



Salem Bicycle Master Plan

October 2018





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Executive Summary

Salem is full of opportunities for bicycling. The city is compact, features a well-connected street network, and a diverse mix of land uses that make most trips within the city possible by bike. The city's public bicycle sharing program has increased options for getting around by bike. Bicycling is valued because it supports economic and tourism growth. The community also understands that better conditions for bicycling will attract and retain residents, tourists, and students.

Plan Highlights

With over 100 infrastructure and policy projects identified, this Plan is a blueprint for creating a citywide environment that is safe and comfortable for people biking, regardless of their age or ability level. These changes hold the potential to transform daily transportation in Salem. With ever-growing traffic congestion and gridlock wearing on quality of life and the environment in Salem, one thing is certain: we cannot build our way out of traffic with car-focused streets. Through a well-connected network of high-quality bike infrastructure and supportive policies and programs, Salem will offer biking as a safe and convenient transportation option, making it easier and more appealing for large numbers of people to leave their car keys at home.

The vision guiding this plan is based on **five big ideas**, identified below:

- 1. Neighborhoods will connect to each other and downtown with comfortable bikeways along key arterials, including:**
 - North Street
 - Bridge Street
 - Boston Street
 - Lafayette Avenue
 - Derby Street
 - Highland Avenue
 - Loring Avenue
- 2. The Salem Commuter Rail Station will be accessible via comfortable bike infrastructure from all approaches.**
- 3. Salem will connect to Beverly, Marblehead, Lynn, and Peabody with on and off-street bikeable connections.**
- 4. Recreational trails and parks will be easy to reach by bike for people of all ages, abilities, and backgrounds.**
- 5. Processes, regulations, and programming will embed biking into the daily decision making of City staff and officials.**

The Salem Bicycle Master Plan (the Plan) was created to establish a vision and plan of action for making Salem a place that is bikeable for people of all ages, abilities, and backgrounds. While the City has invested in bicycle infrastructure, many barriers prevent people from bicycling more. People are interested in bicycling as a fun, healthy, low-cost transportation option but are discouraged by routes with little or no separation from motor vehicles on high-speed and high-volume streets. Other issues, such as lack of bike parking or maintenance of trails can also deter people from bicycling.

The Plan was developed to address these issues through discussions with stakeholders, members of the public and City staff. It included a review of work the City has already completed and analysis of existing conditions and safety concerns for people biking in Salem. Through this process, over 100 infrastructure projects and policy changes were identified that will enable the development of a safe, high-comfort network of bikeways that will connect to destinations throughout Salem.

The projects identified in the Plan range from small traffic calming interventions in North Salem and the Point, to improved connections at Leslie's Retreat Path, to new bike lanes on many of Salem's main corridors. The projects in the Plan will not only provide a safer and more comfortable environment for people biking, but will support Salem's other livability, mobility, economic, and environmental goals. Investments in biking will take place over time and all projects will be thoughtfully integrated into Salem's existing transportation system. The final section of this document, the Action Plan, serves as a guide for making these smart, strategic investments with projects prioritized and organized into short, medium, and long-term projects.

Many people turn to biking as an affordable, convenient, healthy, and fun way to move around Salem. With the implementation of this Plan, Salem will become a place that is bikeable for everyone, from eight-year-old children on their way to school, to working professionals destined for the train, to 75-year-old grandparents out for an evening ride.



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1 Introduction

Salem has all of the bones of a premiere biking city. At just over eight square miles, Salem’s size is one of its greatest assets. The city offers a rich density of activity – cultural institutions, historic attractions, educational and employment centers, parks, and more – within short, bikeable distances of its residential neighborhoods and transportation hubs. Furthermore, biking supports the community values and vision set forth in Imagine Salem, the city’s visioning plan. Recognizing its enviable position as a city fit for bicycling, this Bicycle Master Plan represents an important step toward realizing an equitable and sustainable transportation future based on smart investments that will improve safety, livability, and transportation choices for its residents and visitors.

Introduction

The Salem Bicycle Master Plan was born out of the community that it will serve – the people who live, work, and travel throughout Salem, regardless of mode. A balanced transportation system that supports biking as an attractive and safe option for people of all ages and abilities is essential for continued economic growth, community health outcomes, and quality of life for all people in Salem. Working together with other transportation options available in Salem – walking, train, bus, ferry, and personal vehicle – biking offers an important transportation option that is widely accessible to virtually all people regardless of where they live, their age, or their income. Whether people choose to travel by bike, have few other options, or ride around Salem simply for fun, this Plan charts a course for providing the infrastructure, policy, and programming necessary to support biking for all people in Salem.

Bikeable Salem

The city's land mass of eight square miles includes an inner core full of historic homes and mixed-use buildings, with some suburban-style housing outside Downtown. Densely settled, about 67% of housing is in multifamily buildings spread throughout the city.¹ Salem possesses a wealth of recreational and natural areas, including 18.5 linear miles of shoreline on its north and east sides. Salem is home to approximately 44,400 people,² and the city hosts over a million tourists each year who come to experience the city's rich historic and cultural legacy.

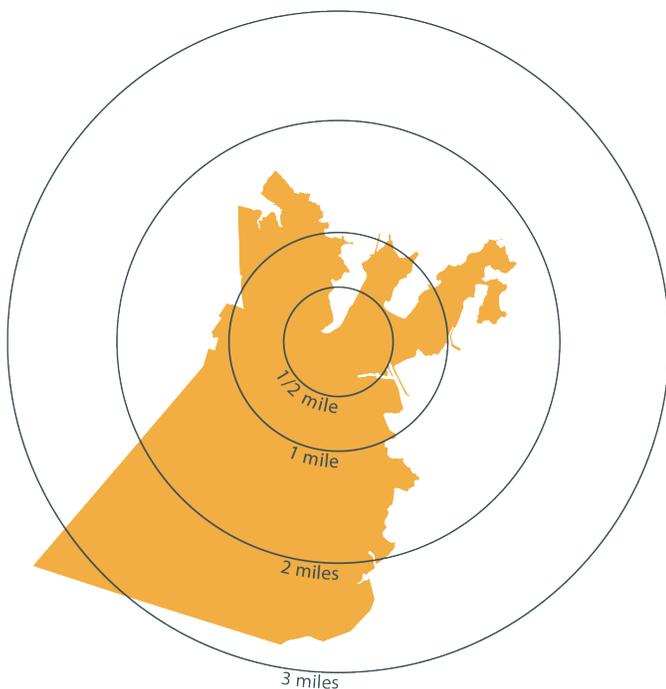


Figure 1: Distance to Downtown from Around Salem

The relatively small size of the city is an asset for biking (See Figure 1). Because of the physical exertion required for biking, distance is a main factor people consider when deciding whether a trip may be made by bike or not. From any point within the city's boundaries, the core of Downtown can be reached within a bike ride of approximately three or less miles (under 30 minutes riding time). Whether for shopping, recreation, or employment, **virtually every trip within the city is of a bikeable distance.**

The Planning Process

Beginning in the fall of 2017, the City of Salem launched the planning process by identifying a Steering Committee comprised of City Councilors, municipal department leaders, advocates, members of Salem's Bicycle Advisory Committee, and other community stakeholders. The Steering Committee was selected in recognition of the collaboration and consensus-building required to plan, design, and implement meaningful changes to the built and policy environment in Salem.

With the Steering Committee as a guiding force throughout the Plan development, the community was engaged through a variety of outreach methods to collect feedback about the current state of bicycling in Salem, including barriers to bicycling and priorities for improvement. The outreach strategies used are outlined below:

Steering Committee: The 15-person Steering Committee met four times throughout the planning process and played a pivotal role in the early community engagement efforts, project prioritization, and general plan review.

Listening Sessions: A series of listening sessions were held with 14 stakeholder groups and focused on the unique expertise or interest of the interviewee(s). Through the listening sessions, the City evaluated specific policy and regulatory conditions – such as zoning requirements and site plan review – as they relate to biking.

Community Bike Rides: Two community bike rides were held in December 2017 that covered two routes starting and ending at the Salem Commuter Rail station (an 11-mile loop and a 9-mile loop). The general public were invited to attend the bike rides and despite snowy and cold conditions, those in attendance were well-acquainted with bicycling in Salem and shared a detail-rich narrative of the current conditions for bicyclists.

1 Imagine Salem Progress Report. 2017. City of Salem.

2 U.S. Census Bureau Annual Estimates of the Resident Population: July 1, 2017

Public Open House: An interactive open house was held in February 2018 to spark the community conversation about specific challenges the bike Plan should address. In addition to a brief presentation about the Plan, members of the public were prompted by hands-on activities to identify streets that are challenging for biking, what kinds of infrastructure the community would like to see, and where people want to travel to and from by bike. The open house flyer was formatted in English and Spanish, and Spanish translation was available at the open house.

Online Interactive Map: An online interactive map was used to identify current routes and destinations in Salem, as well as desired routes and destinations. Provided in both English and Spanish, the map was open for user feedback from between December 2017 and March 2018, during which time 179 users logged 509 unique insights about their current and desired routes and destination in Salem. The wikimap received comments from daily bike riders, casual and infrequent riders, and those who do not ride at all.

In addition, completed and ongoing planning initiatives were consulted to ensure this Plan built on and coordinated with existing City efforts.



The public discussed biking in Salem at the Public Open House

Thank You For Participating!

Steering Committee Members

Members of the Public

Listening Session Participants

Andrew Zimmerman, *RCG*

Salem Maritime and Saugus Ironworks National Historic Sites

Beth Debski, *The Salem Partnership*

David Valecillos, *North Shore Community Development Coalition*

David Pabich, *Salem Renewal*

Jason Consalvo, *Salem Five Bank, Salem Rotary*

Andy Goldberg, *Goldberg Properties*

Bicycling Advisory Committee

Salem State University Focus Group

North Shore Medical Center

South Salem Neighborhood Association

Bob Monk, *Peabody Essex Museum*

Kelley Rice, *Salem Public Schools*

Steve Feldman, *Salem Business Owner*

Community Bike Ride Attendees

Tom Devine, *City of Salem*

Matt Smith, *City of Salem*

Eric Papetti, *Steering Committee*

Paul Tucker, *Massachusetts State Representative*

Christine Madore, *City Councilor, Ward 2*

Community engagement for the plan included Open House interactive street design and comment stations plus an online interactive map survey.





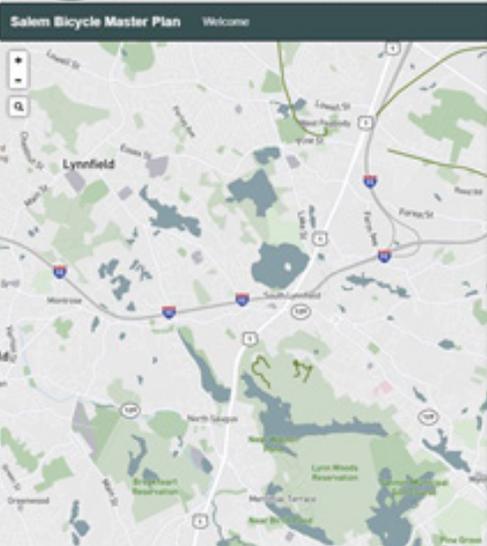
Instructions

draw on the map by clicking 'add route' or 'add point' below

comment like/dislike on your point or pop-up after draw

input

for more info click here!





Welcome to the **Salem Bicycle Master Plan Wikimap!** Please use this map-based survey tool to tell us your thoughts about bicycling in and around Salem. The input that you provide here will guide recommendations for future bicycle transportation programs, recreation opportunities, and infrastructure in Salem.

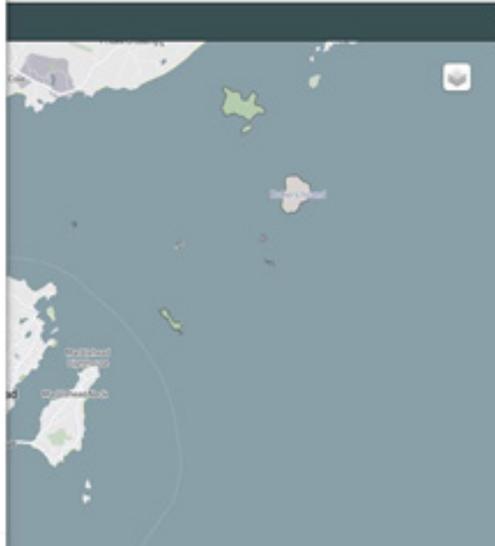
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Bike rides and Open House interactive mapping stations encouraged community members to share their knowledge of locational issues for biking.



Imagine Salem: Transportation Guiding Principles

Salem believes in an accessible local and regional transportation system that provides alternative modes of transportation and choices. Salem aims to have a true multimodal transportation system that encourages active and sustainable transportation choices for everyday trips and empowers all travelers to safely use the streets. The City recognizes the crucial role that a sustainable transportation system plays in opening up opportunities for the Salem community.

People should have options when choosing to get around the city regardless of their age and ability. People have differing preferences and abilities, and therefore choice should be embedded in all parts of the transportation system. In many places, providing choice entails rebalancing streets after nearly 80 years of automobile-oriented investment. In other places, it means designing streets and sidewalks to be ensure safety and comfort for all users, particularly the elderly and people with disabilities.

