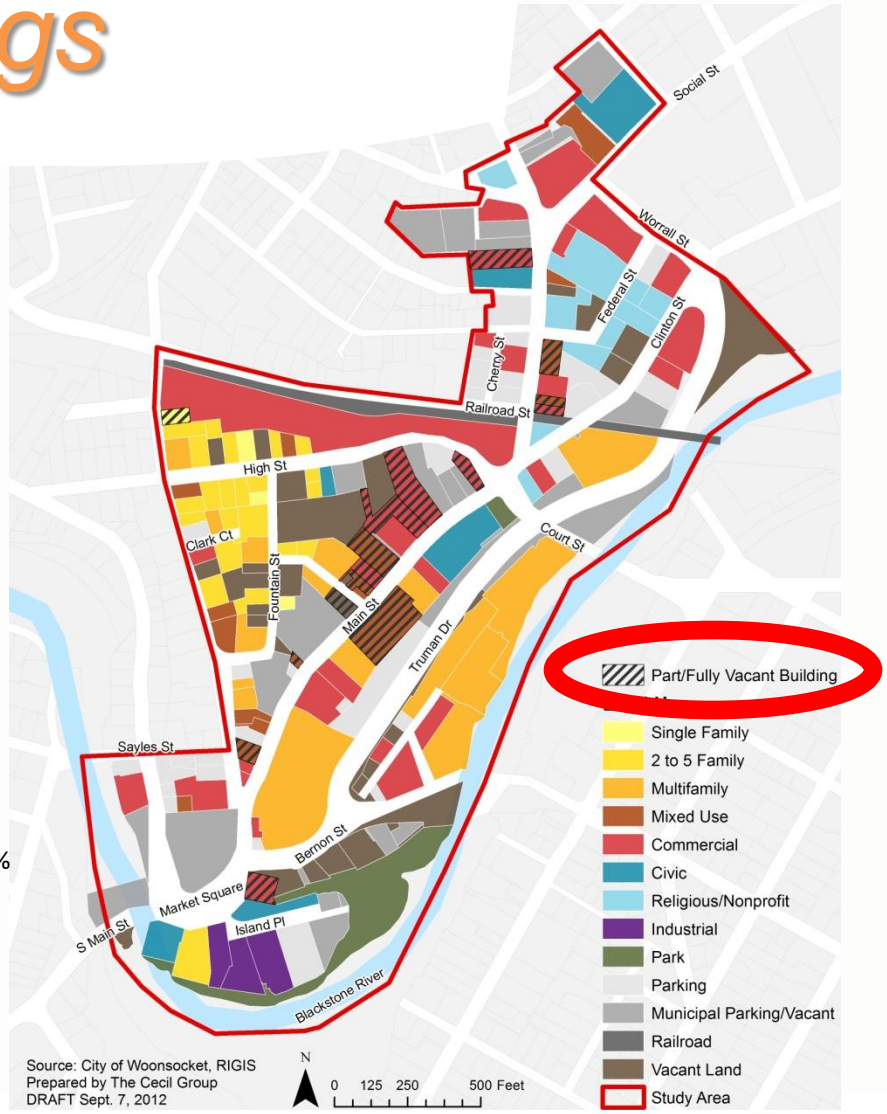
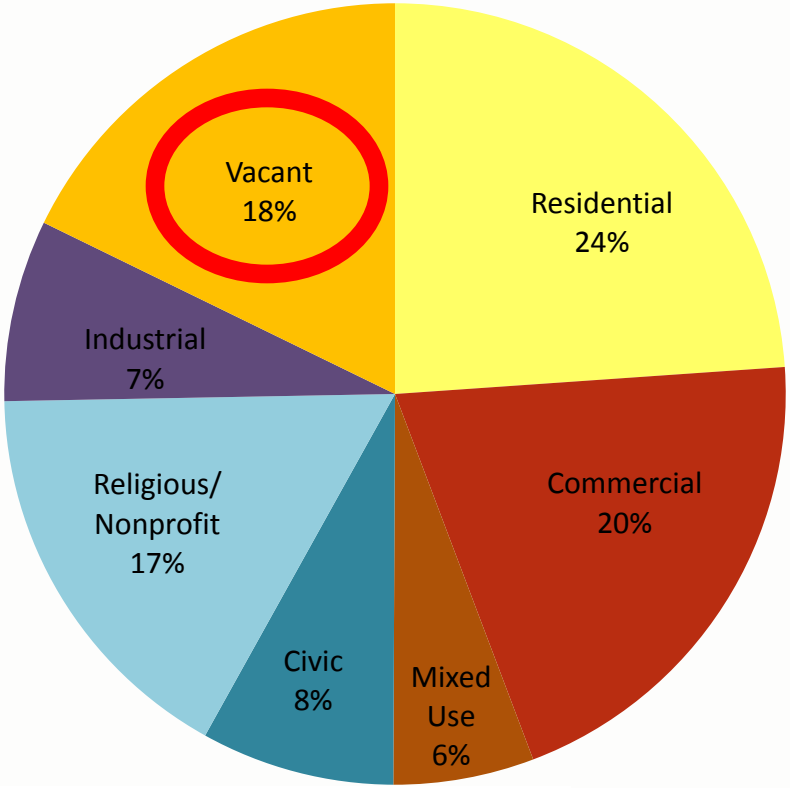
But *Vacant Buildings*





Est. Building Use by SF

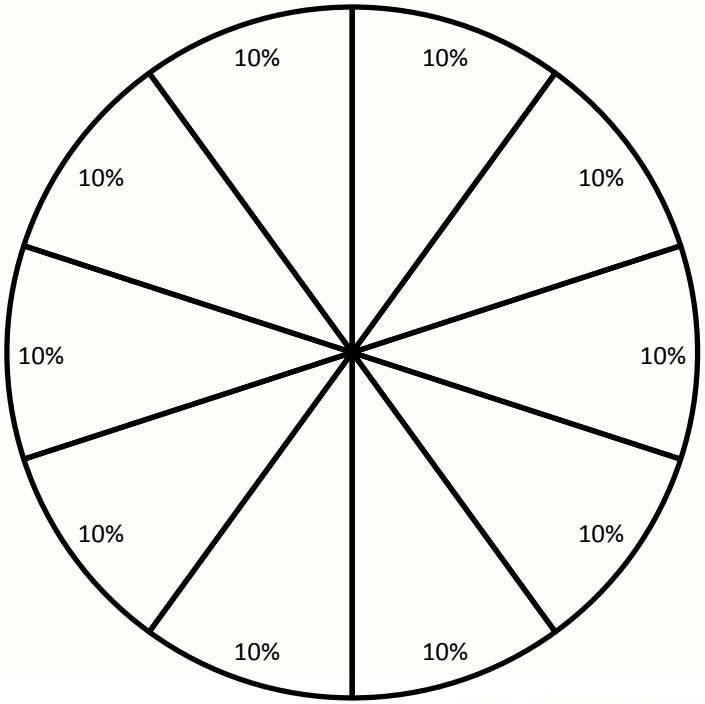


Use	Est. Building NSF
Residential	277,105
Commercial	235,928
Mixed Use	67,522
Civic	92,852
Religious/Nonprofit	192,837
Industrial	87,159
Vacant/Largely Vacant	206,126
Total	**1,159,529**

Source: City of Woonsocket and GIS

Visioning Exercise

- Breakout Groups
  - What makes the downtown great?
  - What should refill the area?
    - **Buildings**
    - **Land**
  - Considerations
    - Reuse/redevelop
    - Parking
    - Open space



Wrap Up

- Next Steps
  - Alternatives and strategies
  - Draft plan
  - Final Main Street Livability Plan

Woonsocket
Main Street Livability Plan

The Cecil Group
Fitzgerald & Halliday, Inc.
Alta Planning + Design

Public Meeting
Sept. 19, 2012

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Appendix B

Conceptual Alternatives

Conceptual Alternatives

Based on input from the public and the existing conditions analysis, the consultant team developed three alternative scenarios for the future of the Main Street area. Each scenario lays out a specific vision for the area and recommends improvements to the existing streetscape, circulation, parking, bicycle and pedestrian facilities, and land use. The three scenarios have the following themes:

- Creative Businesses
- Arts and Entertainment
- Residential

Detailed descriptions and strategies for each scenario are included in the following pages of this report.

As part of the planning process, the consultant team developed baseline recommendations for the Main Street area that are intended to set the stage for revitalization regardless of the future scenario preferred by the community. These recommendations, shown in Figure A, include a broad range of improvements; many focus on changes to the streetscape, circulation, parking and bicycle and pedestrian facilities that would make the area more inviting, safe, convenient and attractive for people who want to live, work or visit the area. Based on feedback from the community and others, the consultant team refined these baseline recommendations and incorporated them into the final recommendations, which are presented in the next chapter "Preferred Alternative."

Alternative 1 - Creative Businesses

Land Use

This alternative scenario, depicted in Figure B, continues to grow the commercial nodes at Market and Monument Squares, which anchor the study area and Main Street. It encourages the development of businesses that create products – creative businesses, and it specifically provides spaces for fabricators and light industrial uses in the squares. This could include woodworkers, furniture makers, clothing makers, high-technology businesses and other producers of small consumer goods. These types of businesses tend to be more consumer-oriented and have less environment impacts than heavy industrial uses such as manufacturing.

Alternative 1 also promotes retail storefronts on Main Street where creative businesses and entrepreneurs could sell their products. Entrepreneurs and small business owners could own or rent live/work spaces on Main Street, which would decrease demands on the transportation network. By encouraging people who work on Main Street to live there as well, the level of activity in the area would be increased throughout the day as opposed to only during regular daytime work hours.