Elements of the transportation system should connect, so that the system becomes multimodal. It is unreasonable to expect all transportation modes to work for all trips, and creating independent systems for all transportation modes would be redundant in many places. The transportation system should allow travelers to string together different mode choices where appropriate.

Streets should be designed to enable active and sustainable transportation modes. The transportation system will work best when people who can reasonably walk, bike, or use transit can do so safely, comfortably, and reliably. Making these modes work is especially important for trips taken along existing transit lines and for short trips within Salem and to adjacent communities. By enabling these modes, valuable “real estate” in the public right of way will become free. Allowing people to not use their cars unnecessarily relieves traffic congestion, increases retail foot traffic, fosters community, and ameliorates public health.

The transportation system should be design for safety and a “Vision Zero” standard. Major injuries and deaths from traveling are largely if not entirely preventable. Improper street designs, including those that incentivize fast travel speeds, can increase the likelihood of casualties. When reconfiguring streets, Salem should design for low speeds and low casualties in its neighborhoods. Ultimately, Salem should aim to have zero deaths and major injuries—a standard called “Vision Zero.”

The transportation system should complement neighborhoods. Quality of life in Salem’s neighborhoods should be bolstered by the transportation system. Rather than communities accommodating inflexible transportation infrastructures, the transportation system should be designed with the unique character of each neighborhood in mind.

Other Current and Ongoing Planning Initiatives

- 2003 North River Corridor Master Plan
- 2012 North River Canal Corridor Transportation Plan
- 2015-2022 Open Space and Recreation Plan
- 2016 Route 107 Corridor Study
- 2017 1A – Vinnin Square Priority Corridor Study
- 2017 MassDOT District 4 Enhancement Plans
- 2018 Shuttle Feasibility Study
- Bates Elementary Safe Routes to School Plan
- Canal Street Rail Trail Extension Plans
- Comprehensive Subdivision Regulations Update
- East Coast Greenway Network
- Essex Street Pedestrian Mall Conceptual Plan
- Imagine Salem Visioning Plan
- MAPC LandLine Network Plan
- Salem Complete Streets Prioritization Plan
- Salem Power Station Redevelopment Plan
- South Salem Commuter Rail Station Conceptual Plan
- Various studies completed for Bridge, Boston, and North Streets (including MBTA access studies)



② Existing Conditions

Salem will soon celebrate its quadricentennial. Nearly 400 years of history, technological advancement, and growth are embedded into Salem’s streets, reflecting the ever-changing nature of the city. This Plan is responsive to the existing environment to ensure the Plan recommendations work in the service of the Salem that exists today, while anticipating and preparing for the needs of Salem in the future.

Existing Conditions

This section summarizes the current state of biking in Salem. Using existing city-wide data, public input, and field observations, the existing conditions described below establish the framework that was used to craft the Plan recommendations. By first examining Salem’s current characteristics and the City’s efforts to build out a network for biking, the future comes into focus: Where are opportunities to fill network gaps and better connect people to desired destinations? Where do constraints exist that may preclude or complicate future intervention? What are the main barriers that prevent people from biking, and how can they be overcome?

Travel Patterns

Though compact in size, Salem is comprised of a variety of neighborhood types and scales. From the densely-settled Point neighborhood to the suburban environment in Witchcraft Heights to the bustling Downtown core, Salem residents rely on a variety of transportation tools to travel between their homes and places around Salem.

Outreach to the Salem community revealed the many ways people currently use a bike to experience Salem. People in Salem bike to reach their jobs, local parks, and daily destinations (such as shops or restaurants). In addition, a significant percentage of people bike to make their transit connections.

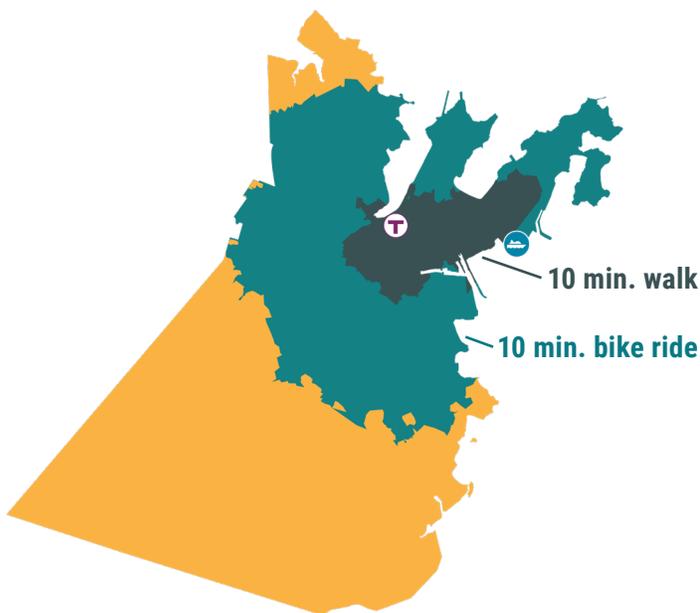


Figure 2: Salem’s Access to Commuter Rail and Ferry Terminal via a 10-minute Walk vs 10-minute Bike Ride

Although the current bike mode share in Salem is relatively small – just one percent of people in Salem report biking as their primary mode to traveling to work³ – the community processes completed for this Plan, as well as Imagine Salem, demonstrate a strong preference for increasing the share of trips made by active modes and expanding low-cost, reliable transportation options, like biking.

Multimodal Connectivity

Salem’s transit hubs are among the most important destinations for Salem residents. The scale of Salem makes biking an extremely convenient choice for people who use the commuter rail, ferry, or bus service for longer-distance travel. Through trip chaining – linking together two or more legs of a trip through various modes – biking may be used for the first or last segment of a trip to make longer-distance trips possible without the use of a car. In this way, biking is a far more effective tool than walking. **While only 20% of Salem residents can reach the commuter rail or ferry within a 10-minute walk, 70% can reach the two transit hubs within a 10-minute bike ride** (See Figure 2). Data from the MBTA and other recent studies illustrate the importance of and connection between biking and transit use in Salem. The Salem commuter rail station is one of the most heavily used in the entire MBTA system, with weekday ridership over 2,000.⁴ Data from the 2015-17 MBTA Systemwide Passenger Survey shows that the 90

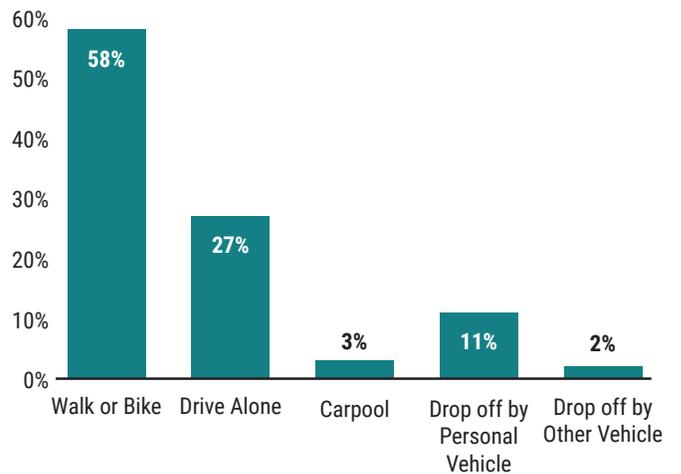


Figure 3: Mode Used to Access Salem Commuter Rail Station

³ American Community Survey. 2016. United States Census Bureau.

⁴ Forman, Ben and Hodge, Daniel. The Promise and Potential of Transformative Transit-Oriented Development in Gateway Communities. 2018. MassINC.

percent of people taking the commuter rail daily do so for work trips, with 72 percent of passengers taking the train five days weekly.⁵

Of the people who board the commuter rail in Salem, 12 percent do not have access to a car and 11 percent are from low-income households earning \$43,500 per year or less. Owing to the overall scale of the city and the relatively dense development pattern around the station (over 3,000 working-age people live within a half-mile of the station), walking and biking are attractive modes for access to and from the train; As shown in Figure 3, over 1,200 (58 percent of riders) access the station via walking or biking while 27 percent access the station by driving alone.^{6 7}

The importance of multimodal connections was echoed throughout the public process completed for this Plan. Fully ten percent of all biking destinations identified by the public were concentrated at just two locations: the MBTA commuter rail station and ferry terminal.

Utility Trips

Utility trips – those made for transportation purposes to work, school, shopping, or other daily destinations – play a significant role in the number of people biking around Salem every day

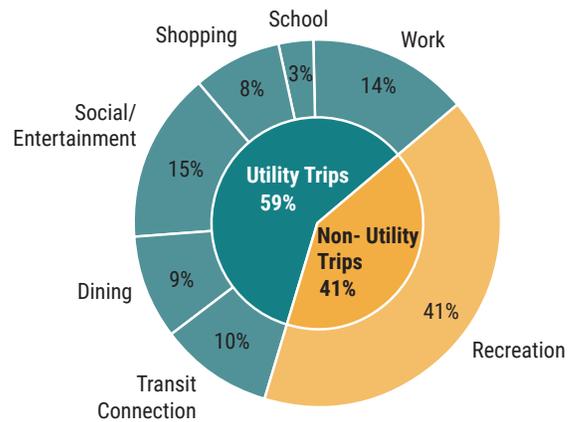


Figure 4: Current Biking Destinations by Type

(See Figure 4).⁸ Although many in the community bicycle for recreation, people most frequently bike for transportation purposes (See Figure 5).⁹

Salem plays a significant role in the regional employment and consumer economy, with tens of thousands of people traveling in, around, and out of Salem daily for access to jobs and other daily destinations. Approximately half of Salem’s residents are of working age (21,801 residents 16 years or older),¹⁰ and 19% of those residents work within Salem.¹¹ An additional

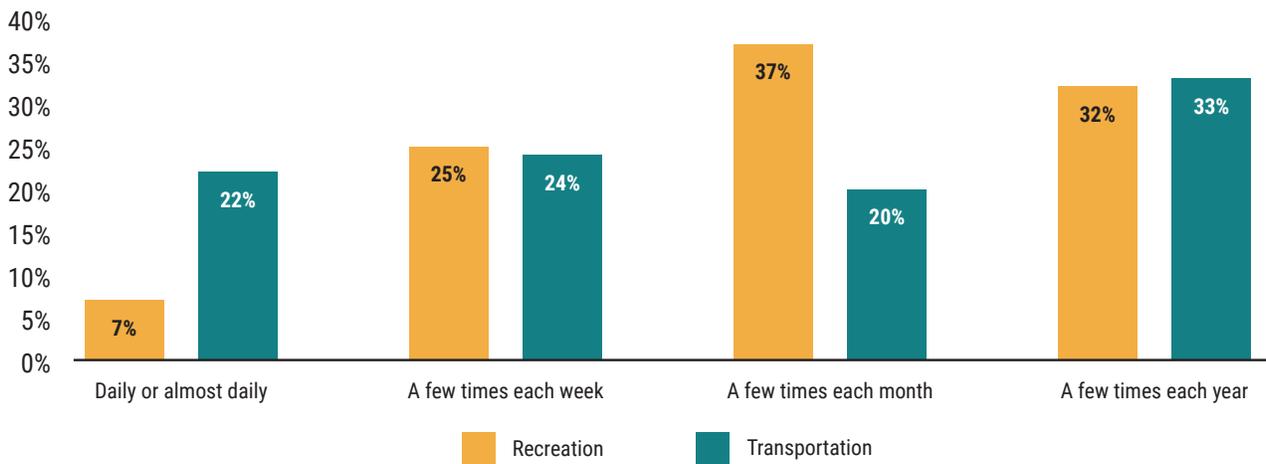


Figure 5: Biking Frequency of Current Bicyclists in Salem by Trip Type

5 2015-2017 MBTA Systemwide Passenger Survey. Central Transportation Planning Staff.

6 2015-2017 MBTA Systemwide Passenger Survey. Central Transportation Planning Staff.

7 Forman, Ben and Hodge, Daniel. The Promise and Potential of Transformative Transit-Oriented Development in Gateway Communities. 2018. MassINC.

8 Community comments collected via Wikimap

9 Community comments collected via Wikimap

10 American Community Survey. 2016. United States Census Bureau.

11 Imagine Salem Progress Report. 2017. City of Salem.

17,000 people commute into Salem each day for work. Salem has clusters of high-activity employment and shopping located Downtown, along Highland Avenue, and in pockets of southeastern Salem. High concentrations of workers report to a single or small handful of locations for the city’s largest non-government employers such as North Shore Medical Center (over 3,000 employees) and Salem State University (approximately 1,500 employees). Major shopping destinations also include regional malls, such as Northshore Mall in Peabody and Liberty Tree Mall in Danvers. While some people currently bike to these areas, the existing infrastructure does not provide a sense of safety or comfort required to encourage a larger share of the population to bike to their jobs or daily errands.

Biking for Fun

Salem contains dozens of parks of varying sizes located throughout the City, in addition to an exceptional array of cultural attractions. The broad distribution of the City’s parks allows people who live in any neighborhood to access a green space within a short distance of their home. Similarly, the vast majority of Salem’s museums and historic sites are concentrated within the Downtown area, making it easy to travel between sites using active modes.

The strong tourist economy in Salem brings over a million people into Salem, most within a short time period around October. The heavy influx of people into Salem strains all modes of transportation, placing an even greater emphasis on the need for transportation choices to support the increased demand. The availability of Salem’s hybrid dockless bikeshare system gives tourists access to the whole of Salem by bike. With a concentration of docking stations located Downtown, the system is especially well-equipped to handle visitors to Salem’s main tourist attractions.

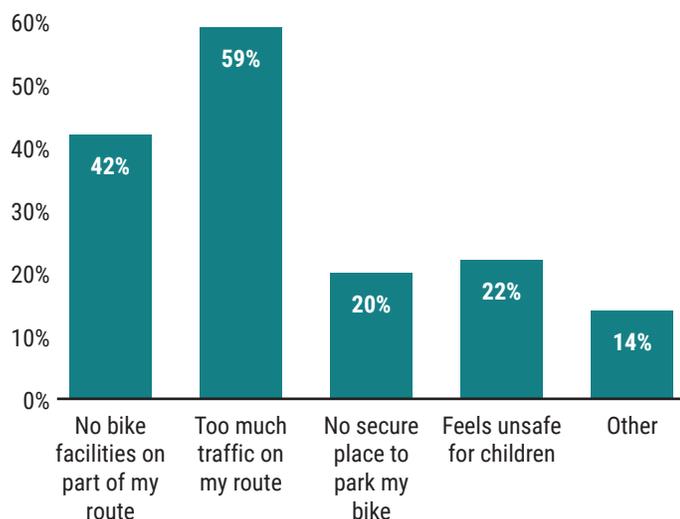


Figure 6: Community-Reported Challenges to Biking in Salem

Salem’s Bike Network

In the intervening years since the 2010 Bicycle Circulation Master Plan was completed, Salem has made many positive changes that have made biking accessible. Several miles of bike lanes and new shared-use paths have been opened, creating new routes and options for moving around the City. However, the current system of bike infrastructure does not always provide adequate separation or connectivity to make most people feel that it is a safe way to travel. The primary challenge facing Salem is inadequate separation between people biking and driving along many of Salem’s main high-volume, high-speed streets. These streets are the primary connectors in Salem - those that carry people from neighborhoods to Downtown, Salem State, the ferry terminal, and other destinations described above.

Existing Lanes and Paths

As shown in Map 1, Salem currently has approximately seven miles of bike infrastructure installed throughout the City, including just under three miles of off-street shared use path and approximately four miles of on-street bike lanes. While these bike lanes and paths are useful tools for a portion of the population, most of the on-street bike facilities that exist today are along relatively high-volume, high-speed streets and do not prove any separation between people biking and moving traffic. As a result, the majority of Salem’s existing on-street lanes are considered low-comfort. National research shows that routes like these are likely to attract a maximum of around seven percent of the total population, while an additional 65 percent would consider biking if routes provided a more comfortable ride. In Salem, the public identified the primary reasons they don’t currently ride a bike, demonstrating that for a greater bike mode share to be achieved, greater comfort and separation is required along Salem’s streets (See Figure 6).¹²

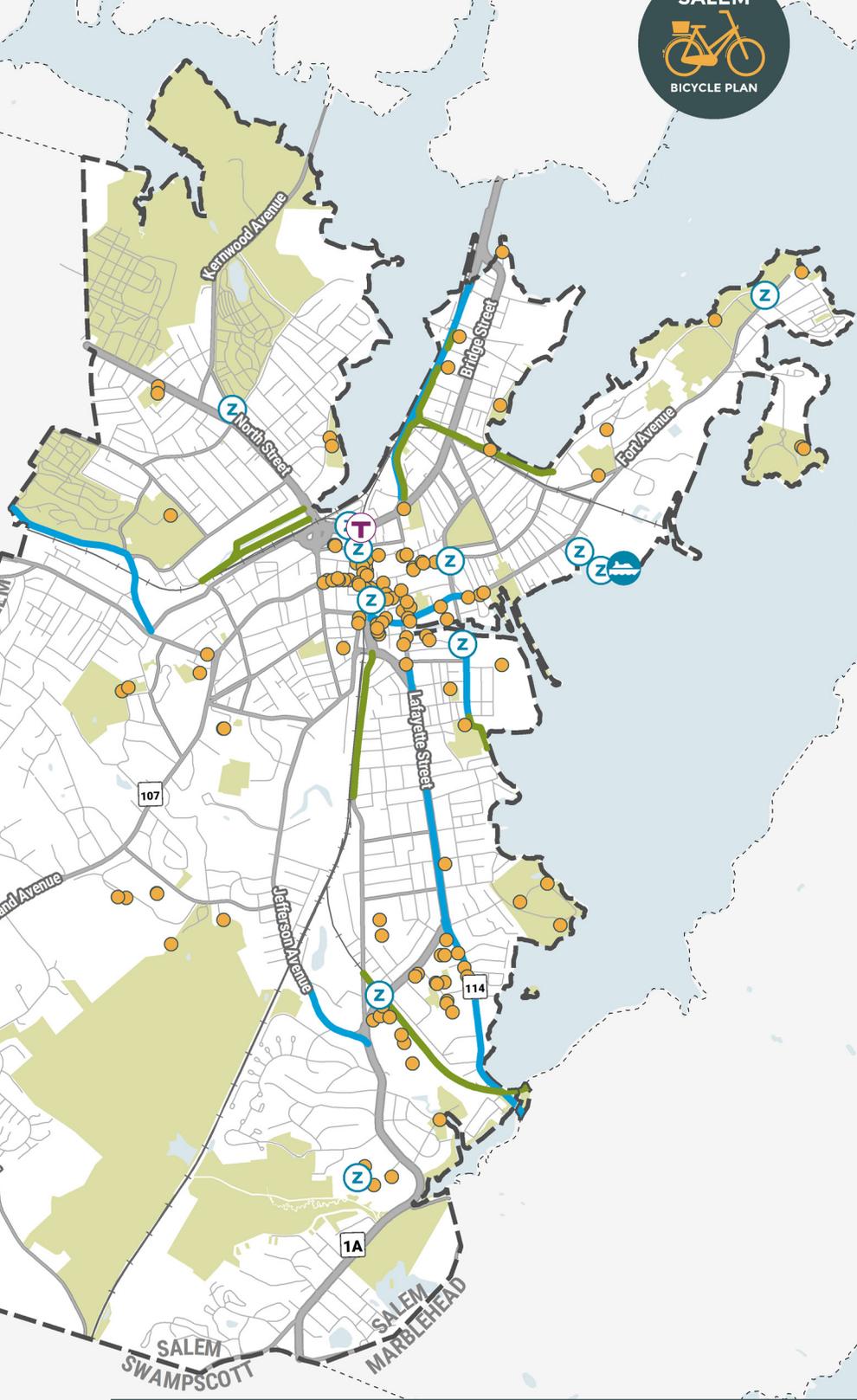
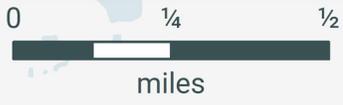
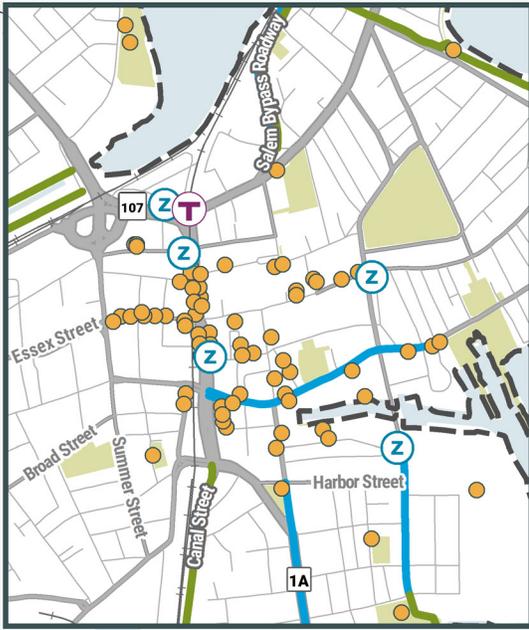
Comfort and Safety

Salem’s bicycle network currently supports a small population of highly confident bicyclists who are willing to ride on roads with traffic and without bike lanes. By contrast, most people (51-56%) are interested in biking but concerned about safety and seek off-street or separated bicycle facilities or quiet, traffic-calmed residential roads (See Figure 7).¹³ This research is supported by feedback collected from Salem residents who identified ‘no bike facilities on part of my route’ and ‘too much traffic on my route’ as the main reasons they currently elect to not travel by bike.

¹² Community comments collected via Wikimap

¹³ Dill, D. and N. McNeil. Revisiting the Four Types of Cyclists. In Transportation Research Record 2587. TRB, National Research Council, Washington, DC, 2016.

DOWNTOWN



Map 1: Existing Bicycle Facilities

- Bike Lane
- Shared Use Path
- Municipal Bike Rack
- Bikeshare Dock
- Ferry Terminal
- MBTA Commuter Rail Station



The community's perception of unsafe conditions was examined alongside the numerical results of a crash analysis and a Bicycle Level of Traffic Stress tool that quantifies how comfortable a given route is based on the road context. The analysis evaluated characteristics that most strongly contribute to bicyclist comfort: the level of separation from motor vehicles, traffic volume, and traffic speed. A weakest link principle was then used to score road segments based on vehicular speed, volume, curbside use, and bicycle facility width/separation. The lowest-stress segments (LTS 1) are suitable for almost all people – including children – to bike on while the highest-stress segments (LTS 4) require riding near and negotiating with moderate to high-speed traffic.

The results of Salem's Bicycle Level of Traffic Stress analysis are shown in Map 2. In general, Salem's many local, residential streets were designated high-comfort due to the low traffic volumes and speeds found on those streets. The main streets that carry the majority of people to the places they want to go were generally categorized as high-stress or highest-stress. These streets - some of which include existing painted bike lanes - do not provide separated infrastructure to mitigate exposure to significant traffic volumes and high speeds.

A comparison of the Level of Traffic Stress analysis and crash data for the most recent five years show a trend between high-stress streets and the crashes resulting in serious injury or death. Most crashes (57%) were located along high-stress streets, and a high concentration of crashes occurred in the dense and busy Downtown street network. Of the total 245 crashes involving vulnerable users, seven crashes resulted in the end of a person's life.

Bike Parking

An often-overlooked component of bike infrastructure is bike parking. There are a variety of public bike racks with total capacity for 647 bikes around Salem. High-capacity racks are located at Mack Park, Salem State University, Salem High School, Carlton Innovation School, the ferry dock, and the MBTA garage near Salem Station. The location of municipal bike parking facilities is shown in Map 1. Although the majority of existing bike parking is centralized in the downtown area, Salem residents still reported that this is where bike parking is most in need of additional supply. The 2018 Salem Community Food Assessment also disclosed that bike racks are available at only one of Salem's forty-seven food stores and that the lack of bike racks at these stores was a deficit to food access.