Figure A Baseline Recommendations

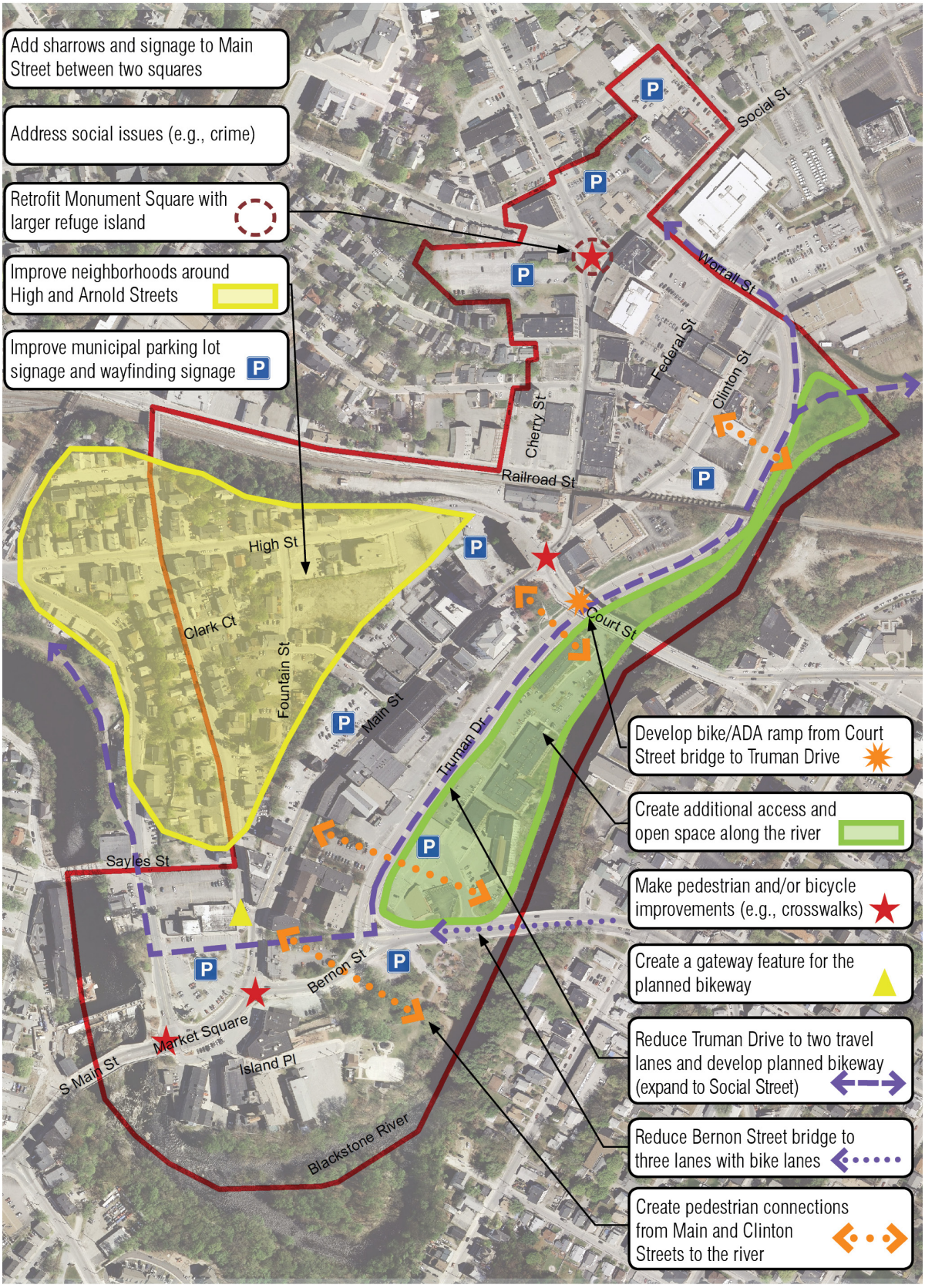
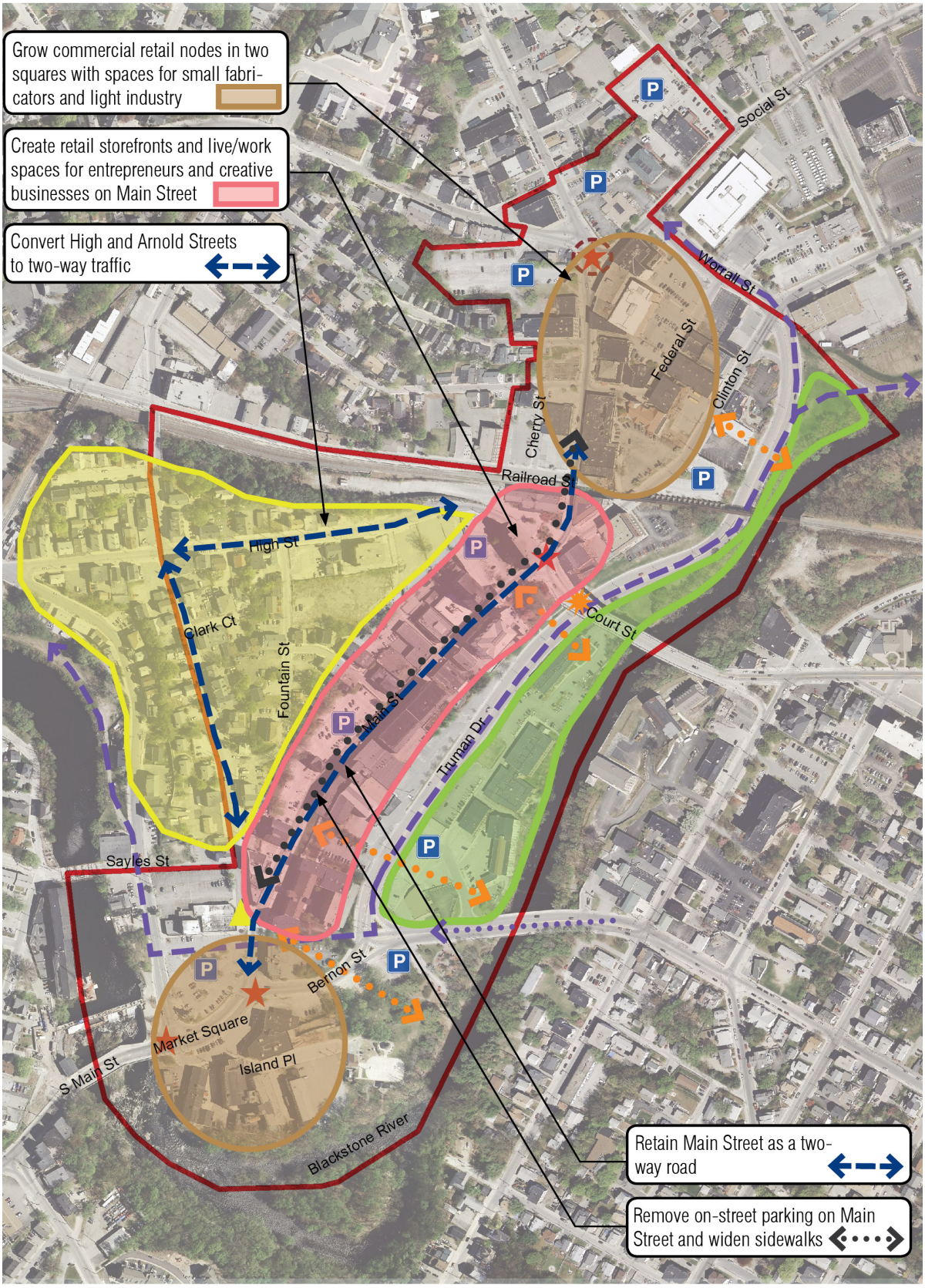


Figure B Alternative 1 - Creative Businesses



Circulation and Parking

Alternative 1 places an emphasis on improving traffic and pedestrian circulation on local roads by shifting parking from on-street to private and public parking lots. Increasing two-way operation would improve accessibility within the study area by improving the ease with which thru and local traffic can access Main Street and parking resources in the downtown. An ancillary benefit of increasing two-way operation is a marginal reduction in traffic volume on local roadways, as traffic can take more direct routes to destinations.

While Main Street has recently been converted to two-way operation, it has retained a parking lane on the south side of the street. Main Street is approximately 32 feet wide with two 12-foot-wide travel lanes and one eight-foot-wide parking lane between Market Square and Woonsocket Depot. The sidewalks on this segment of Main Street are relatively narrow, directly abutting store fronts and allowing little room for street furniture and landscaping. To expand this pedestrian zone would require the removal of a parking lane from Main Street. This would provide eight additional feet of width within the right-of-way for additional sidewalk and pedestrian space. Parking would in turn be shifted to municipal and private lots on Main Street or lots at Market Square, Truman Drive or High Street. With additional demand placed upon these lots, parking wayfinding and parking regulatory signage would be critical to ensure an efficient parking regime.

High Street, currently a one-way street in the westbound direction, could accommodate two-way traffic by eliminating four on-street parking spaces from the eastern end of High Street near its intersection with Main Street. With the exception of this location near Main Street where High Street is 22 feet wide, High Street is 30 feet wide on average. This roadway width allows on-street parking to be retained on the upper section of High Street near Fountain and Arnold Streets.

Arnold Street is relatively narrow (26 feet) and currently operates as a one-way street in the southbound (downhill) direction. The removal of parking from the west side of the street would be necessary to accommodate two-way traffic flow. This on-street parking is approximately 50 percent utilized; with narrow lots and small parcels, the removal of on-street parking from Arnold Street may place an undue hardship on residents. River Street, immediately to the west, may be considered as an alternate resource for two-way traffic flow as it currently operates in this capacity.