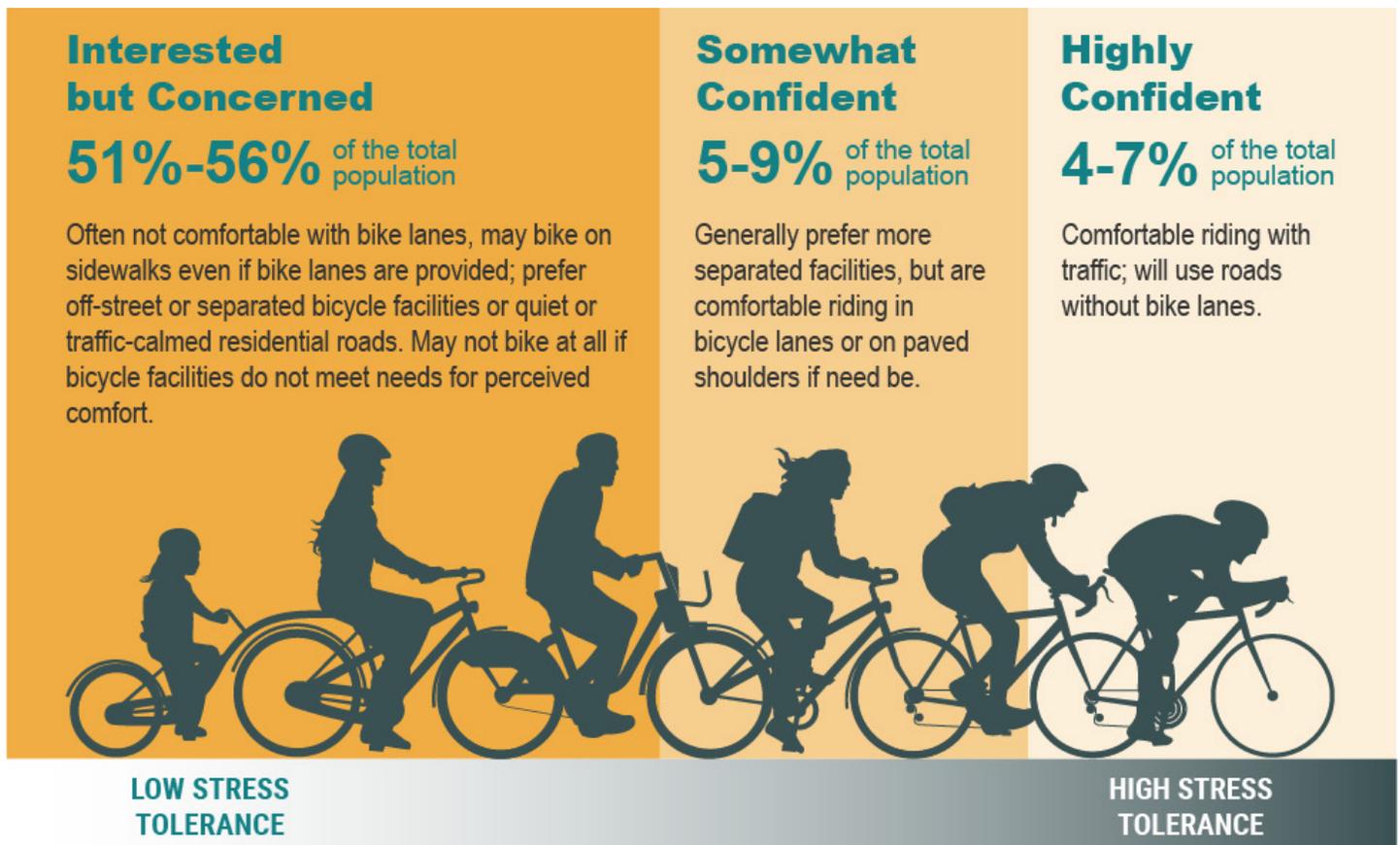
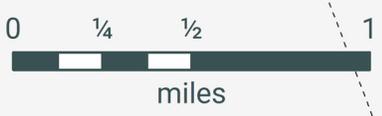
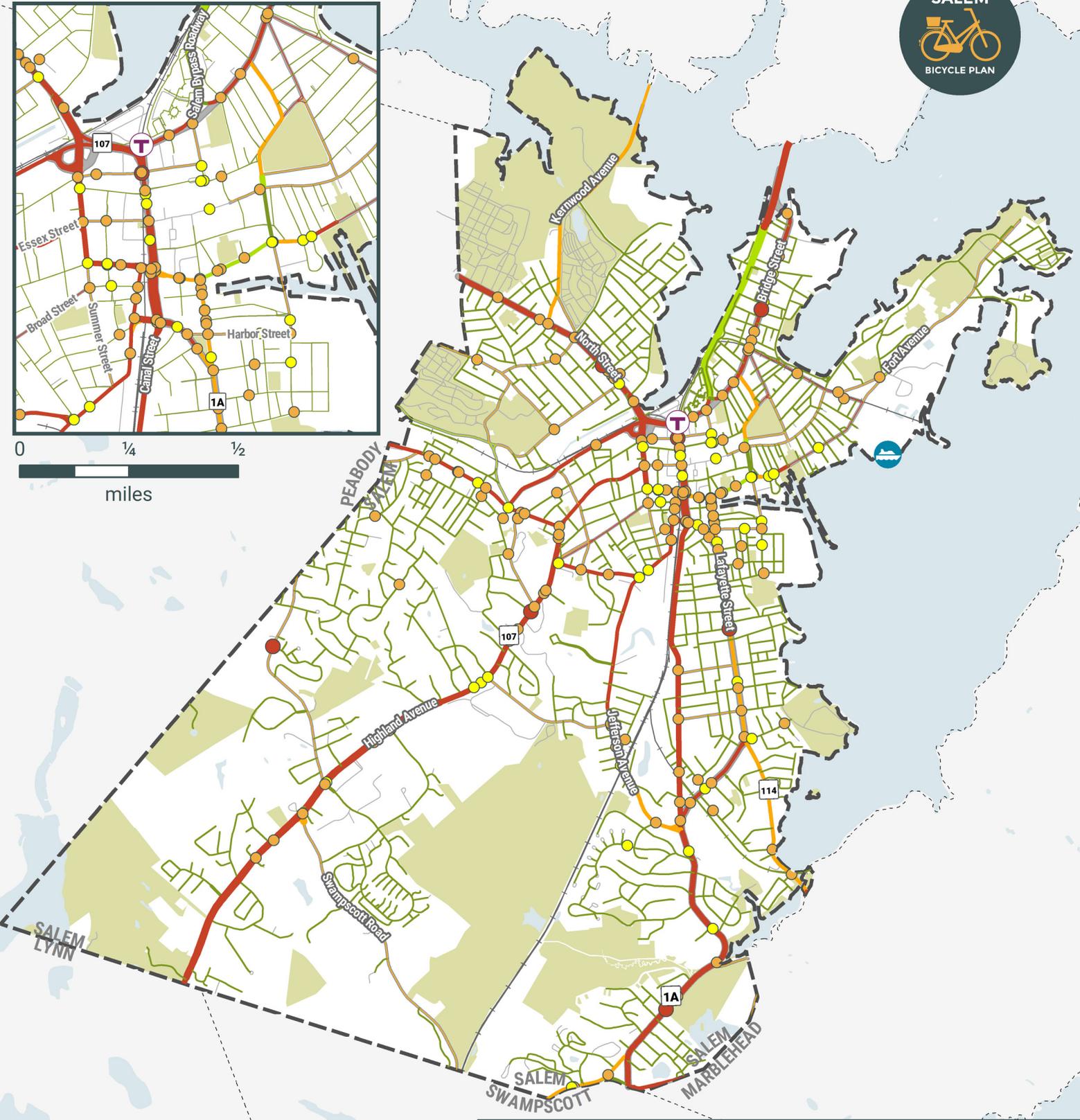
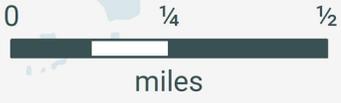
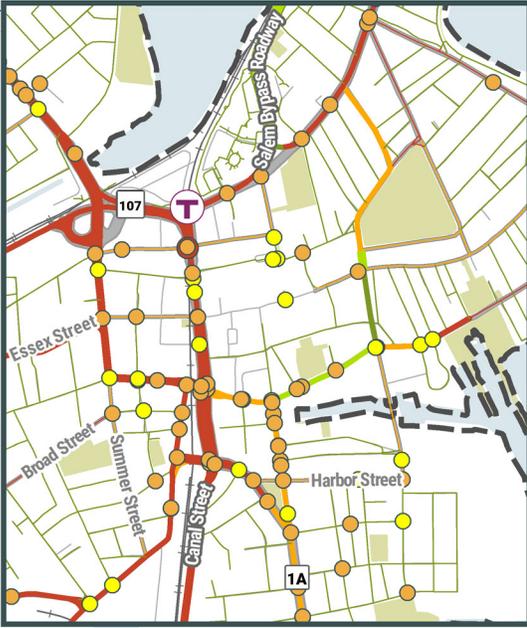


Figure 7: Bicyclist Design User Profiles

DOWNTOWN



Map 2: Comfort and Safety

- | | | | |
|---|-----------------------------|---------------------------------------|-----------------|
| 2010-2015 Crashes | | Level of Traffic Stress | |
| ● | Fatal Injury | — | 1 - Low Stress |
| ● | Non-Fatal Injury | — | 2 |
| ● | No Injury (Property Damage) | — | 3 |
| | Ferry Terminal | — | 4 - High Stress |
| T | MBTA Commuter Rail Station | | |

Policies and Programs

Salem’s ability to provide a safe and comfortable biking experience throughout the city is dependent on how well biking is integrated into Salem’s routine processes and procedures. Biking in Salem is currently supported through several existing policies and programs, described below. Although Salem has made progress toward achieving a bike network that is accessible for people of all ages and abilities, a primary focus of this Plan is the coordination of City procedures and policies to ensure biking is built in as an upfront consideration in City decision-making processes.

Bicycling Advisory Committee

In June 2006 the City established the Salem Bicycling Advisory Committee to help guide Salem’s bike path network and promote a bike and pedestrian-friendly environment citywide. The committee coordinated with City staff and a consulting team to produce Salem’s first-generation bike plan, the 2010 Bicycle Circulation Master Planning Study, which identified a 4.85-mile pilot route consisting of shared use paths, bike lanes, and shared lane markings connecting Winter Island south to Marblehead. The City has implemented this route in stages, with many shared lane markings and lanes completed. In their role as advisors to the City, the Bicycling Advisory Committee’s will continue to be engaged in City-led initiatives including planning and engineering projects that affect biking.

Community Planning

In 2016 the City commenced the Imagine Salem planning process to establish a collective vision for the city’s future. The process is focused on achieving community, housing, employment, and transportation goals by 2026, with a strong emphasis on providing greater access to active transportation modes throughout Salem. With its focus on bike network safety, comfort, and connectivity, this Plan is directly in line with all of the transportation goals identified by Imagine Salem.

In addition, the Salem for All Ages initiative charts a course of action for making Salem a livable place for people of all ages and abilities. The plan provides a vision for accessible, coordinated, and affordable intra-city transportation options, supporting policies that provide multi-modal options and links between various modes. A key plan initiative points to the need to evaluate the safety and walkability of intersections throughout Salem. Although Salem for All Ages does not identify bicycling as a transportation strategy, evidence suggests that supportive policies to improve bicycling infrastructure – as well as technology enhancements such as electric bicycles – may increase rates of bicycling in older population groups.^{14 15}

Policies

The City established a Complete Streets policy in 2014 that seeks to make every Salem transportation project an



Salem’s bikeshare system launched in 2017 with 10 stations around Salem, primarily in the Downtown area

14 Complete Streets Improve Mobility for Older Americans. National Complete Streets Coalition, Smart Growth America.

15 Renee, J., and Bennett, P., Socioeconomics of Urban Travel: Evidence from the 2009 National Household Travel Survey, World Transport Policy and Practice 20(4):7-27. September 2014

opportunity for improving streets for all transportation modes. The City's policy and associated prioritization plan opens the door for the City to receive funding through MassDOT's Complete Streets Funding program, which allocates up to \$400,000 for municipal projects selected through a competitive application process. Thus far Complete Streets funding has been awarded for upgrades to the intersection of Lafayette Street, Loring Avenue, and West Avenue.

Site plan review is a primary vehicle for reviewing and guiding changes to the built environment in Salem. As part of the City's site plan review process, applicants must disclose the location and dimensions of all bicycle racks and storage areas, however there is no requirement to include these facilities as part of a project. Although zoning does not currently mandate bike parking requirements for new development, the City maintains an updated inventory of all municipal bike parking and is currently in the process of preparing bike parking guidelines for private developments reviewed by the City Planning Board.

Programs

The City participates in the federally-funded MassDOT Safe Routes to School (SRTS) initiative, which seeks to provide students with an opportunity to walk or bike to school on a frequent basis. In Salem, there is significant opportunity to improve the share of people walking and biking to school. Travel data for the over 4,000 public school students in Salem demonstrates that 39 percent arrive by bus and much of the remaining 61 percent arrive by car. Though the SRTS program, Walk to School days, bike rodeos, and other programs are coordinated with five local schools – Bates Elementary, Bentley Elementary, Horace Mann Laboratory, Nathaniel Bowditch, and Saltonstall. In addition, Bates Elementary school was the recipient of MassDOT SRTS infrastructure funding for a safety improvement project that will include signal upgrades and sidewalk improvements. The Bates Elementary School SRTS infrastructure project is currently in preliminary design.

Salem also supports improved conditions for biking through a recently instituted neighborhood traffic calming program that provides residents the opportunity to request traffic calming through a formal application process. Two projects are currently underway and slated to be finished in late 2018. The program was initially administered by the City's Engineering Department but is now managed by the Traffic and Parking Department and funded through the City's Capital Improvement Plan.

Salem is supportive of enforcement education programs, and was one of 12 initial communities to participate in the MassDOT Bicycle and Pedestrian Safety Awareness and Enforcement Program in 2014. Approximately 30 officers have completed the Massachusetts Police Mountain Bike Patrol School training. Through this Plan's outreach process, the Police Department

Salem Complete Streets Policy

The City recognizes that all roadway projects – including new construction, maintenance and reconstruction – are potential opportunities to apply Complete Streets design principles. The City will, to the maximum extent practical, design, construct, maintain, and operate all streets to provide for a comprehensive and integrated street network of facilities for people of all ages and abilities.

expressed support for biking infrastructure throughout Salem, noting that compliance by all users increases with dedicated infrastructure.

Finally, Salem launched a bikeshare program in 2017 with 50 bikes available at 10 stations. In its first year of use, the system accommodated approximately 2,500 rides, with 6,953 rides as of September 11, 2018. The City also piloted a bikeshare feature that allowed users to lock a bike at any bike rack in addition to designated docks around the city. In general, the bikeshare docks are concentrated around Downtown with two stations on the Salem State University Campus and one in North Salem. Through public engagement, the Salem community shared concerns that current system is limited geographically, and that additional docks or stations outside of Salem (for example, in Marblehead) would provide additional functionality to residents and employers in Salem. Others suggested that the cost of a membership acts as a disincentive for some of Salem's lower-income residents. Several stakeholders involved in development activity suggested that bikeshare should be better promoted, especially to new residents.

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3 Recommendations

Planning for a more bikeable future will require the coordination, time, and resources of many City departments, neighboring jurisdictions, and the public. The recommendations of this Plan address specific infrastructure changes, city policy, and programming that will enable the development of citywide network of bikeways that is comfortable for people of all ages and abilities.

FHWA's Principles of Connected Networks

Safety and Security

Does the network provide routes that minimize risk of injury, danger, and crime?

Comfort

Does the network appeal to a broad range of age and ability levels with consideration given to user amenities?

Cohesion

How connected is the network in terms of its concentration of destinations and routes?

Directness

Does the network provide direct and convenient access to destinations?

Access

How well does the network accommodate travel for all users, regardless of age, income level, or ability?

Alternatives

Are there many different route choices available within the network?

Recommendations

The recommendations were developed based on the review of existing conditions, ongoing planning and design efforts, and with the input of community members, the Steering Committee, and City staff. Recommendations align with the six principles for connected bike networks as identified by the Federal Highway Administration as described below.

The recommendations of the Plan are grounded in a commitment to **safety, security, and comfort**. Along busy, fast, or wide streets, shared use paths and separated bike lanes are preferred because they provide the greatest degree of separation from motor vehicles (See Figure 8). Conventional or buffered bike lanes may be appropriate on streets with moderate volumes and low speeds and where parking turnover is low. Neighborhood greenways are reserved for low-volume, low-speed local streets. While the bikeway solutions selected for each recommendation reflect a planning level analysis of traffic volume, speed, road width, and other factors, the final selection and design of each facility will require detailed site analysis and additional public outreach.

The recommendations address other infrastructure components that contribute to comfort and safety, such as wayfinding signage, bike racks, and intersection treatments such as bike crossings and queue boxes. An additional design consideration that will affect project design and implementation is the character of Salem's streets and historic districts. Bicycle facilities can be designed to minimize pavement markings and signage or to integrate them into an aesthetic scheme that preserves community identity and historic contexts.

Cohesion and **access** were considered in terms of how the network could connect Salem's high-demand employment, shopping, and recreation destinations. Recommendations focus on creating a dense network of bikeways in the busy Downtown area, with routes connecting Downtown to all areas of Salem. Routes that increase access to the MBTA Commuter Rail Station, MBTA Ferry Terminal, and bust stops were also prioritized given their unique value to the transportation network.

Directness and **alternatives** were balanced by comparing the feasibility of developing safe and comfortable routes on main streets versus parallel local streets. As research shows, most people are willing to lengthen a trip only by 25 percent¹ to avoid difficult traffic conditions, alternatives requiring significant out-of-direction travel were not substituted for high-comfort bikeways on busy corridors.

1 Winters, M., K. Teschke, M. Grant, E. Setton and M. Bauer. How Far Out of the Way Will We Travel?: Built Environment Influences on Route Selection for Bicycle and Car Travel. Transportation Research Record: Journal of the Transportation Research Board, No. 2190, 2010, pp. 1-10.

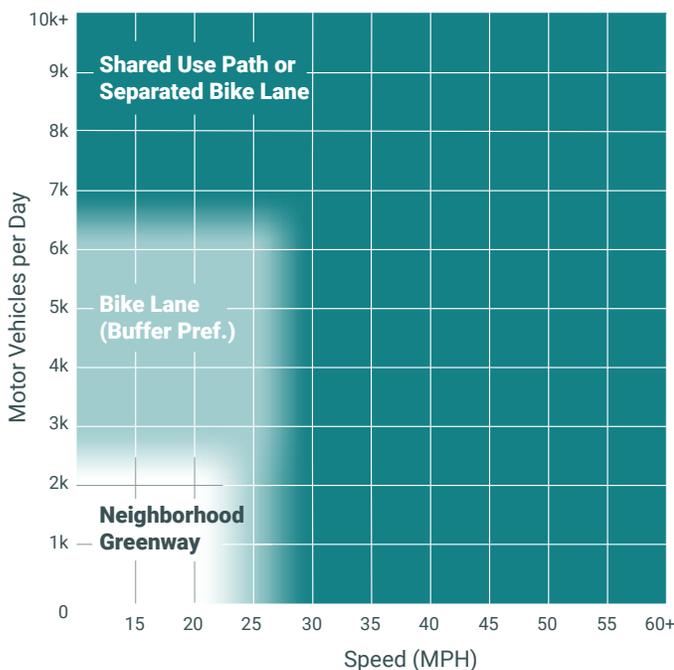


Figure 8: Facility Selection Guidance

Designing for Comfort and Safety

The following bikeway treatment types are identified throughout the Plan recommendations:

Shared Use Path

A shared use path is physically separated from traffic and permits two-way operations for use by all non-motorized users.

Separated Bike Lane

A separated bike lane is physically separated from traffic with vertical and horizontal elements. They may be designed for one-way or two-way use and may be constructed at the street, sidewalk, or intermediate level.

Buffered Bike Lane

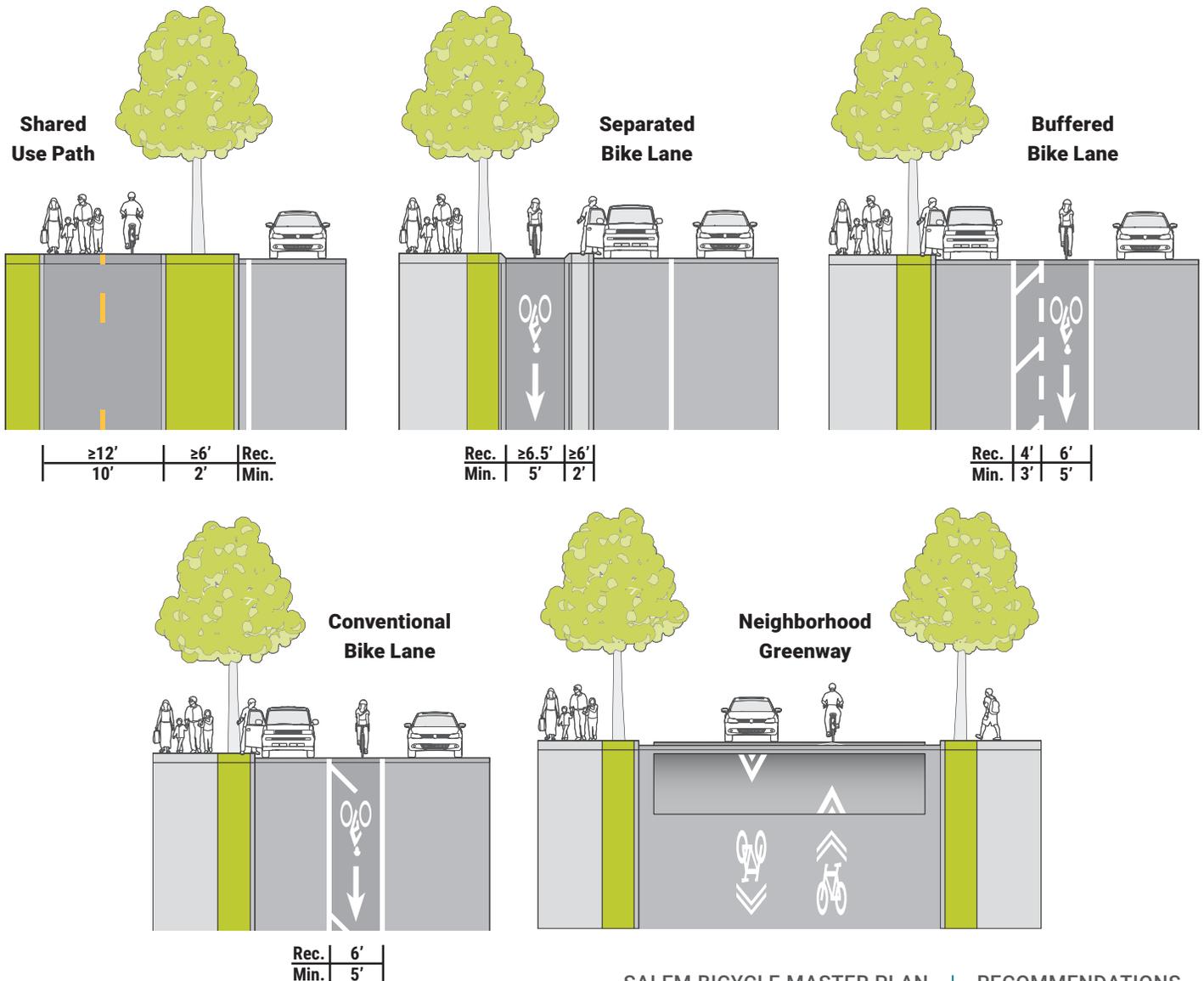
A buffered bike lane is an on-street bikeway separated from an adjacent travel lane or on-street parking lane by a striped buffer area.

Conventional Bike Lane

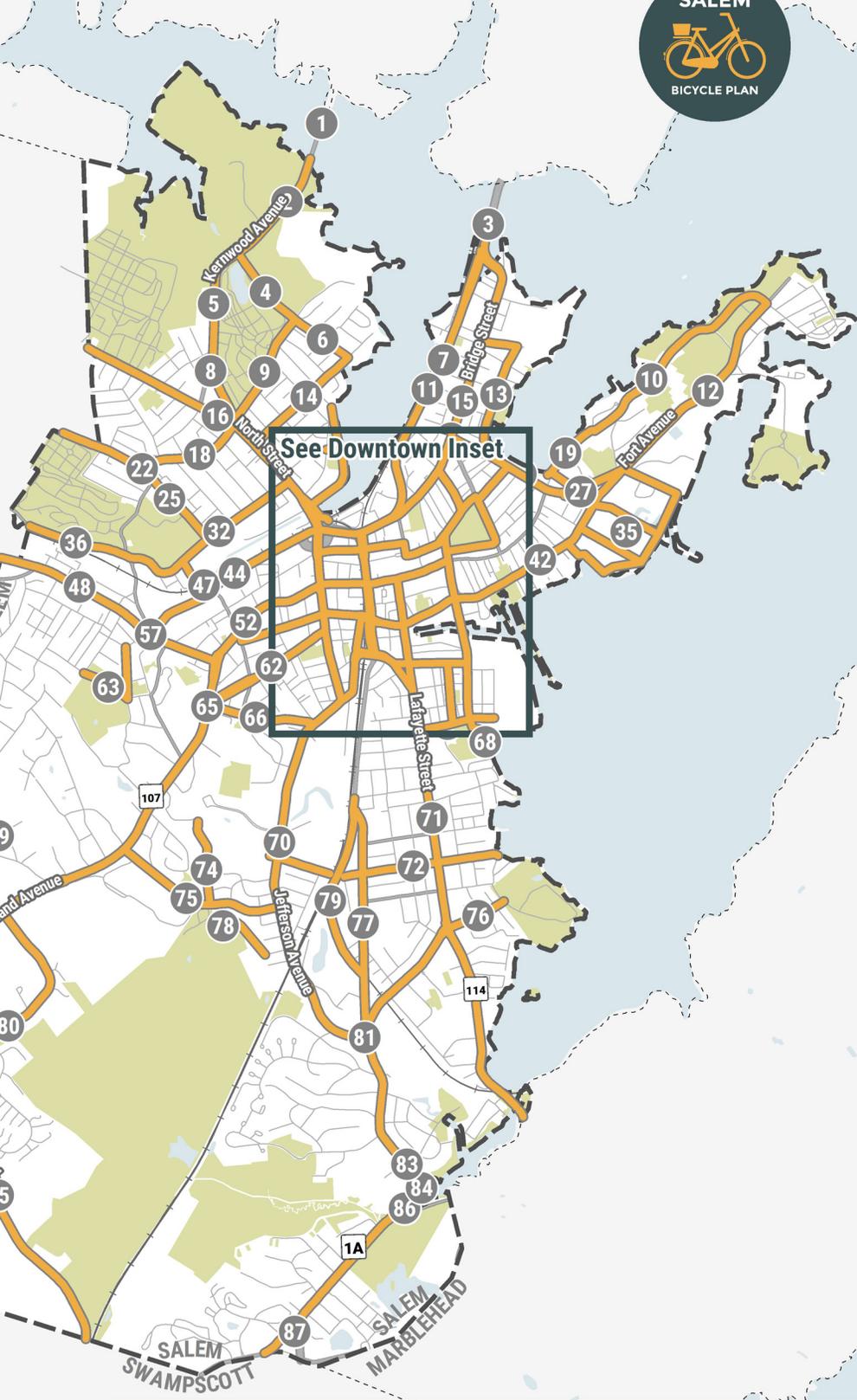
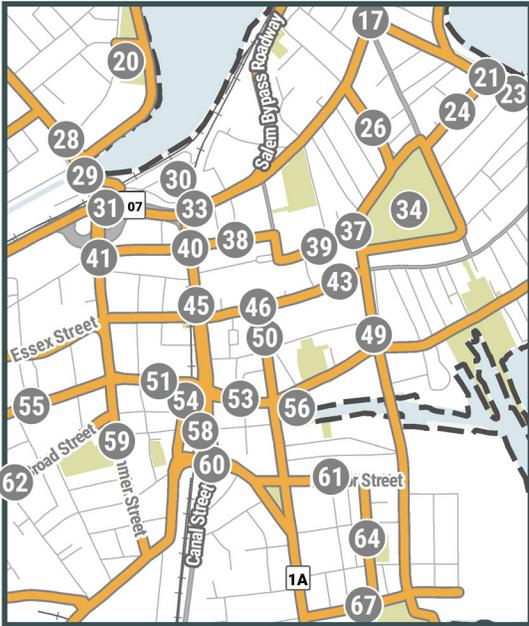
A conventional bike lane is an on-street bikeway delineated from an adjacent travel lane or on-street parking lane with pavement markings.