Streetscape, Bicycle and Pedestrian Facilities

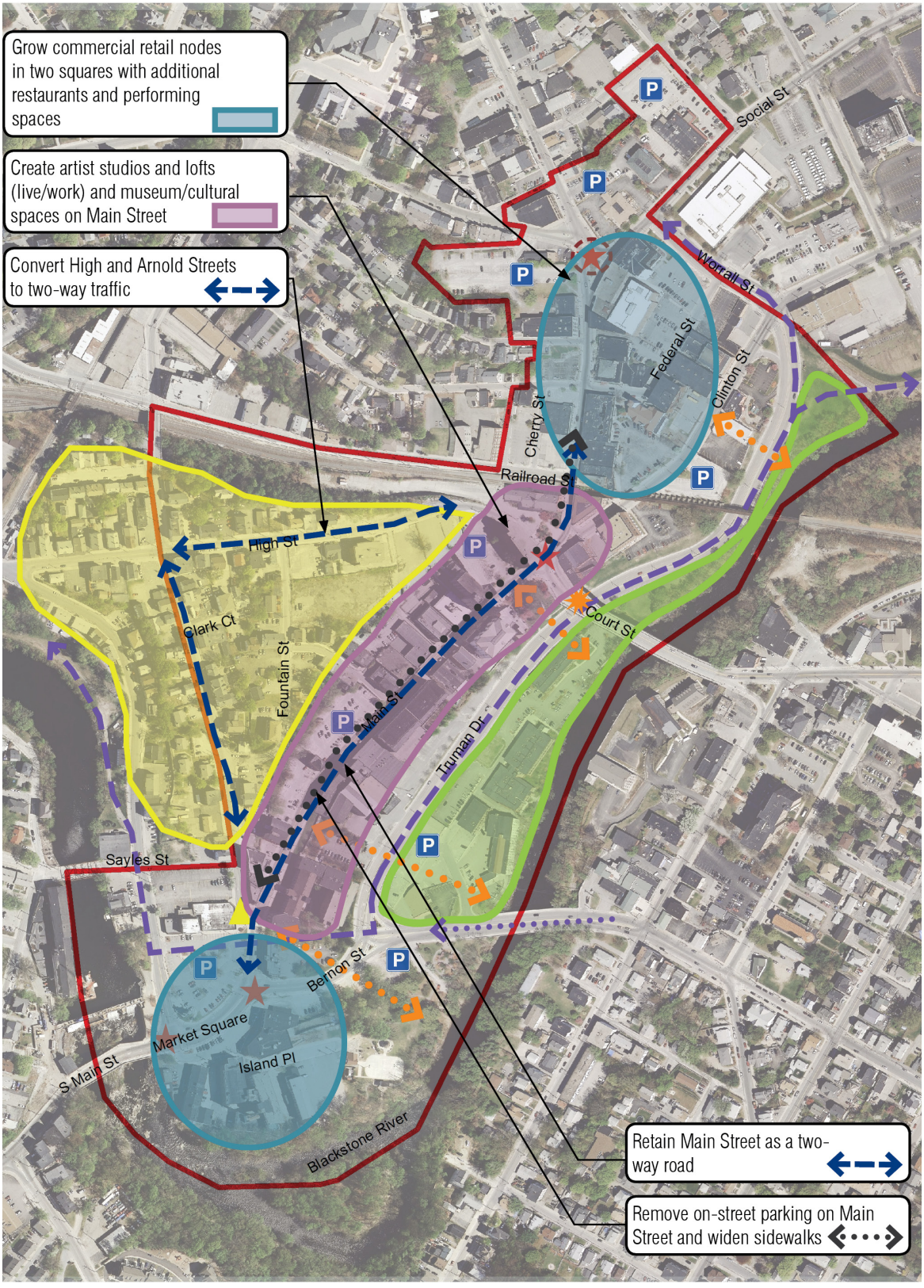
This alternative includes the recommendations for streetscape, bicycle and pedestrian facilities provided in the baseline recommendations. Additional improvements are not suggested under this alternative scenario.

Alternative 2 - Arts and Entertainment

Land Use

This scenario, shown in Figure C, is similar to Alternative 1 in that it focuses on growing commercial uses in the Main Street Area. It differs from the previous alternative by encouraging different types of uses; it

Figure C Alternative 2 - Arts and Entertainment



specifically builds off the existing businesses and strengths of Market and Monument Squares by promoting the growth of additional restaurants and performance spaces. As mentioned earlier, the two squares are already home to several restaurants and performance venues, which attract customers and visitors from Woonsocket and beyond. By promoting these types of uses, the Main Street area could become widely known as an arts and entertainment district. Cross promotion between the restaurants and venues could be strengthened, and coordination among the uses and events could create a more cohesive district character.

The squares would be supported by additional arts-related uses on Main Street. This could include artist studios, lofts and galleries (live/work spaces) as well as museums or cultural spaces that compliment, for example, the Museum of Work and Culture in Market Square. Outdoor recreation or entertainment spaces for temporary activities would also be encouraged. This would allow businesses and organizations to hold outdoor events such as music performances in the Main Street area. These activities would potentially help enliven the downtown and heightened the area's visibility and "arts and entertainment" image.

Circulation and Parking

The circulation and parking recommendations from Alternative Scenario 1 are recommended for this scenario.

Streetscape, Bicycle and Pedestrian Facilities

This alternative includes the recommendations for streetscape, bicycle and pedestrian facilities provided in the baseline recommendations. Additional improvements are not suggested under this alternative scenario.

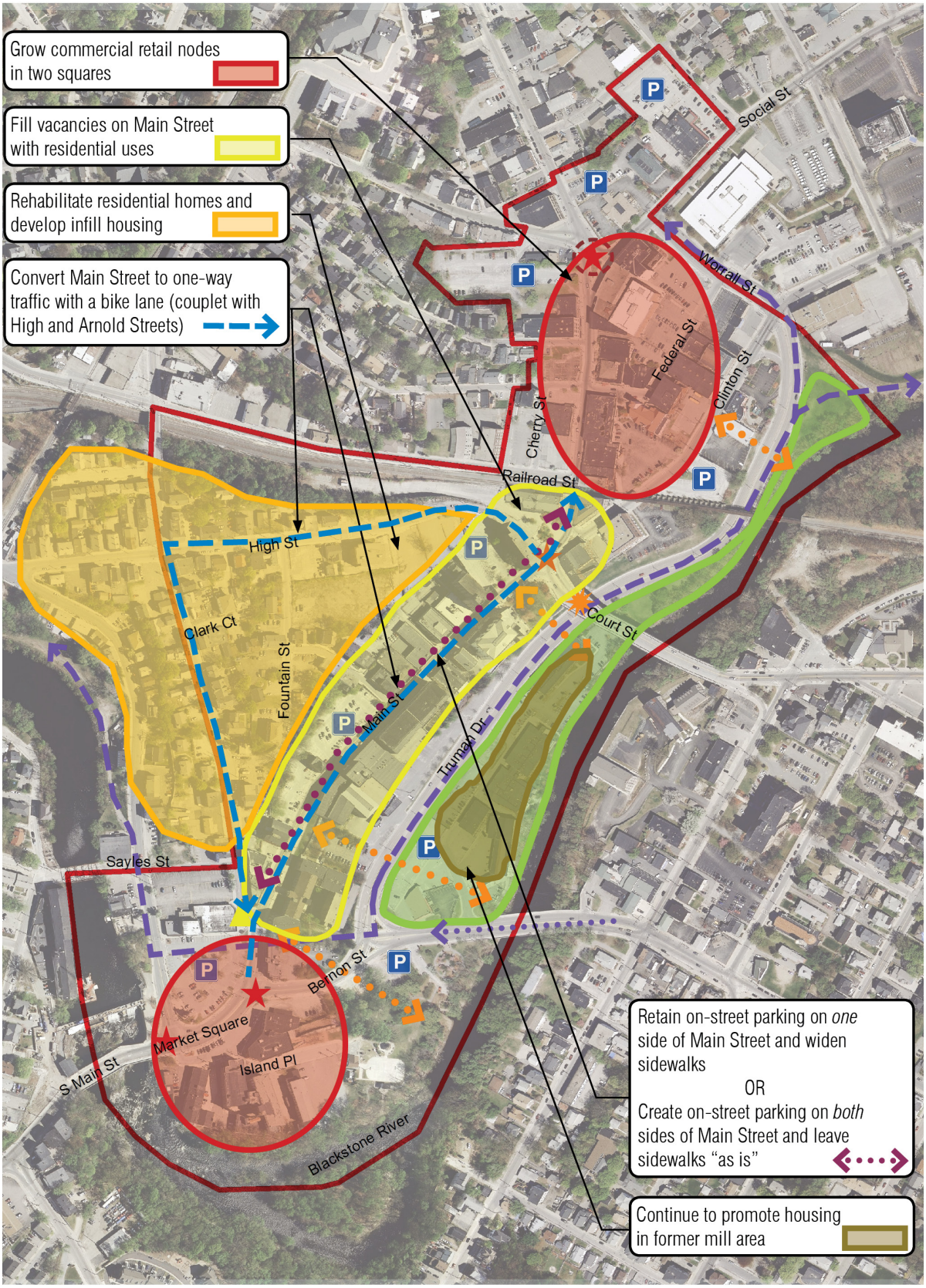
Alternative 3 - Residential

Land Use

Alternative 3, shown in Figure D, differs greatly from the two other alternatives, as it looks to convert the Main Street area into a residential district, focusing on growing housing as opposed to commercial uses. While it continues to grow the commercial nodes at Market and Monument Squares, it fills the vacancies on Main Street with housing. This could include a mix of market-rate housing as well as affordable units. (There has been concern in the community about single-room occupancy units and roominghouses, but the concerns appear to focus on the condition of the housing as opposed to the actual type of housing.)

This scenario also puts greater emphasis on improving the residential neighborhood near High and Arnold streets. It specifically looks to rehabilitate the existing homes, while creating infill housing on vacant or underutilized lots. Generally, it is more critical in this alternative scenario than the other alternatives to turnaround the residential neighborhood because Main Street is not likely to be an attractive place to live if the neighborhood just up the hill is degraded and unsightly.

Figure D Alternative 3 - Residential



In addition, this scenario promotes the continued conversion and creation of housing in the former mill area along the river to strengthen the residential character of the Main Street area. The three areas – High and Arnold streets, Main Street and the riverfront – could provide different types of quality housing, opening the area up to people of ages and household types. The Main Street area would effectively become a place where diverse housing choices were available.

Circulation and Parking

In this scenario, Main Street would revert to one-way traffic in the north-bound direction. The benefit of this change in operation would be additional space within the roadway for bicycle lanes, wider sidewalks or additional on-street parking. South and westbound Main Street traffic would be accommodated by the existing one-way traffic patterns on High and Arnold Streets. On-street parking on High and Arnold Streets would be preserved as is, while parking on Main Street could be doubled if a parking lane were installed on the north side of Main Street in lieu of bicycle lanes or wider sidewalks.

As in Alternative 1, parking wayfinding and regulatory signage would be critical to this scenario. With traffic restricted to one-way operation, parking would only be accessed from one direction on Main Street. An effective wayfinding program would minimize the occurrence of traffic "doubling back" to access a parking lot.

Streetscape, Bicycle and Pedestrian Facilities

If Main Street is converted to a one-way street as recommended in this scenario, the City should consider adding a bike lane to Main Street. As mentioned earlier, the additional space gained by the conversion could be used to widen sidewalks or add on-street parking to the east side of the street.

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Appendix C

Traffic Counts

Connecticut Counts LLC
63 Sugar Maple Lane
Kensington, Connecticut 06037
_(860) 828-1693_

Truman Drive North of Bermon Street
Woonsocket, Rhode Island

Site Code: 2891
Station ID:

Latitude: 0' 0.000 Undefined

Start	12-Nov-12		Tue		Wed		Thu		Fri		Sat		Sun		Week Averag	
Time	Northbo	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South
12:00 AM	*	*	*	*	*	*	20	19	34	13	56	32	52	22	40	22
01:00	*	*	*	*	*	*	18	6	32	10	38	18	34	13	30	12
02:00	*	*	*	*	*	*	18	7	21	14	22	12	17	5	20	10
03:00	*	*	*	*	*	*	21	19	23	11	15	14	8	12	17	14
04:00	*	*	*	*	*	*	45	8	41	13	28	6	13	4	32	8
05:00	*	*	*	*	*	*	119	14	122	7	53	12	21	10	79	11
06:00	*	*	*	*	*	*	252	33	246	35	88	7	56	7	160	20
07:00	*	*	*	*	*	*	**421**	85	419	83	146	37	103	19	272	56
08:00	*	*	*	*	*	*	404	100	**426**	105	216	60	120	42	292	77
09:00	*	*	*	*	*	*	356	143	404	183	268	120	191	68	305	128
10:00	*	*	*	*	*	*	310	137	366	**194**	**359**	**174**	244	85	**320**	148
11:00	*	*	*	*	*	*	321	**171**	320	190	308	150	**248**	**97**	299	**152**
12:00 PM	*	*	*	*	329	207	348	218	345	216	**327**	**188**	243	**144**	318	195
01:00	*	*	*	*	342	163	337	188	375	200	291	159	**257**	129	320	168
02:00	*	*	*	*	**393**	209	**425**	250	**450**	228	311	152	232	114	**362**	191
03:00	*	*	*	*	386	236	400	**296**	425	**372**	320	141	228	108	352	231
04:00	*	*	*	*	328	**288**	344	291	378	334	236	141	220	121	301	**235**
05:00	*	*	*	*	328	259	348	258	396	276	284	146	169	126	305	213
06:00	*	*	*	*	262	190	288	178	375	218	239	132	159	68	265	157
07:00	*	*	*	*	169	108	162	124	222	155	163	83	136	61	170	106
08:00	*	*	*	*	114	97	126	103	134	93	114	58	84	47	114	80
09:00	*	*	*	*	87	72	77	84	127	106	113	48	56	34	92	69
10:00	*	*	*	*	78	38	77	37	114	65	85	60	52	19	81	44
11:00	*	*	*	*	51	26	49	32	87	43	69	37	38	25	59	33
Lane	0	0	0	0	2867	1893	5286	2801	5882	3164	4149	1987	2981	1380	4605	2380
Day	0		0		4760		8087		9046		6136		4361		6985	
AM Peak							07:00	11:00	08:00	10:00	10:00	10:00	11:00	11:00	10:00	11:00
Vol.							421	171	426	194	359	174	248	97	320	152
PM Peak					14:00	16:00	14:00	15:00	14:00	15:00	12:00	12:00	13:00	12:00	14:00	16:00
Vol.					393	288	425	296	450	372	327	188	257	144	362	235

Connecticut Counts LLC
63 Sugar Maple Lane
Kensington, Connecticut 06037
(860) 828-1693

Truman Drive North of Bermon Street
Woonsocket, Rhode Island

Site Code: 2891
Station ID:

Latitude: 0' 0.000 Undefined

Start	19-Nov-12		Tue		Wed		Thu		Fri		Sat		Sun		Week Averag	
Time	Northbo	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South
12:00 AM	23	19	29	12	21	17	53	27	34	22	61	24	55	45	39	24
01:00	19	11	17	8	21	7	50	14	24	6	46	17	30	15	30	11
02:00	10	4	8	4	10	10	20	11	43	10	21	10	18	9	19	8
03:00	18	11	21	12	17	10	10	8	26	19	17	13	18	12	18	12
04:00	39	7	45	6	53	7	15	5	42	12	25	10	19	9	34	8
05:00	130	13	123	15	113	15	16	9	59	15	40	12	31	12	73	13
06:00	225	28	233	30	236	30	45	12	100	15	72	12	38	7	136	19
07:00	442	73	427	74	**451**	79	80	22	170	38	137	33	87	11	256	47
08:00	**445**	120	**438**	115	436	110	110	44	254	55	172	50	114	33	281	75
09:00	332	137	383	132	385	158	122	44	283	104	245	112	175	59	275	107
10:00	296	156	366	138	345	171	153	69	318	142	**294**	115	**231**	87	286	125
11:00	331	**186**	307	**188**	338	**222**	**178**	**81**	**329**	**172**	294	**152**	231	**91**	**287**	**156**
12:00 PM	321	185	332	194	389	215	**230**	62	312	170	**291**	146	240	104	302	154
01:00	353	190	390	203	400	222	148	60	321	160	281	133	233	101	304	153
02:00	**383**	232	**398**	263	**412**	277	138	54	**365**	158	255	**148**	**244**	116	**314**	178
03:00	370	228	397	274	374	277	132	46	324	182	272	101	237	**118**	301	175
04:00	337	**295**	332	**277**	371	**316**	154	53	289	**212**	254	125	200	105	277	**198**
05:00	326	235	322	242	300	229	150	60	298	154	237	104	177	76	259	157
06:00	262	170	239	170	246	125	142	**76**	207	119	284	99	140	81	217	120
07:00	181	120	184	132	206	114	130	48	217	78	182	95	137	61	177	93
08:00	108	71	113	83	168	85	137	53	132	54	106	56	99	38	123	63
09:00	72	49	71	58	116	51	89	36	114	53	102	79	61	38	89	52
10:00	57	31	69	46	102	34	66	28	98	70	111	56	56	28	80	42
11:00	56	32	58	32	85	37	62	27	55	45	71	48	41	24	61	35
Lane	5136	2603	5302	2708	5595	2818	2430	949	4414	2065	3870	1750	2912	1280	4238	2025
Day	7739		8010		8413		3379		6479		5620		4192		6263	
AM Peak	08:00	11:00	08:00	11:00	07:00	11:00	11:00	11:00	11:00	11:00	10:00	11:00	10:00	11:00	11:00	11:00
Vol.	445	186	438	188	451	222	178	81	329	172	294	152	231	91	287	156
PM Peak	14:00	16:00	14:00	16:00	14:00	16:00	12:00	18:00	14:00	16:00	12:00	14:00	14:00	15:00	14:00	16:00
Vol.	383	295	398	277	412	316	230	76	365	212	291	148	244	118	314	198

Connecticut Counts LLC
63 Sugar Maple Lane
Kensington, Connecticut 06037
(860) 828-1693

Truman Drive North of Bermon Street
Woonsocket, Rhode Island

Site Code: 2891
Station ID:

Latitude: 0' 0.000 Undefined

Start	26-Nov-12		Tue		Wed		Thu		Fri		Sat		Sun		Week Averag	
Time	Northbo	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South
12:00 AM	23	9	*	*	*	*	*	*	*	*	*	*	*	*	23	9
01:00	19	8	*	*	*	*	*	*	*	*	*	*	*	*	19	8
02:00	8	3	*	*	*	*	*	*	*	*	*	*	*	*	8	3
03:00	14	7	*	*	*	*	*	*	*	*	*	*	*	*	14	7
04:00	40	12	*	*	*	*	*	*	*	*	*	*	*	*	40	12
05:00	114	16	*	*	*	*	*	*	*	*	*	*	*	*	114	16
06:00	227	19	*	*	*	*	*	*	*	*	*	*	*	*	227	19
07:00	428	76	*	*	*	*	*	*	*	*	*	*	*	*	428	76
08:00	**445**	94	*	*	*	*	*	*	*	*	*	*	*	*	**445**	94
09:00	322	**127**	*	*	*	*	*	*	*	*	*	*	*	*	322	**127**
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:00 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lane	1640	371	0	0	0	0	0	0	0	0	0	0	0	0	1640	371
Day	2011		0		0		0		0		0		0		2011	
AM Peak	08:00	09:00													08:00	09:00
Vol.	445	127													445	127
PM Peak																
Vol.																

Comb. Total	9750	8010	13173	11466	15525	11756	8553	15259
ADT	ADT 6,565	AADT 6,565						

Connecticut Counts LLC
63 Sugar Maple Lane
Kensington, Connecticut 06037
(860) 828-1693

Main Street South of Ascension Street
Woonsocket, Rhode Island

Site Code: 2890
Station ID:

Latitude: 0' 0.000 Undefined

Start	12-Nov-12		Tue		Wed		Thu		Fri		Sat		Sun		Week Averag	
Time	Northbo	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South
12:00 AM	*	*	*	*	*	*	43	46	55	67	102	103	79	93	70	77
01:00	*	*	*	*	*	*	32	24	54	30	86	61	55	60	57	44
02:00	*	*	*	*	*	*	11	14	14	21	25	40	28	20	20	24
03:00	*	*	*	*	*	*	17	18	17	15	24	20	20	18	20	18
04:00	*	*	*	*	*	*	33	23	25	27	36	14	21	8	29	18
05:00	*	*	*	*	*	*	83	50	68	49	35	21	39	25	56	36
06:00	*	*	*	*	*	*	136	142	157	101	56	56	63	47	103	86
07:00	*	*	*	*	*	*	250	**164**	223	169	107	95	75	73	164	125
08:00	*	*	*	*	*	*	224	159	257	196	165	148	133	101	195	151
09:00	*	*	*	*	*	*	230	164	**476**	122	226	207	178	130	**278**	156
10:00	*	*	*	*	*	*	218	154	262	218	227	237	207	152	228	190
11:00	*	*	*	*	*	*	**260**	149	257	**220**	**262**	**245**	**230**	**180**	252	**198**
12:00 PM	*	*	*	*	**331**	210	279	151	**310**	251	282	224	248	242	**290**	216
01:00	*	*	*	*	271	234	279	245	293	264	258	236	269	230	274	242
02:00	*	*	*	*	283	267	251	234	270	246	**287**	243	**274**	**246**	273	247
03:00	*	*	*	*	263	304	252	287	307	242	245	213	232	223	260	254
04:00	*	*	*	*	261	**311**	**286**	**322**	254	**370**	265	**255**	232	224	260	**296**
05:00	*	*	*	*	267	292	279	299	293	304	242	243	226	190	261	266
06:00	*	*	*	*	214	268	245	262	268	246	207	238	163	162	219	235
07:00	*	*	*	*	164	207	215	178	229	276	166	187	129	150	181	200
08:00	*	*	*	*	126	187	160	168	175	185	152	137	118	118	146	159
09:00	*	*	*	*	100	119	109	178	163	192	132	155	99	107	121	150
10:00	*	*	*	*	93	95	82	104	128	165	121	148	77	73	100	117
11:00	*	*	*	*	55	61	74	69	128	121	111	92	54	43	84	77
Lane	0	0	0	0	2428	2555	4048	3604	4683	4097	3819	3618	3249	2915	3941	3582
Day	0		0		4983		7652		8780		7437		6164		7523	
AM Peak							11:00	07:00	09:00	11:00	11:00	11:00	11:00	11:00	09:00	11:00
Vol.							260	164	476	220	262	245	230	180	278	198
PM Peak					12:00	16:00	16:00	16:00	12:00	16:00	14:00	16:00	14:00	14:00	12:00	16:00
Vol.					331	311	286	322	310	370	287	255	274	246	290	296