Neighborhood Greenway

A neighborhood greenway (or bike boulevard) is a low-volume, low-speed street – typically a local street – that has prioritizes bicycle travel with signs, pavement markings, traffic calming measures, and enhanced crossing treatments.



DOWNTOWN



See Downtown Inset

Map 3: Infrastructure Project Recommendations

- # Project ID
- Project Extent



Infrastructure Recommendations

Eighty-seven infrastructure recommendations are listed according to their position on a map of Salem (See Map 3). The Action Plan in the following section provides additional information on cost and funding sources, suggested time to completion, feasibility, and physical or other constraints.

- 1 Kernwood Avenue Bridge**

Add conventional bike lanes to Kernwood Avenue bridge. Consider a wider shared use path on one side of the bridge to accommodate people biking and walking in a completely separated environment. Consider adding non-slip plates across bridge grates to improve traction. Coordinate with MassDOT on maintaining boardwalk sidepath.
- 2 Kernwood Avenue**

Provide conventional bike lanes along Kernwood Avenue.
- 3 Essex Bridge (Sgt. James Ayube Memorial Drive)**

Coordinate with MassDOT to provide separated bike lanes on the Essex Bridge extending from Sgt. Ayube Drive into Beverly. Consider grade-separated or concrete barriers to provide adequate protection from high-speed traffic. Coordinate with Beverly to provide continuous high-comfort route.

Current Initiative: MassDOT upgrades to Beverly side
- 4 Sargent Street**

Provide neighborhood greenway treatment from Orne Street to Kernwood Avenue.
- 5 Liberty Hill Avenue, Appleton Street**

Provide buffered or separated bike lane on Liberty Hill Avenue from Appleton Street to Kernwood Avenue. Consider a shared use path along the east side of the street (against the cemetery).

Current Initiative: Bates Elementary School SRTS Infrastructure Project
- 6 Felt Street**

Provide neighborhood greenway treatment from Dearborn Street to Kernwood Avenue
- 7 Bridge Street Neck Path**

Evaluate feasibility of extending Bridge Street Path to close gap between Skerry Street and Burnside Street between Sgt. James Ayube Memorial Drive and Essex Bridge.
- 8 Liberty Hill Avenue at Appleton Street**

Tighten intersection and improve communication of traffic control.

Current Initiative: Bates Elementary School SRTS Infrastructure Project
- 9 Orne Street**

Provide neighborhood greenway treatment along Orne Street from North Street to Sargent Street.
- 10 Szetela Lane, Memorial Drive, Restaurant Row**

Provide neighborhood greenway treatment from Settlers Way to Bay View Avenue via Memorial Drive and Restaurant Row.
- 11 Sgt. James Ayube Memorial Drive**

Install vertical separation along existing bike lane on Sgt. James Ayube Memorial Drive from Bridge Street to proposed connection on Essex Street Bridge.
- 12 Fort Avenue**

Narrow parking lanes to provide buffered or separated bike lanes along Fort Avenue. Coordinate with Salem Power Plant development to strengthen bicycle connectivity. Consider a fully separated multi-use path.

Current Initiative: Salem Power Plant Study
- 13 Collins Street, East Collins Street, and Planters Street**

Transition Peter Tracy Multiuse Path / Collins Cove Path to an on-street bike lanes. Provide connection from end of path to Bridge Street Neck via Collins Street, East Collins Street, and Planters Street
- 14 Dearborn Street**

Provide neighborhood greenway treatment from North Street to Felt Street.
- 15 Bridge Street Neck**

Provide buffered bike lanes on Bridge Street.
- 16 North Street**

Consider quick build project to complete minimum grid. Evaluate feasibility to eliminate travel lane, and/or narrow travel/parking lanes to provide buffered bike lanes extending from Franklin Street to the Peabody City Line. Carry bike lanes through all intersections. Coordinate with Peabody to provide continuous high-comfort route.

Current Initiative: Complete Streets Prioritization Plan; 2010 Bicycle Circulation Master Planning Study

- 17 Bridge Street at Webb Street**
Provide transition opportunity for bikes exiting path to turn left onto Bridge Street. Add bike box in front of stop bar for northbound Webb Street traffic, and consider signage to allow bikes to use pedestrian signal to cross.
Current Initiative: City-planned path extension
- 18 School Street**
Provide buffered bike lanes on School Street between North Street and Tremont Street. Consider removing center lines or other methods to calm traffic. Provide neighborhood greenway treatment on narrower section (close to North Street).
- 19 Collins Cove Path**
Extend and widen Collins Cove Path from terminus at Webb Street to Settlers Way along waterfront desire line in accordance with Complete Streets Prioritization Plan.
Current Initiative: Complete Streets Prioritization Plan; 2010 Bicycle Circulation Master Planning Study; Collins Cove Living Shoreline Project
- 20 Furlong Park / Ferris Lot**
Coordinate with landowners to provide shared use path connection along waterfront behind Furlong Park and Ferris lot. Formalize goat path along North River across train tracks to connect to MBTA Commuter Rail station.
- 21 Entry to Peter Tracy Multiuse Path at Andrew Street / Webb Street Intersection**
Widen entry to Peter Tracy Multiuse Path north of Andrew Street / Webb Street intersection.
Current Initiative: Collins Cove Multi-use Path Project
- 22 Tremont Street at School Street**
Tighten intersection.
- 23 Webb Street**
Provide conventional bike lanes from Bridge Street (connecting to Peter Tracy Multiuse Path) to Derby Street.
- 24 Andrew Street**
Provide neighborhood greenway treatment to connect to Salem Common.
- 25 Tremont Street**
Provide conventional bike lanes along Tremont Street between Peabody City Line and Mason Street.
- 26 Winter Street**
Provide separated bike lanes along Winter Street from Salem Common to Bridge Street.
- 27 Collins Cove Path (Beattie Park)**
Extend Collins Cove Path east through City land and David J. Beattie Park to connect to Derby Street in accordance with Complete Streets Prioritization Plan. Provide crossing at Fort Avenue.
Current Initiative: Complete Streets Prioritization Plan and Collins Cove Multi-use Path Project
- 28 North Street at Franklin Street**
Improve crossing conditions for vulnerable users. Formalize and sign connection along North Street spur to Commercial Street and Leslie's Retreat Path.
Current Initiative: MassDOT Route 114 Road Safety Audit
- 29 North Street Bridge**
Consider quick build project to complete minimum grid. Provide separated bike lanes along both sides of the North Street Bridge.
Current Initiative: MassDOT District 4 Pedestrian, Bicycle Upgrades at Various Locations, and MassDOT Route 114 Road Safety Audit
- 30 MBTA Commuter Rail Station**
Strengthen bicycle and pedestrian access to the train station at the Bridge Street / Washington Street entrance and from MBTA parking lots. Clarify bicycle route of travel through main entrance on Bridge Street / Washington Street to lower platform and bike cage. Formalize connections to station from Leslie's Retreat Park and path behind former HMA site. Add additional rail crossing pads.
Current Initiative: Complete Streets Prioritization Plan
- 31 Leslie's Retreat Path at Bridge Street (Path Entrance)**
Formalize connection from Bridge Street and the MBTA Commuter Rail Parking lot driveway to the entrance of Leslie's Retreat Path west of the MBTA Commuter Rail Parking Lot in accordance with Complete Streets Prioritization Plan.
Current Initiative: Complete Streets Prioritization Plan
- 32 Mason Street**
Provide conventional bike lanes along Mason Street between Flint Street and Tremont Street. Provide signage to direct people to high-comfort options for crossing the North River into downtown.

33 Bridge Street (MBTA Commuter Rail Station)
Consider quick build project to complete minimum grid. Provide separated bike lanes on Bridge Street between Bridge Street Neck and North Street. Install bike box at Bridge Street / Washington Street intersection and leading bike interval to allow bikes to maneuver into left lane to continue on Bridge Street and into the MBTA parking lot. Stripe green lane across intersection to indicate movement for bikes going to MBTA parking lot at lower level.

Current Initiative: Complete Streets Prioritization Plan

34 Salem Common Loop
Provide continuous bikeway loop around perimeter of Salem Common with strong access/egress connections on feeder streets (Andrew Street, Winter Street, Hawthorne Street, and Brown Street.)

Current Initiative: Concept Design to convert existing sidewalk to multiuse path at Salem Station Apartments

35 Salem Power Station Redevelopment
Consider providing bike facilities and wayfinding throughout Salem Power Station Redevelopment site.

Current Initiative: Salem Harbor Plan Update

36 Harmony Grove Road
Consolidate right-of-way and narrow travel lanes to provide shared use path along one or both sides of Harmony Grove between Grove Street and Peabody City Line.

37 North Washington Square at Brown Street
Consider squaring off intersection to make plaza.

38 Federal Street
Provide neighborhood greenway treatment from St. Peter Street to North Street.

39 Brown Street
Provide neighborhood greenway treatment from the Salem Common to St. Peter Street. Coordinate with proposed pedestrian improvements documented in Complete Streets Prioritization Plan.

Current Initiative: Complete Streets Prioritization Plan

40 Washington Street at Federal Street
Stripe green bike lanes through the intersection and enhance crosswalk markings and signage to improve pedestrian access to bikeshare station. Consider RRFB, curb extensions, and other crosswalk enhancements plus improvements to left turn from Washington to Federal.

41 North Street at Federal Street
In the short-term, complete proposed plans to stripe conventional bike lanes through the intersection. In the long-term, consider reconstructing the intersection with tightened geometry and improved crossings for people biking and walking. Consider closing slip lane from North Street southbound, and formalize goat path to create high-comfort connection to Leslie's Retreat path and MBTA commuter rail through green space. Use jug handle to facilitate bikes turning left from Summer Street / North Street into path. Widen crosswalk and path to provide a comfortable shared pedestrian / bike environment. Provide queue box for bikes exiting path and entering Summer Street southbound.

Current Initiative: MassDOT District 4 Pedestrian and Bicycle Upgrades at Various Locations

42 Derby Street
Provide bike lanes on Derby Street between Lafayette Street and Fort Avenue. Consider parking-protected bike lanes on wider section (west of Orange Street). Consider contraflow lanes on Derby Street east of Orange Street. Current Complete Streets Prioritization Plan recommendations include a mix of conventional bike lanes and shared use paths to improve connectivity to the MBTA Ferry Terminal via full reconstruction east of Orange Street.

Current Initiative: Complete Streets Prioritization Plan

43 Essex Street (Hawthorne Boulevard)
Consider traffic calming and wayfinding between New Liberty Street and Hawthorne Boulevard to clarify bike connection to high activity pedestrian mall via this low-volume, low-speed segment.

44 Bridge Street
Install separated bike lanes along Bridge Street between Flint Street and Boston Street. Evaluate potential to widen north side of street to accommodate connected bike lanes along Bridge Street between Rt. 114 ramp and Flint Street. Formalize bike connection within shoulder area if widening is not possible. Complete planned project to convert Bridge Street between Flint Street and Boston Street to a three-lane cross section with separated bike lanes. Integrate design with proposed off-street path connection from Grove Street to Bridge Street behind self storage building.

Current Initiative: 2012 North River Canal Corridor Study; Bridge Street Massworks Project "Complete Streets" Enhancements

45 Washington Street
Consider quick build project to complete minimum grid. Provide separated bike lanes on Washington Street between New Derby Street and Bridge Street as a priority north/south bike route. Consider a two-way facility on the west side of the street as an extension of the Salem Bike Path or one-way separated pairs on both sides of the street.

Current Initiative: Complete Streets Prioritization Plan; MassDOT District 4 Pedestrian and Bicycle Upgrades at Various Locations; East Coast Greenway link

46 Essex Street Pedestrian Mall
Reconstruct the Essex Pedestrian Mall in accordance with the Essex Street Pedestrian Mall Improvements project to improve accessibility and clarify travel zones. Consider revising City ordinance to permit bike travel along the Mall outside of the busy season (October). Provide signage to inform people biking of seasonal bike restrictions. Provide wayfinding to bike parking locations outside of mall, and consider providing moveable bike racks within mall.

Current Initiative: Essex Street Pedestrian Mall Conceptual Design

47 Leslie's Retreat Path at Flint Street
Formalize connection of terminus of Leslie's Retreat Path to meet intersection of Flint Street and Bridge Street.