Connecticut Counts LLC
63 Sugar Maple Lane
Kensington, Connecticut 06037
(860) 828-1693

Main Street South of Ascension Street
Woonsocket, Rhode Island

Site Code: 2890
Station ID:

Latitude: 0' 0.000 Undefined

Start	19-Nov-12		Tue		Wed		Thu		Fri		Sat		Sun		Week Averag	
Time	Northbo	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South
12:00 AM	33	24	25	40	43	47	126	98	49	44	111	72	117	69	72	56
01:00	15	10	22	21	32	25	113	74	34	16	112	75	85	48	59	38
02:00	25	10	12	17	19	19	20	26	20	24	34	24	30	17	23	20
03:00	29	14	25	15	21	17	25	19	27	13	26	8	32	9	26	14
04:00	30	26	39	14	31	23	25	10	37	26	43	15	25	7	33	17
05:00	71	41	79	44	81	40	22	14	57	40	37	12	40	17	55	30
06:00	133	106	150	91	150	129	55	40	111	58	81	43	65	29	106	71
07:00	220	160	244	173	231	166	90	64	119	94	129	108	84	75	160	120
08:00	238	177	239	190	264	219	106	85	194	144	178	135	141	104	194	151
09:00	234	190	263	214	**321**	202	147	136	257	180	252	164	186	129	237	174
10:00	257	193	248	214	269	**226**	**185**	163	257	232	254	207	210	166	240	200
11:00	**277**	**250**	**272**	**227**	287	223	183	**203**	**273**	**252**	**275**	**239**	**259**	**189**	**261**	**226**
12:00 PM	**278**	239	**305**	202	288	262	**199**	**202**	269	231	**289**	264	**295**	**253**	**275**	236
01:00	267	223	256	232	289	242	181	157	302	271	268	**267**	231	229	256	232
02:00	259	243	304	251	302	277	176	140	**308**	249	282	238	234	228	266	232
03:00	260	260	304	277	**339**	256	139	134	272	**291**	260	239	265	237	263	242
04:00	243	264	270	**316**	271	**302**	178	163	272	270	266	248	212	226	245	**256**
05:00	233	**273**	275	315	275	285	170	166	299	290	245	265	205	194	243	255
06:00	218	229	245	264	251	238	160	175	225	253	244	208	173	162	217	218
07:00	149	191	195	212	230	213	157	139	217	198	206	185	147	141	186	183
08:00	126	152	143	170	179	184	122	146	167	150	152	135	112	104	143	149
09:00	88	121	116	149	153	207	98	103	133	174	142	173	100	84	119	144
10:00	70	57	84	99	136	174	89	74	135	162	128	128	90	63	105	108
11:00	51	61	57	71	117	127	70	66	97	117	107	102	43	24	77	81
Lane	3804	3514	4172	3818	4579	4103	2836	2597	4131	3779	4121	3554	3381	2804	3861	3453
Day	7318		7990		8682		5433		7910		7675		6185		7314	
AM Peak	11:00	11:00	11:00	11:00	09:00	10:00	10:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00
Vol.	277	250	272	227	321	226	185	203	273	252	275	239	259	189	261	226
PM Peak	12:00	17:00	12:00	16:00	15:00	16:00	12:00	12:00	14:00	15:00	12:00	13:00	12:00	12:00	12:00	16:00
Vol.	278	273	305	316	339	302	199	202	308	291	289	267	295	253	275	256

Connecticut Counts LLC
63 Sugar Maple Lane
Kensington, Connecticut 06037
(860) 828-1693

Main Street South of Ascension Street
Woonsocket, Rhode Island

Site Code: 2890
Station ID:

Latitude: 0' 0.000 Undefined

Start	26-Nov-12		Tue		Wed		Thu		Fri		Sat		Sun		Week Averag	
Time	Northbo	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South
12:00 AM	39	21	*	*	*	*	*	*	*	*	*	*	*	*	39	21
01:00	27	8	*	*	*	*	*	*	*	*	*	*	*	*	27	8
02:00	18	8	*	*	*	*	*	*	*	*	*	*	*	*	18	8
03:00	41	6	*	*	*	*	*	*	*	*	*	*	*	*	41	6
04:00	35	11	*	*	*	*	*	*	*	*	*	*	*	*	35	11
05:00	76	18	*	*	*	*	*	*	*	*	*	*	*	*	76	18
06:00	154	117	*	*	*	*	*	*	*	*	*	*	*	*	154	117
07:00	273	171	*	*	*	*	*	*	*	*	*	*	*	*	273	171
08:00	**284**	187	*	*	*	*	*	*	*	*	*	*	*	*	**284**	187
09:00	268	**215**	*	*	*	*	*	*	*	*	*	*	*	*	268	**215**
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:00 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lane	1215	762	0	0	0	0	0	0	0	0	0	0	0	0	1215	762
Day	1977		0		0		0		0		0		0		1977	
AM Peak	08:00	09:00													08:00	09:00
Vol.	284	215													284	215
PM Peak																
Vol.																
Comb. Total	9295		7990		13665		13085		16690		15112		12349		16814	
ADT	ADT 7,681		AADT 7,681													

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Appendix D

Draft Zoning Language

The Cecil Group
Planning and Design

Proposed Zoning Changes
Prepared by the Cecil Group
Date: April 2013

The following zoning recommendations have been developed as part of the Woonsocket Main Street Livability Plan.

The consultant team specifically recommends that Appendix C – Zoning of the Woonsocket code (http://clerkshq.com/default.ashx?clientsite=woonsocket-ri) by amended as follows.

Add the following to Section 2.1-6 Overlay Districts
Section 2.1-6.5 *Main Street Overlay District*. Established to regulate the development and use of land, buildings, improvements and facilities in the Main Street area; allow additional permitted uses that encourage further growth and concentration of art, cultural and entertainment attractions; promote the temporary use of vacant and underutilized properties; and encourage a walkable, vibrant environment.

Add the column "Main Street Overlay District" to the Use Regulation charts in Sections 4.4 to 4.7

Add the following uses to the specified subsections of Section 4 Use Regulations, and allow the following uses as *permitted* uses (denoted with the symbol "P") **in the new Main Street Overlay District**

- Section 4.4: Live/work unit
- Section 4.6: Artist studio or gallery
- Section 4.6: Outdoor café seating (*refer to Section 12.5-1)*
- Section 4.6: Interim uses (*refer to Section 12.5-1)*

Add Section 12.5 Main Street Overlay District
Section 12.5
The Main Street Overlay District is hereby established to confer additional options for development and land use in the Main Street area, with the boundaries of the Main Street Overlay District as shown in the Zoning Map, Exhibit B. The overlay district is intended to allow additional permitted uses that encourage further growth and concentration of art, cultural and entertainment attractions in the Main Street area; promote the temporary use of vacant and underutilized properties; and encourage a walkable, vibrant environment. All land, buildings, structures, improvements and facilities within the Main Street Overlay District shall be regulated by both the requirements of the district in which they are located and the requirements of this overlay district. Where the requirements of this overlay district are greater or more restrictive than the requirements of the underlying district, or where conflicts exist between this overlay district and the underlying district, the requirements of this overlay district shall prevail.

12.5-1 Permitted Uses.
In addition to uses allowed in the underlying zoning districts, additional permitted uses are allowed within the Main Street Overlay District as provided in Section 4 Use Regulations and as provided as follows.

(1) Outdoor café seating is permitted outside of a principal restaurant, café or other eating and/or drinking establishment provided it complies with the following regulations:

(a) Outdoor café seating shall be located on the same lot as the principal restaurant or café use provided such seating is located adjacent to a City sidewalk, or such seating shall be located on a sidewalk adjoining the principal restaurant or café use provided the appropriate City permits and/or licenses have been obtained.
(b) When outdoor café seating is located on a sidewalk adjoining the principal restaurant or café use, there shall be a minimum four (4) feet wide unobstructed passageway for pedestrians on the sidewalk.
(c) When outdoor café seating is located on a sidewalk adjoining the principal restaurant or café use, outdoor seats, tables and related furnishings shall be removable.
(d) No outdoor café seating shall encroach upon any part of the sidewalk frontage of any adjacent property or alley.
(e) No additional parking shall be required for the additional outdoor seats, provided the parking required by the principal restaurant use is provided and is not reduced.
(f) Outdoor café seating shall comply with all applicable building, health, safety, fire and environmental standards.

12.5-2 Interim Uses.
An interim use is a temporary or transitional development, installation, or activity established on underutilized and/or vacant property for a predetermined period. Interim uses are permitted in the Main Street District Overlay, provided they comply with this Section 12.5-2.

(1) An interim use shall be permitted for a period of up to one (1) year. The one (1) year time period may be extended through the granting of a Special Use Permit. An interim use that occurs on a property on an annual basis or other regular period basis exceeding the allowable time periods shall be treated as a special use and shall only be permitted through the granting of a Special Use Permit.

(2) Interim uses shall achieve all of the following requirements in order to be permitted:

(a) Interim uses shall provide public amenities, public access or promote economic development.
(b) Interim uses shall encourage pedestrian activity with visual and/or physical access provided from the adjacent street edge.
(c) Interim uses shall encourage street-level activity through commercial enterprise, streetscape enhancement, public art and/or public access.

(3) Applications for interim uses shall be reviewed and approved by the City Planner. Applications shall include the following:

(a) Applicant's name, address and phone number
(b) Property owner's name, address and phone number
(c) Written consent of the owner of the property to establish the proposed interim use
(d) Location of property

(e) Current use of property
(f) Description of proposed interim use
(g) Length of time request for proposed interim use
(h) Illustrations, sketches or drawings of sufficient size and clarity to show without further explanation the size and location of the property; location of the adjacent street; location and size of all existing structures on the site; and location of any temporary structures to be installed as part of the interim use
(i) Photos of the property and adjacent properties
(j) Any additional information requested by the City Planner that is considered necessary to adequately review and approve an application

(4) The following interim uses are permitted on underutilized and/or vacant property, provided they comply with this Section 12.5-2:

(a) Food trucks
(b) Pop-up retail
(c) Art and cultural installation
(d) Farmers' market
(e) Outdoor theater and performance

(5) Separate licenses, permits, fees and approvals may be required by City, County or State agencies. Applicants shall be responsible for complying with all such requirements.

12.5-3 Incentive.
Properties in the Main Street Overlay District may exceed the maximum Floor Area Ratio provided in Section. 12.5-5 provided the provisions set forth below are met. In no case shall the FAR exceed 3.0. To qualify for this incentive, the property must meet all of the following provisions:

(a) At least fifty (50) percent of the gross area of the first floor of a building shall be dedicated to restaurants, retail, cultural, art or entertainment uses.
(b) For the building façade that is oriented toward the primary street, at least sixty (60) percent of that facade at the ground floor shall be transparent, and that façade shall include a main entrance(s).

12.5-4 Lot Area
Minimum required lot area shall be six thousand (6,000) square feet.

12.5-5 Floor Area Ratio
The maximum floor area ratio shall be 2.0 unless the provisions of Section 12.5-3 are met.

12.5-6 *Yards and Open Spaces*. All buildings shall meet the following requirements:

12.5-6.1 *Front Setback*. All buildings shall be set back a minimum of zero (0) feet from the street right-of-way line on which they front, and all buildings shall be set back no more than ten (10) feet from the street right-of-way line on which they front.

12.5-6.2 *Side Setback*. All buildings shall be set back from each side lot line a minimum of zero (0) feet or twenty-five (25) feet when abutting a residential zone or use.

12.5-6.3 *Rear Setback*. All buildings shall be set back from the rear lot line a minimum of twenty-five (25) feet.

12.5-7 *Height and Number of Stories.* No building shall exceed live (5) stories or sixty (60) feet in height, unless each side yard is increased over the minimum setback requirement by ten (10) feet for every one (1) story of additional height.

12.5-8 *Upper Story Residential Uses*. No ground floor residential uses shall be permitted except for live/work units; dwelling units shall be permitted on all stories above the ground floor.

Add the following definitions to Section 18.1 Definitions

- Artist studio/gallery – A commercial work or exhibit space within an enclosed structure for artists and artisans, including individuals practicing one of the fine arts or performing arts or individuals skilled in an applied art or craft. Applied arts and crafts include but are not limited to ceramics, jewelry manufacturing, welding and woodworking. Incidental retail sales of items produced on the premises is allowed.
- Farmers' market – A temporary market where producers and processors sell agricultural and horticultural products directly to the public. Such products shall include but not be limited to fruits, vegetables, dairy products, plants and value-added agricultural products like jams, and other food-related products.
- Food truck – A readily movable, motorized wheeled vehicle or a towed wheeled vehicle that is designed and equipped to serve food.
- Interim use – A temporary or transitional use, installation or activity established on underutilized and/or vacant property for a predetermined period.
- Live/work unit – A structure or area within a structure that combines a dwelling unit and permitted non-residential use that is principally used by at least (1) occupant of the dwelling unit. Permitted non-residential uses include those uses permitted in the Main Street Overlay District. The residential use is secondary to the primary use as a place of work.
- Outdoor café seating – Seating incidental to and provided outside of a restaurant, café or other eating and/or drinking establishment, provided the outdoor seating is located on the same lot as the principal use or on the adjoining sidewalk.
- Pop-up retail – A retail store that is opened for a temporary period of time. Such a store may be established in or under temporary and/or modular structures.
- Pawn shop – An establishment that loans money on the deposit or pledge of physically-delivered personal property and/or that may purchase such property on the condition of selling it back again at a stipulated price.
- Secondhand store – An establishment in which used merchandise is sold at retail.

Add the following requirement to Section 5.1 Off-Street Parking Requirements

- Live/work unit: One (1) space is required for each dwelling unit.

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Appendix E

Draft Design Guidelines

Draft Design Guidelines

Design guidelines can be an effective tool that City officials, property owners and developers can use to help guide growth and ensure that changes and improvements in downtown Woonsocket are appropriate and context sensitive.

The following recommended design guidelines may be included in the proposed Main Street Overlay District or the existing Design Review Overlay District. The guidelines are intended to provide a framework for discussions and decisions about design characteristics.

They specifically provide design guidance for sites and blocks, building facades and parking to encourage and support a walkable, vibrant downtown. The City of Woonsocket may choose to expand upon these guidelines to address other aspects of design such as architectural design, lighting and landscaping. Additional design guidance for streetscapes has been provided in the Woonsocket Main Street Livability Plan.

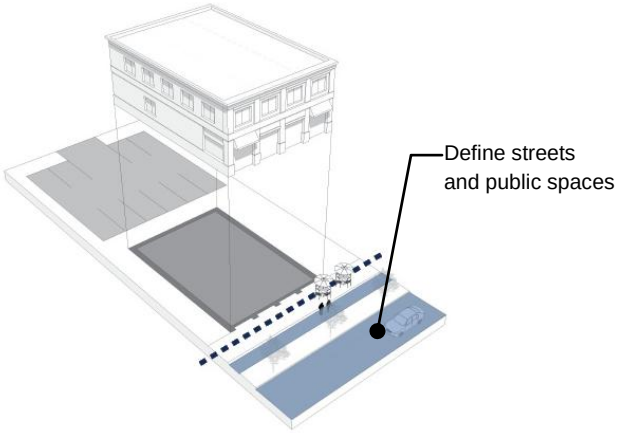

Figure 1 Building Placement

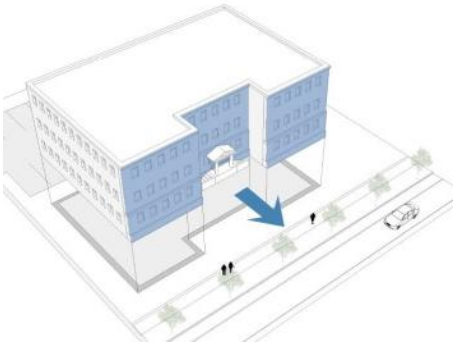

Figure 2 Building Orientation

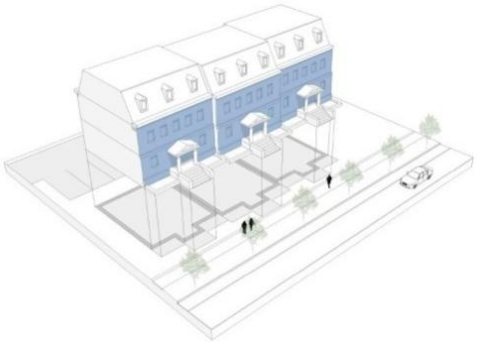

Figure 3 Street Wall Continuity

A. Sites and Blocks

1. Building Placement – Buildings should be placed on the site to define the edges of streets and public spaces. Building placement should respect existing patterns of building placement for the street on which they are located. The individuality of the building should be subordinated to the overall continuity of the streets and public spaces. Buildings should be placed to conceal parking at the interior or rear of building lots. *Refer to Figure 1.*

2. Building Orientation – Buildings should be oriented with the primary building façade(s) facing the primary street frontage(s) of the site. Building massing and façades should be designed to frame streets and public spaces to provide a sense of spatial enclosure and to define street edges. Building entrances, storefronts and windows should be oriented to the primary streets with transparency to streets and public spaces. *Refer to Figure 2.*

3. Street Wall Continuity – The blocks of structures that line the street and define the visual limits of the street are known as a street wall. On streets with a continuous street wall, new and redevelopment projects should maintain and reinforce that street wall continuity, resulting in infill buildings and rehabilitation that respects and continues existing street setbacks and concealed parking areas at the rear of the site. *Refer to Figure 3.*

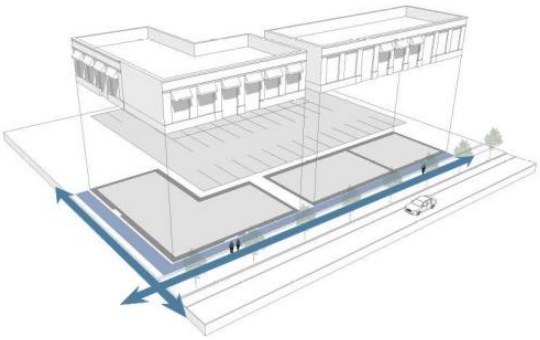

Figure 4 Street Corner

4. Street Corners – Corner sites are of particular importance with the ability to define two street edges and an intersection. Buildings located at a corner site should be oriented and configured to define both the street edges and the corner of the site. The corner may be defined positively by placing the building with built edges at the corner or negatively by framing an open space at the corner with built edges setback from the corner and the provision of a landscaped plaza or other appropriate surface treatment. *Refer to Figure 4.*

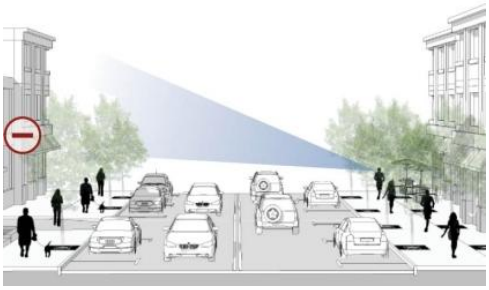

Figure 5 Design Treatment of Edges

5. Design Treatment of Edges – Buildings that are not physically adjoined to abutters should treat side yards and the spaces between buildings in a manner consistent with existing patterns of use, in terms of setbacks and use. Landscaping should be used to define street edges and to buffer and screen edges that may have a negative visual impact, such as parking or loading areas. Access driveways and curb cuts using side yards may be combined between adjoining properties to access parking for multiple buildings at the interior of the block. *Refer to Figure 5.*

B. Building Façades

1. Façade Design and Relationship to Existing Context – The façade, or primary building elevation, of new construction should be compatible with the façade design of neighboring buildings so as to create continuity across projects and the street edge. Primary building façades with frontage along the street should be sensitive to the existing context of building façades along that street. Building façades facing the street should have at least 25% of the overall façade in transparent windows and at least 40% of the ground floor façade in transparent windows.