Current Initiative: Boston/Bridge/Flint MassWorks Project; Salem Suede Redevelopment Project

48 Boston Street
Consider quick build project to complete minimum grid. Provide separated bike lanes for the length of the street, with buffered bike lanes near Bridge Street intersection. Improve crossings for vulnerable users. Coordinate with Peabody to provide continuous high-comfort route.

Current Initiative: 2012 North River Canal Corridor Study; Bridge Street Massworks Project "Complete Streets" Enhancements; 2010 Bicycle Circulation Master Planning Study; MassDOT Boston Street Redesign

49 Congress Street / Hawthorne Boulevard
Provide buffered bike lanes as able from Palmer Cove Park north to Salem Common. Where space does not exist for buffering, provide conventional bike lanes.

Current Initiative: 2010 Bicycle Circulation Master Planning Study

50 Central Street at Essex Street Pedestrian Mall
Consider converting Central Street to shared street from near Essex Street Pedestrian Mall to intersection with Lafayette Street and Charter Street.

51 Norman Street
Provide bike lanes on each side of the street between Summer Street and Margin Street. Consider removing or shortening right turn lane (coordinate with Margin Street closure recommendation) to provide additional space for separation.

Current Initiative: MassDOT District 4 Pedestrian and Bicycle Upgrades at Various Locations

52 Essex Street
Consider quick build project to complete minimum grid. Provide separated bike lanes along Essex Street between Jackson Street / Route 107 and Summer Street. Construct bike lanes in accordance with proposed Complete Streets Prioritization Plan for the segment between Summer Street and Washington Street. Connect to a short traffic calmed or bike lane segment along Flint Street to coordinate with Chestnut Street recommendations (#55).

Current Initiative: Complete Streets Prioritization Plan

53 New Derby Street
Provide parking-protected bike lanes on New Derby Street between Margin Street and Lafayette Street. Note: Current Complete Streets Prioritization Plan recommends conventional bike lanes.

Current Initiative: Complete Streets Prioritization Plan

54 Margin Street between Norman Street and Gedney Street
Consider closing or restricting motor vehicle access on Margin Street between Norman Street / New Derby Street and Gedney Street. Enable two-way operations between Gedney Street and Mill Street. Create shared street between Riley Plaza and Post Office. Clarify preferred bike crossing movement from Riley Plaza to Washington Street northbound through intersection striping and phasing.

Current Initiative: Redevelopment Sites at 212 Washington, Riley Plaza parking, and hotel to be built at Dodge St

55 Chestnut Street
Consider quick build project to complete minimum grid. Provide neighborhood greenway treatments on Chestnut Street from Flint Street to Summer Street as an alternative east/west connection. Consider contraflow connection with street calming while maintaining residential parking on both sides. Modify geometry of Summer Street / Chestnut Street / Norman Street intersection and stripe contraflow bike movement through intersection, including consideration of neighborhood roundabout.

Current Initiative: Traffic Calming Program

56 Salem Harborwalk
Formalize and sign harborwalk bike connections. Consider bike facilities in conjunction with waterfront park and path development. Utilize Chapter 91 review process to identify and leverage new path opportunities.

57 Bridge Street at Boston Street
Square off intersection corners to slow traffic movements. Carry bike lane striping through the intersection. Evaluate signal timing options to protect vulnerable user movements through the intersection.

Current Initiative: Boston/Bridge/Flint MassWorks Project

58 Washington Street between New Derby Street and Mill Street (Salem Bike Path)
Extend bike path to intersection of Washington Street / New Derby Street and connect to separated facility on Washington Street. Consider connection through municipal parking lot instead of on-street.

Current Initiative: City-planned bike lanes

59 Summer Street
Provide separated bike lanes along Summer Street from Essex Street to Gedney Street. Transition to contraflow lane with neighborhood greenway treatments on Summer Street from Gedney Street to Jefferson Street to maintain bi-directional bike connectivity.

Current Initiative: City-planned bike lanes; East Coast Greenway link

60 Washington Street at Mill Street / Canal Street
Tighten intersection and improve crossings for people biking and walking. Consider closing slip lanes. Enhance terminus of existing bike path to direct people biking to crosswalk instead of mid-block location.

Current Initiative: Canal Street Reconstruction

61 Harbor Street
Provide buffered or separated bike lane. Consider providing contraflow lane.

62 Broad Street / Dalton Parkway
Provide parking-protected bike lanes with formalized crossings at each intersection.

63 Gallows Hill Park Paths
Formalize path through Gallows Hill Park connecting the ends of Witch Hill Road and Hanson Street. Formalize and sign path connecting Witch Hill Road and Varney Street through existing path.

Current Initiative: Gallows Hill Park Renovation

64 Prince Street
Provide neighborhood greenway treatment from Harbor Street to Leavitt Street. Consider coordinating with Salem Public Space Project.

65 Route 107 (Highland Avenue / Essex Street) at Jackson Street
Provide bike lane striping and bike boxes on N/S route. Consider providing contra flow lane to Dalton Parkway / Broad Street by widening Warren Court. Stripe Dalton Parkway across to Warren Court for bike access. Consider removing slip lane on Dalton Parkway.

66 Jackson Street
Provide buffered bike lanes on each side of the street. Between Route 107 and Broad Street, route bike lanes between embankment and parking and work with school district to formalize access to the playground parking lot at Jackson Street and Broad Street, with appropriate bike lanes routing through the intersection.

67 Leavitt Street
Provide buffered bike lane. Consider providing contraflow lane.

68 Palmer Cove
Formalize and sign bike connections. Consider bike facilities. Provide direct path connection to Saltonstall School with enhanced crossing treatment on Salem Street.

Current Initiative: Palmer Cove Park Redesign

69 Martin Lane / Circle Hill Road
Formalize a non-motorized connection from Martin Lane to Circle Hill Road through Dibiase Park.

- 70 Jefferson Avenue, Margin Street**
From Margin Street to Dove Avenue, provide buffered bike lane. From Dove Avenue to Adams Street provide conventional bike lanes. Consider consolidation or reduction of on-street parking to provide fully separated bike lanes.
- 71 Lafayette Street**
From Front Street to Dow Street consider removing parking to provide space for bike lanes with greater separation. Upgrade existing bike lanes to parking-separated bike lanes from Dow Street south to Salem Bike Path. Stripe bike lane between West Avenue and Savoy Road. Strengthen connection to bike path. Coordinate with Marblehead to provide continuous high-comfort route.
- 72 Ocean Avenue**
Provide bike lanes along Ocean Avenue. Consider reconstructing the footbridge over the rail tracks to form an east-west connection that reduces the north-south disconnect around the rail line from a mile to a half mile. Consider future access ramifications for proposed South Salem Commuter Rail station in future designs.
- 73 Marlborough Road**
Provide buffered bike lanes from Route 107 (Highland Avenue) to Peabody Line. Coordinate with Peabody to provide continuous high-comfort route.
- 74 Old Road**
Consult with North Shore Medical Center regarding feasibility of formalizing and signing bicycle and pedestrian access from Willson Street to North Shore Medical Center via Old Road and parking lots.
- 75 Willson Street**
Provide bike lanes on Willson Street between Highland Ave and Jefferson Avenue. Strengthen connections to the schools and Salem Woods.
- 76 West Avenue**
Provide neighborhood greenway treatment to Forest River park. Integrate connection to neighborhood greenway with proposed Complete Streets Prioritization Plan to redesign of the Lafayette/Loring/West Intersection.
Current Initiative: Complete Streets Upgrades to Lafayette/Loring/West Intersection
- 77 Canal Street**
Provide buffered bike lanes. Look for opportunities to consolidate curb cuts.
Current Initiative: City-planned bike lanes; East Coast Greenway link
- 78 Story Road / Castle Hill Park**
Formalize path through Castle Hill Park to connect Willson Street to Jefferson Avenue through Story Road.
Current Initiative: Story Road Cluster Subdivision
- 79 Salem Bike Path**
Extend Salem Bike Path in accordance with existing plans.
Current Initiative: 2010 Bicycle Circulation Master Planning Study
- 80 First Street**
Provide buffered or separated bike lanes or shared-use paths from Highland Avenue to Swampscott Road.
Current Initiative: 2010 Bicycle Circulation Master Planning Study; Planned First Street/Traders Way Traffic Circle
- 81 Jefferson Avenue / Canal Street / Route 1A (Loring Avenue)**
Consider closing slip lanes and tightening intersection through quick-build or reconstruction in long-term. Stripe bike lanes through intersection. Minimize conflicts between southbound bicyclists on Route 1A and right turning cars. Evaluate signal timing options to protect vulnerable user movements through the intersection.
Current Initiative: Route 1A - Vinnin Square Priority Corridor Study; MassDOT Canal Street Reconstruction Project
- 82 Route 107 (Highland Avenue)**
Work with massDOT to provide separated bike lanes along the length of Highland Avenue from the Lynn City Line to Jackson Street. Provide sufficient separation to protect people biking from high-speed traffic. Stripe all major driveways with green paint. Remove median.
Current Initiative: MassDOT Route 107 Corridor Study
- 83 Route 1A (Loring Avenue)**
In accordance with Complete Streets Prioritization Plan pilot project, provide buffered or separated bike lanes from Lafayette Street to Lincoln Road and separated bike lanes south to Vinnin Square, with appropriate design treatments at bus stops.
Current Initiative: Complete Streets Prioritization Plan; Route 1A - Vinnin Square Priority Corridor Study

84 Route 1A Shared Use Path

Consider an off-road path connection in green space on southbound Loring Avenue between Salem State South Campus and Riverview Street. Improve crossing treatments at Intersection with Lincoln Road and provide signage to direct people to Salem Bike Path via local, low-stress streets.

85 Swampscott Road

Provide bike lanes along Swampscott Road between the Swampscott town line and Highland Avenue. Consider installation of a two-way facility or shared use path along the north side of the street. On-street bike lanes may substitute if widening is infeasible.

86 Route 1A at Leggs Hill Road

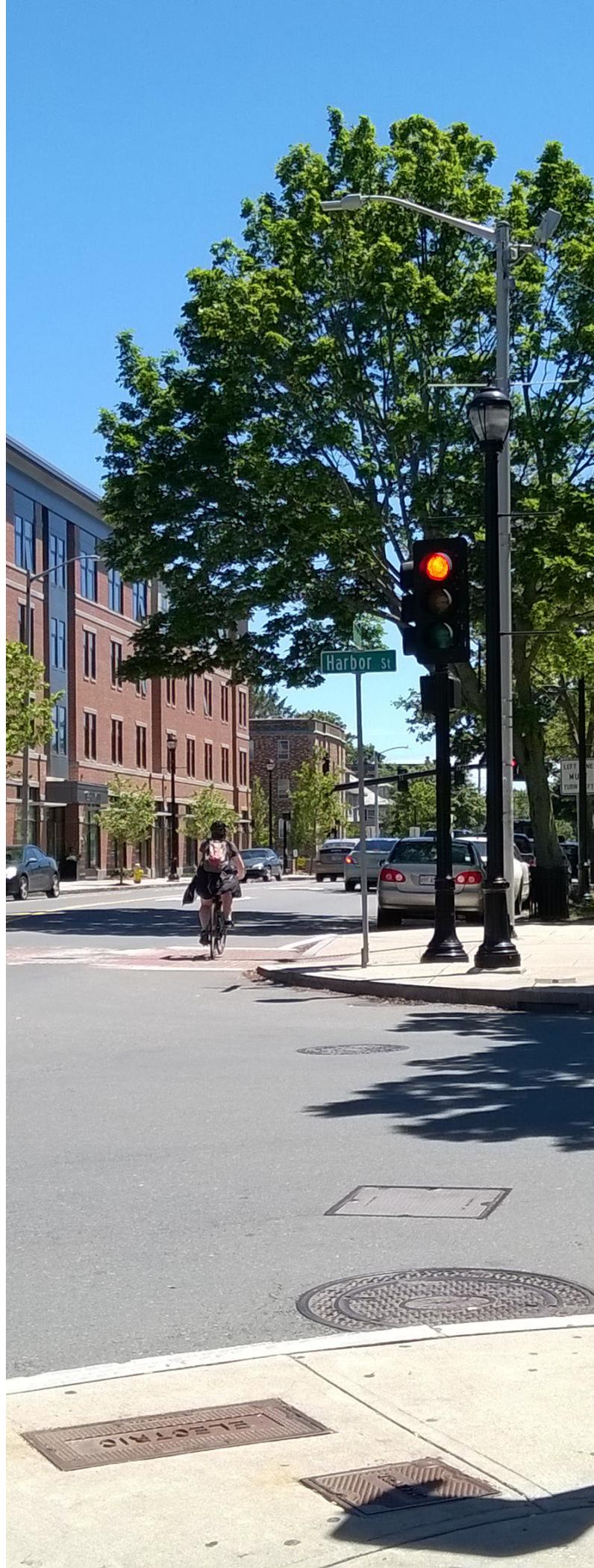
Prioritize vulnerable user crossings with crosswalk enhancements and ADA upgrades. Consider RRFB, HAWK signal, upgrading advance crosswalk warning signage, enhanced pavement markings, or other treatments.