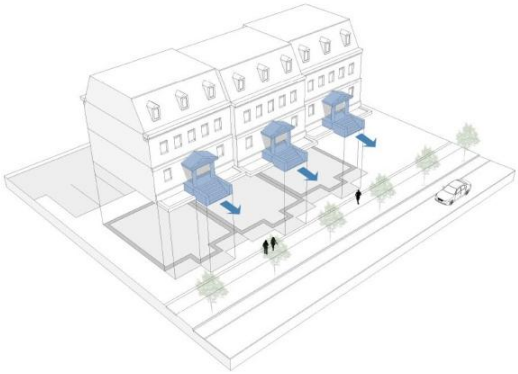

Figure 6 Placement and Treatment of Entries

2. Placement and Treatment of Entries – Entrances should be oriented to the primary street frontage and address the street with an active and welcoming entry composition that is integrated into the overall massing and configuration of the building form. The building façade should integrate separate entrances for multiple tenants and uses into a coordinated ground-floor façade. Building and shop entrances should be recessed to a minimum depth equal to the width of the door to prevent doors from swinging into the sidewalk. Building entries should be used to introduce human-scaled components to the building façade such as storefronts and canopies and provide a high level of visibility and transparency into ground floor uses to activate and add interest to the adjacent street. *Refer to Figure 6.*

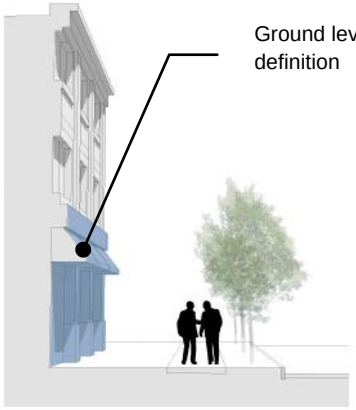

Figure 7 Ground Level Articulation

3. Ground Level Articulation – The building façade should clearly define commercial ground floor space and differentiate the articulation of the ground floor from the residential or mixed-use space on the building stories above. Articulation of the ground level of a building should be used to visually anchor the base of the building on the site and to define a human-scaled base at the primary street frontage. Glass should be used in storefronts to maintain transparency and an active and interesting ground level at the street. *Refer to Figure 7.*

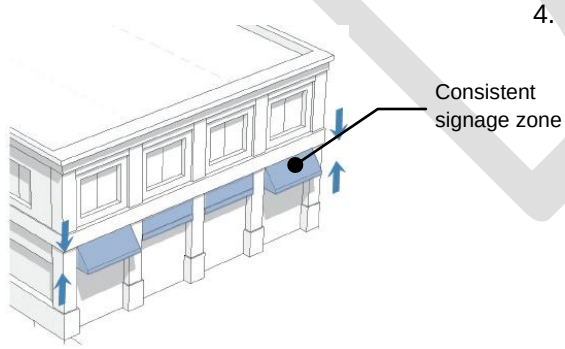

Figure 8 Multi-Tenant Signage

4. Multi-Tenant Signage – Signs for buildings with multiple tenants should be coordinated upon a building façade to offer clear, orderly and legible information about the building, address and tenants. A consistent height and line for a sign band in multiple tenant buildings should be created in conjunction with the ground floor storefront and articulation; signage should not be placed on the upper façade of multi-story buildings. *Refer to Figure 8.*

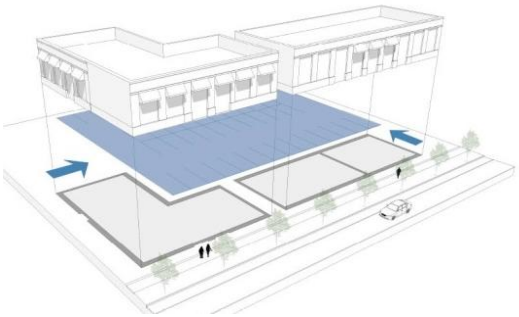

Figure 9 Placement of Parking

C. Parking and Curb Cuts

1. Parking Placement – Parking should be located at the interior of blocks, behind buildings or at the rear of sites, away from prominent site edges, public spaces and streets. *Refer to Figure 9.*

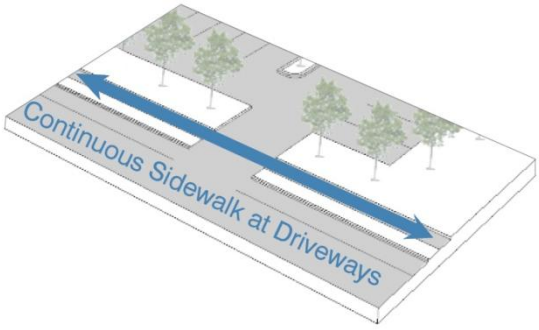

Figure 10 Curb Cuts and Access

2. Curb Cuts – Curb cuts should provide a continuous and uninterrupted pedestrian walkway. *Refer to Figure 10.*

Appendix F

Design Guidelines: Resources and Examples

Design Guidelines: Resources and Examples

Source	Website	Topics	Observations
Quincy Center District Design Guidelines. Goody Clancy	http://www.quincyma.gov/CityOfQuincy_Content/documents/QCD%20Design%20Guidelines-October%202010-small.pdf	Design guidelines for a historic city center	This is an example of design guidelines aimed at reviving a historic city center in a Massachusetts community.
An Approach toward a Framework of Design Guidelines for Urban Settlements. M. Tamer El Khorazty and Rowaida Rashed	http://archnet.org/library/documents/one-document.jsp?document_id=9204	Design guidelines for urban areas	This paper explains the meaning of design guidelines for different types of urban areas, including empty land in the planning process and built-out areas. It also illustrates and explains the steps in setting design guidelines.
Urban Design Guidelines. City of Pittsburgh, Pennsylvania	http://www.city.pittsburgh.pa.us/dt/UDGUIDE.PDF	Design guidelines for an urban downtown	This is an example of design guidelines for an urban downtown bordered by rivers.
Design Review Ordinance. Town of Freeport, Maine	http://www.natlands.org/wp-content/uploads/downloads/2011/05/Freeport-Maine.pdf	Design review ordinance for mixed-use areas with historic resources	This is an example of a design review ordinance for a coastal community in Maine. It provides a design review process as well as design guidelines.
Beverly Downtown Design Guidelines. Chan Krieger & Associates.	http://www.beverlyma.gov/docs/dm/Beverly-Design-Guidelines_reduced.pdf	Design standards for neighborhoods, streets, open space and buildings	This is an example of design guidelines that direct storefront and streetscape improvements in a downtown.
City Of Salem Commercial Design Guidelines. Chan Krieger & Associates and Finch & Rose.	http://salem.com/Pages/SalemMA_DPCD/studiesreports/SDG_all_pages.pdf	Commercial design standards for buildings and signage	This is an example of guidelines for commercial areas in a Massachusetts community that seeks to preserve history while making physical improvements.
Design Guidelines for Ayer Center. The Cecil Group, Inc.	http://easthamptonminutes.com/boards_committees/HB_district/records/publications/02.%20Ayer%20Design%20Guidelines.pdf	Design guidelines for a town center	This is an example of design guidelines for a town center in a Massachusetts community. It provides goals and guidelines for facades, building materials, lighting, signage and other elements.

Source	Website	Topics	Observations
Street Design Guideline. City of Roanoke, Virginia	http://www.roanokeva.gov/85256A8D0062AF37/CurrentBaseLink/03BF255E742B4368852578A8004765E5/$File/STREET_DESIGN_GUIDELINES.pdf	Street design	This is an example of design guidelines for streets in Roanoke, Virginia. It provides detailed guidelines and illustrations for different types of streets in different types of neighborhoods.
Active Design Guidelines: Promoting Physical Activity and Health in Design. City of New York	http://ddcftp.nyc.gov/adg/downloads/adguidelines.pdf	Sustainable design	This document includes strategies for designing neighborhoods, streets, and outdoor spaces that encourage active transportation and recreation, including walking and bicycling.
Historic Neighborhood Design Guidelines. Knoxville, Tennessee	http://archive.knoxmpc.org/historic/dguides/4thgill.pdf	Design guidelines for historic neighborhoods	This is an example of design guidelines for a historic district. It addresses architectural elements, infill buildings, mechanical systems and other neighborhood elements.
The Language of Cities & Towns: A Visual Dictionary. Dhiru Thadani. Rizzoli. 2010		Illustrated terminology	This book provides a common vocabulary for description and discussion of urban design concepts used in many guidelines and standards.
Planning and Urban Design Standards American Planning Association. John Wiley & Sons, Inc. 2006		Design standards at many scales	This is a comprehensive sourcebook covering regional planning to streetscapes and a guidebook for planning agencies and consultants.

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Appendix G

Concept Cost Estimates

Concept Cost Estimates
Prepared by Fitzgerald & Halliday, Inc. and Alta Planning and Design

Truman Drive Conversion	Units	Cost/Unit	Item Cost
Traffic Signal Modifications	(ea)		
Truman/Bernon	1	$50,000	$50,000
Truman/Worrall	1	$50,000	$50,000
			$100,000
Curb/Roadway Reconfiguration	(lf)		
Truman/Bernon	250	$100	$25,000
Truman/Clinton	300	$100	$30,000
Main St/Bernon	100	$100	$10,000
River Street	250	$100	$25,000
Market Square	250	$100	$25,000
			$115,000
Roadway Striping & Traffic Regulatory Signage	(lf)		
Truman Drive	2400	$5	$12,000
River Street	200	$5	$1,000
Market Square	250	$5	$1,250
Bernon Street	1200	$5	$6,000
			$20,250
Crosswalk Markings & Signage	(ea)		
Truman/Bernon	3	$500	$1,500
Truman/Worrall	6	$500	$3,000
Market/River	4	$500	$2,000
Market/Bernon	2	$500	$1,000
Truman/Main Street Park	1	$500	$500
Pathway/Main Street	1	$500	$500
			$8,500
Multi Use Pathway	(lf)		
Truman Drive	2400	$189	$453,600
Parking lot (between Main St and River St)	250	$189	$47,250
River Street (shoulder bikeway striping)	380	$0.60	$228
			$501,078
Pathway Connection to Monument Square	(ea)		
Worrall Street Shared Lane Markings	8	$275	$2,200
Worrall Street "Share the Road" signage	8	$300	$2,400
			$4,600
Multi Use Pathway Signage	(ea)		
Truman Drive	8	$300	$2,400
Parking lot (between Main St and River St)	4	$300	$1,200
River Street (bikeway signage)	6	$300	$1,800
			$5,400

Multi Use Pathway Crossing at Main Street	(ea)			
Raised offset median	1	$20,000		$20,000
				$20,000
Multi Use Pathway Gateway at Main/Arnold	(ea)			
Kiosk with map	1	$3,000		$3,000
Benches	2	$800		$1,600
Trash receptacles	2	$500		$1,000
				$5,600
Path through River Island Park to access river	(lf)			
Path	200	$80		$16,000
				$16,000
Utility Impacts	(ea)			
Drainage	1	$50,000		$50,000
Lighting	1	$100,000		$100,000
Misc/Unknown	1	$50,000		$50,000
				$200,000
Landscaping & Amenities				
Landscaping	1	$500,000		$500,000
Amenities	1	$100,000		$100,000
				$600,000
Conversion Subtotal Cost				$1,596,428
Admin/ Planning/ Engineering/ Design/ Contingency			50%	$798,214
Total Conversion Cost				**$2,394,642**
Ped/Bike Ramp from Court Street Bridge to Blackstone River Bikeway (Long-term)	(ea)			
ADA compliant ramp	1	$5,000,000		$5,000,000
				$5,000,000
Admin/ Planning/ Engineering/ Design/ Contingency			50%	$2,500,000
Total Cost				**$7,500,000**

One to Two-Way Conversion	Units	Cost/Unit	Item Cost
Traffic Signal Installation/Modifications	(ea)		
Depot Square	1	$50,000	$50,000
Monument Square	1	$150,000	$150,000
Social/Worrall	1	$50,000	$50,000
Truman/Worrall	1	$50,000	$50,000
			$300,000
Curb & Sidewalk Reconstruction	(lf)		
Depot Square	150	$200	$30,000
Monument Square	500	$200	$100,000
Worrall Street	150	$200	$30,000
Market Square	300	$200	$60,000
High Street	250	$200	$50,000
			$270,000
Roadway Striping & Traffic Regulatory Signage	(lf)		
Main Street	900	$5	$4,500
Clinton Street	900	$5	$4,500
Arnold Street	450	$5	$2,250
High Street	1200	$5	$6,000
Social Street	300	$5	$1,500
Worrall Street	400	$5	$2,000
			$20,750
Crosswalk Markings & Signage	(ea)		
Depot Square	5	$500	$2,500
Monument Square	6	$500	$3,000
Social St/ Worrall St	3	$500	$1,500
Arnold Street	2	$500	$1,000
			$8,000
Bus Stop Reconstruction/ Relocation	(ea)		
Clinton Street	1	$50,000	$50,000
Main Street	1	$50,000	$50,000
			$100,000
Utility Impacts	(ea)		
Drainage	1	$50,000	$50,000
Lighting	1	$50,000	$50,000
Misc/Unknown	1	$50,000	$50,000
			$150,000
Conversion Subtotal Cost			$848,750
Admin/ Planning/ Engineering/ Design/ Contingency		50%	$424,375
Total Cost			**$1,273,125**

Wayfinding	Units	Cost/Unit	Item Cost
Parking Wayfinding	(ea)		
Directional Signage	14	$200	$2,800
Lot Signage	16	$1,000	$16,000
			$18,800
Bike/Ped Wayfinding	(ea)		
Directional Signage	10	$200	$2,000
			$2,000
Subtotal			**$20,800**
Admin/Design		20%	$4,160
Total Cost			**$24,960**

Main Street Bike/Ped Improvements	Units	Cost/Unit	Item Cost
Shared Lane Markings	(ea)		
Main Street Shared Lane Markings	36	$275	$9,900
Main Street "Share the Road" signage	36	$300	$10,800
			$20,700
Bike Parking	(ea)		
Bike racks throughout Downtown	40	$500	$20,000
			$20,000
Bumpouts	(ea)		
Elongated bumpouts	4	$50,000	$200,000
			$200,000
Crosswalk Markings & Signage	(ea)		
Main Street crosswalks	6	$500	$3,000
			$3,000
Subtotal Cost			$243,700
Admin/ Planning/ Engineering/ Design/ Contingency		50%	$121,850
Total Cost			**$365,550**

Clinton Street Bike/Ped Improvements	Units	Cost/Unit	Item Cost
Shared Lane Markings	(ea)		
Clinton Street SLMs	6	$275	$1,650
Clinton Street signage	6	$300	$1,800
			$3,450
Crosswalk Markings and Signage	(ea)		
High-visibility crosswalks	1	$500	$500
			$500
Subtotal Cost			$3,950
Admin/ Planning/ Engineering/ Design/ Contingency		50%	$1,975
Total Cost			**$5,925**

Bernon Street Bike Lanes	Units	Cost/Unit	Item Cost
Bike Lanes and Lane Striping	(lf)		
Bernon Street buffered bike lane	815	$5.20	$4,238
Road diet from four to three lanes	815	$2	$1,630
			$5,868
Markings and Signage	(ea)		
Bike lane markings every 200' on both sides	10	$75	$750
Shared lane markings at intersection with Truman Drive	2	$275	$550
			$1,300
Subtotal Cost			$7,168
Admin/ Planning/ Engineering/ Design/ Contingency		50%	$3,584
Total Cost			**$10,752**

Appendix H

Resources

Tiger Grant Program

Administered by: U.S. Department of Transportation (DOT)

http://www.dot.gov/tiger/

The U.S. Department of Transportation oversees the Transportation Investment Generating Economic Recovery (TIGER) grant program. As a single program, TIGER resembles a microcosm of the activities that the DOT regularly supports with a wide range of established grants. Eligible projects include bicycle and pedestrian improvements. Eligible TIGER grantees include state, local, tribal and territorial government entities, such as transit agencies, port authorities and multijurisdictional coalitions. Award amounts range from a minimum of $20 million to a maximum of $300 million, although DOT may waive the minimum threshold in the case of small projects.

Four rounds of grants have been conducted since the introduction of the program and a fifth round has proposed funding. Future funding for this program is uncertain.

Congestion Mitigation and Air Quality (CMAQ) Improvement Program

Administered by: FHWA

http://www.fhwa.dot.gov/environment/air_quality/cmaq/

The Congestion Mitigation and Air Quality Improvement (CMAQ) Program assists areas designated as nonattainment or maintenance under the Clean Air Act Amendments of 1990 to achieve and maintain healthful levels of air quality by funding transportation projects and programs.

Projects must be likely to contribute to the attainment of national ambient air quality standards (or the maintenance of such standards where this status has been reached) based on an emissions analysis. CMAQ has seven major project categories, one of which is pedestrian and bicycle projects.

Pedestrian and bicycle projects account for approximately 13 percent of CMAQ projects. CMAQ Improvement Program funds are available to a wide range of government and non-profit organizations, as well as private entities contributing to public/private partnerships. They are controlled by metropolitan planning organizations (MPOs) and state departments of transportation. Often, these organizations plan or implement their own air quality programs besides approving CMAQ funds for other projects. Funding is available for areas that do not meet the National Ambient Air Quality Standards (nonattainment areas) as well as former nonattainment areas that are now in compliance (maintenance areas). CMAQ-funded projects may include bicycle and pedestrian facility improvements, bicycle racks and lockers, and individualized marketing initiatives that promote bicycling and walking (such as maps, brochures, and public service announcements).

The Federal share for most eligible activities and projects is 80 percent; or 90 percent if used on certain activities on the Interstate System; or up to 100 percent for certain identified activities such as traffic control signalization and carpooling projects.

The CMAQ program has funded numerous bicycle and pedestrian improvements including bikeway networks in cities such as Philadelphia, Houston, and New York City, pedestrian and bicycle spot improvement programs, bicycle parking, bicycle racks on buses, sidewalks, trails, and promotional programs such as bike-to-work events. CMAQ funds have also been used to fund bicycle and pedestrian coordinator positions at the State and local level.

Surface Transportation Program (STP)

Administered by: FHWA

www.enhancements.org

The Surface Transportation Program is the most flexible of all the highway programs and historically one of the largest single programs. States and metropolitan regions may use these funds for highway, bridge, transit (including intercity bus terminals), and pedestrian and bicycle infrastructure projects. STP funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or nonconstruction projects (such as maps, brochures, and public service announcements) related to safe bicycle use and walking. TEA-21 added "the modification of public sidewalks to comply with the Americans with Disabilities Act" as an activity that is specifically eligible for the use of these funds.

Ten percent of each State's STP funds is set-aside for the Hazard Elimination and Railway-Highway Crossing programs, which address bicycle and pedestrian safety issues. Each State is required to implement a Hazard Elimination Program to identify and correct locations which may constitute a danger to motorists, bicyclists, and pedestrians. Funds may be used for activities including a survey of hazardous locations and for projects on any publicly owned bicycle or pedestrian pathway or trail, or any safety-related traffic calming measure. Improvements to railway-highway crossings "shall take into account bicycle safety."

Transportation Alternatives Program (TAP)

Administered by: FHWA

www.fhwa.dot.gov/map21/guidance/guidetap.cfm

For years, federal transportation law has provided dedicated funding to make biking and walking safer and more convenient through three main programs: Transportation Enhancements (TE), Safe Routes to School (SRTS) and Recreational Trails (Rec Trails) — with the majority of annual funding coming through the Transportation Enhancements program. Under the old law (SAFETEA-LU) states were required to spend around two percent of their total transportation funds on these programs. With bike and pedestrian projects comprising some of the eligible uses, this was the single biggest source of funds for safe walking and biking.

MAP-21 consolidates these three programs into the new Transportation Alternatives (TA) program. Instead of a state requirement to spend a percentage of funds, local applicants will compete for grants

to fund a broad range of activities that provide transportation options, improve safety and enhance economic vitality.

The Transportation Alternatives Program (TAP) provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for the planning, design or construction of boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.

Recreational Trails Program (RTP)

The Recreational Trails Program (RTP) provides funds to the States to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses.

The RTP funds come from the Federal Highway Trust Fund, and represent a portion of the motor fuel excise tax collected from nonhighway recreational fuel use: fuel used for off-highway recreation by snowmobiles, all-terrain vehicles, off-highway motorcycles, and off-highway light trucks.

The RTP funds are distributed to the States by legislative formula: half of the funds are distributed equally among all States, and half are distributed in proportion to the estimated amount of nonhighway recreational fuel use in each State. Seven and a half percent (7.5%) of TA funding is set aside for the RTP program.

Projects eligible for this program include: construction of new trails (motorized and non-motorized); maintenance and restoration of existing recreational trails (motorized and non-motorized); access to trails by persons with disabilities; purchase and lease of trail construction and maintenance equipment; acquisition of land or easements for a trail, or for trail corridors; operation of educational programs to promote safety and environmental protection as related to recreational trails.

Community Development Block Grant (CDBG)

Administered by Department of Housing and Urban Development

www.hud.gov

The Community Development Block Grant (CDBG) program, is a flexible program that provides communities with resources to address a wide range of unique community development needs, specifically directed toward revitalizing neighborhoods, economic development, and providing improved community facilities and services. Sidewalk improvements, bike lanes, paths and trails are all eligible under the guidelines.

The program provides annual grants on a formula basis to entitled cities and counties to develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low- and moderate-income persons.

HUD awards grants to entitlement community grantees to carry out a wide range of community development activities directed toward revitalizing neighborhoods, economic development, and providing improved community facilities and services.

Entitlement communities develop their own programs and funding priorities. However, grantees must give maximum feasible priority to activities which benefit low- and moderate-income persons. A grantee may also carry out activities which aid in the prevention or elimination of slums or blight. Additionally, grantees may fund activities when the grantee certifies that the activities meet other community development needs having a particular urgency because existing conditions pose a serious and immediate threat to the health or welfare of the community where other financial resources are not available to meet such needs.