Current Initiative: Route 1A - Vinnin Square Priority Corridor Study

87 Vinnin Square

Consider feasibility study for reconfiguring ROW to provide buffered bike lanes or working with private developers to provide shared use (bicycle and pedestrian) path(s) through parking areas.

Current Initiative: Route 1A - Vinnin Square Priority Corridor Study



Policy and Programming Recommendations

Policy and programming recommendations will support the growth of biking in Salem. These recommendations are organized into three main categories:

- **Education and Encouragement** programs to popularize and normalize cycling
- **Regulations and Operations** to address gaps in project review and bikeway maintenance processes
- **Evaluation** to measure and report progress on the Plan

Recommendations include only those which are feasible and that meet the goals of improving safety, comfort, and connectivity. These policy and program changes are based on methods that have been proven to integrate considerations for bicycling into decision-making processes in other communities throughout New England and the country.

Education and Encouragement

1. **Continue to host educational opportunities on bike safety, maintenance, and infrastructure for all ages, with a focus on children.** Salem should continue to coordinate through the Safe Routes to School (SRTS) and Mass in Motion initiatives to provide bicycle safety classes that instruct children how to ride a bicycle, complete a bicycle safety check, use safe riding skills, and follow the rules of the road. The same content should be tailored to teenagers, adults, and seniors along with information on the design and use of evolving bike facilities and infrastructure including bike racks, bikeways, pavement markings, signals, etc. Demonstration projects may be used to alert and explain new bicycle infrastructure to all road users. Additionally, Salem may consider providing bicycle maintenance classes for all ages that introduce basic skills to casual riders to maintain bicycles for transportation and recreation.
2. **Provide education and training to City staff on bicycle planning and engineering.** These may include online or in person trainings from Baystate Roads, National Association of City Transportation Officials (NACTO), or others.
3. **Continue to provide training to law enforcement personnel on bicycle and pedestrian rights and responsibilities.** Salem should continue to utilize the Massachusetts Police Mountain Bike Patrol School training for officers joining the Salem Bicycle Patrol Unit.
4. **Continue to promote biking in Salem with up-to-date online and printed materials.** As the conditions for biking

in Salem evolve, the available information too must reflect the most up to date information. Clarify bicycle facilities, laws, and safe riding habits to both residents and visitors by updating the Salem Bike Routes Map brochure as city bike facilities evolve. Provide copies of the brochure to realtors, businesses, schools, and City departments for dispersal to residents, and target visitors by providing copies to tourism organizations and local hospitality establishments. Consider incorporating information into existing city tourism webpages and/or providing a permanent website with this information, updates on relevant City projects, and a calendar of bike-related events. At a minimum, all materials should be provided in English and Spanish.

5. **Organize bike-focused community events.** These may include open streets events (where streets are closed to vehicular traffic), Bike to Work days, family-oriented outings, increased Salem Bike Party rides, and other events that enhance the visibility of bicycling. Consider events or tours that promote Salem's historic sites.
6. **Work with Salem businesses and employers to encourage bicycling.** Encourage employers to establish commuter benefit programs to provide incentives for people who bike to and from work. Encourage businesses to include walking, biking, and transit directions on websites and to install covered, secure, and well-lit bike parking.

Regulations and Operations

1. **Review and improve crash reporting procedures to better identify factors contributing to serious and fatal crashes.** Ensure that crash reports include accurate information about pedestrian, bicyclist, and motor vehicle pre-crash maneuvers and crash conditions. This data can help the City to identify the countermeasures for specific types of crashes or locations.
2. **Update guidelines to incorporate bike parking requirements into development and retrofit projects.** Evaluate existing guidelines for development within the City and revise to encourage new developments to provide bicycle parking on-site. Consider supporting reductions in parking ratios and/or providing density credits for bike-friendly developments. Refer to the Association of Bike and Pedestrian Professional (APBP) Bicycle Parking Guidelines for information on parking best practices. For development within Chapter 91 jurisdiction, ensure bicycle and pedestrian access is prioritized through the open space and access requirements.
3. **Establish a regular review of the routine road repaving program to identify opportunities where bicycle facilities may be implemented as part of routine maintenance.**

Work with the City Engineer and Department of Public Works to review Paving Program list(s) several months in advance. When repaving occurs, ensure that existing bike infrastructure is reimplemented according to best practices.

4. **Use the Bike Master Plan for project and development review.** Utilize the Bicycling Advisory Committee to review all proposed and relevant capital projects and development projects against the infrastructure recommendations in the Bike Master Plan to identify opportunities to implement recommendations.
5. **Coordinate with Salem’s other planning initiatives and those of neighboring municipalities.** Consider bike planning within other City-led initiatives including Imagine Salem and the Salem Harbor Plan. In addition to collaboration among City departments, work with neighboring communities to ensure that bicycle network developed in Salem meets and extends seamlessly into adjacent municipalities. Consider accelerating Plan recommendations in the event that a neighboring jurisdiction plans to construct a bike facility along a connecting street.
6. **Establish snow clearance and other maintenance procedures for bike facilities.** Review current snow clearance operations and develop procedures that prioritizes winter bike access on primary roads and paths. For reference, see guidance in the 2018 MassDOT Municipal Resources Guide for Biking and MassDOT Separated Bike Lane Planning and Design Guide. Incorporate maintenance of bike facilities into annual budgets and planning programs. Publish a snow clearance schedule to inform residents of which routes receive prioritized snow clearance.
7. **Continue to expand bike parking program including maintenance of inventory, working with schools to site new racks, and addition of new bike racks in high-activity areas.** Maintain up-to-date inventory of all city-owned bike parking and conduct routine utilization checks at high-activity areas. Adjust and expand inventory as needed. Work with all Salem schools to ensure bike parking is provided at all school entrances. Review major employment and shopping areas, open spaces, and historic sites, and install bike parking where appropriate and/or requested. Codify bike parking standards for all city-maintained racks and encourage use of standards by developers and other partners.
8. **Continue to work with a bikeshare operator to maintain and expand bikeshare in Salem.** Throughout the public engagement process, stakeholders noted the geographic limitations of bikeshare stations, with some requests

made to accommodate travel between Salem and nearby towns. Consider working with adjacent municipalities to expand bikesharing opportunities. Consider working with a bikeshare operator to provide a subsidy for low-income residents of Salem to offset membership costs. Encourage employers to provide a health benefit incentive by subsidizing membership for bikeshare. Promote station sponsorship opportunities to anchor employers in Salem.

Evaluation

1. **Evaluate and communicate progress on the Plan yearly.** Collect and evaluate the following information:
 - Number and severity of crashes involving people walking or biking
 - Miles of high-comfort bike lanes/paths constructed
 - City-wide bicycle mode share
 - Before and after bike counts for major infrastructure projects

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3 Action Plan

The following pages present an Action Plan for the implementation of recommendations to aid in the strategic growth of biking in Salem. The Action Plan provides a prioritization of recommendations and clarifies cost, feasibility, and a suggested timeline for completing each project. Potential funding sources for each project have been identified.

Implementation Considerations

Project Cost Estimates

\$ - Neighborhood greenways and traffic calming, standard bike lane painting, buffered bike lanes, and small spot treatments such as widening an entrance to a path.

\$\$ - Separated bike lanes, new shared-use paths, and minor intersection modifications.

\$\$\$ - Projects requiring new signal equipment or modifications at intersections, building new structures, closing streets and/or creating shared streets or plazas, creating vertical separation on bridges.

Project Feasibility

Low feasibility: Project has significant infrastructural challenges (such as constrained right-of-way) and jurisdictional (MassDOT or historic) implications

Medium feasibility: Project may have jurisdictional implications but minor infrastructural challenges

High feasibility: Project may be in a historic district but is otherwise relatively unconstrained. Project may already be planned or in progress as part of an ongoing initiative.

City Funding Sources

Neighborhood Traffic Calming Program (NTCP): This is a program geared at small-scale projects that can be implemented quickly with paint and other inexpensive materials and then potentially hardened over time.

Salem Capital Improvement Plan (CIP): The CIP is a comprehensive investment strategy that may cover anything from new street painting for bicycles to bike racks to signage. CIP funding is a path for more expensive projects or as a means to fund a large number of similar projects.

Engineering/Public Works Funding: The City receives state grants for roadway projects, as well as an annual Chapter 90 disbursement from the state for routine roadwork, which can include adding bicycle infrastructure. The funding needed to include bike infrastructure is relatively small compared to the overall cost of road projects. Under this category, bikeways may be implemented as a component of larger City projects.

Action Plan

The Action Plan presented here is a starting point. The City will monitor changing conditions to ensure the implementation of the plan responds to new opportunities that may arise or shifting priorities of the community.

Action Plan for Infrastructure

Infrastructure-based recommendations range from low-cost projects with short completion timelines to more ambitious endeavors that require coordination among multiple landowners and complex review and funding structures. These differences are reflected in the Action Plan through a listing of projects by implementation timelines (short, mid, and long) and potential sources of funding (city, state, federal) for each project.

Cost and Feasibility

Planning-level assessments of cost and feasibility (low, medium, high) and were used to determine the most likely timeline for the completion of each project.

Cost estimates are generally based on the general intensity of construction required for the facility types included in each recommendation. Therefore, projects that can be completed with paint and signage are generally estimated to be less costly than those that may require relocation of curb or new signal equipment. Each infrastructure recommendation is listed with a symbol reflecting its relative expense.

A planning-level evaluation of feasibility for each project was completed based on the physical and regulatory constraints that are likely to affect the project. Conditions used to measure feasibility included project jurisdiction, routes with bus service, historic districts, constrained rights-of-way, and significant environmental challenges, such as steep elevation or waterbodies.

Taken together, the cost and feasibility estimates correlate to the implementation timelines for each project, with less costly and simpler projects programmed for the short-term and more costly and complex projects expected to be completed on a longer time schedule.

Implementation Timelines

Implementation timelines need to consider the time and resources required to complete a project. Projects with significant cost and collaboration requirements will necessarily require more time to complete than small projects that can

be completed through an existing City project or process. The implementation timelines established for the Plan recommendations reflect the time to completion from initial site analysis and concept development through construction closeout, and include:

- Short-term projects: projected to be completed within five years (See Map 4)
- Mid-term projects: projected to be complete within five to ten years (See Map 5)
- Long-term projects: projected to require ten years or more to complete (See Map 6)

The implementation timelines established for each project are intended to represent a permanent installation. In some cases, however, the immediate or rapid installation of a project using temporary and inexpensive materials will have significant benefits on overall safety and connectivity benefits. A select few projects, for example, are along streets that are vitally important for providing basic connectivity to and through the core of Salem, but will require a significant effort to reconstruct the street in a permanent condition with relocated curbs and other features. These projects are noted throughout the Action Plan as candidates for ‘Quick Build’ implementation.

Project Benefits and Prioritization

Under each implementation term in the Action Plan, projects are listed according to their priority. Prioritization is important to help a City with a great vision for biking – like Salem – begin the process of implementing positive changes to the built environment. Working with the Steering Committee, each recommended project was evaluated according to their benefit to the community based on projects that:

- Result in a significant **safety** improvement in high-stress and high-crash areas
- Improve connectivity in high-**demand** destinations
- Address **public input** collected through the planning process
- Bolster **equity** in transportation access and opportunity

Using quantitative data points, each project was assigned a score based on the project location and the expected benefit to the community. Projects that have a significant impact on the overall safety or connectivity of biking in Salem are considered highest priority, while those that benefit fewer people or have less dramatic positive impacts are considered lower priority.

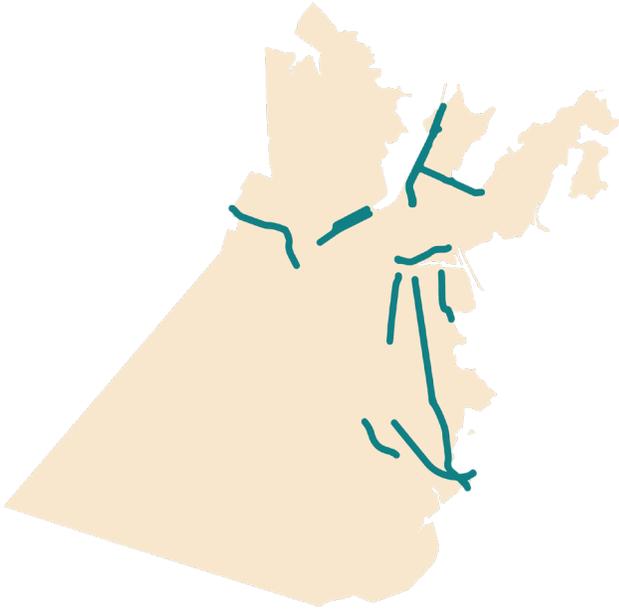
Each project was evaluated on a scale of 0 to 100, as shown in Table 1. High priority projects were those scoring 75 and above, with medium priority projects scoring between 50 and 75, and all others categorized as lower priority.

Table 1: Project Prioritization Scoring Criteria

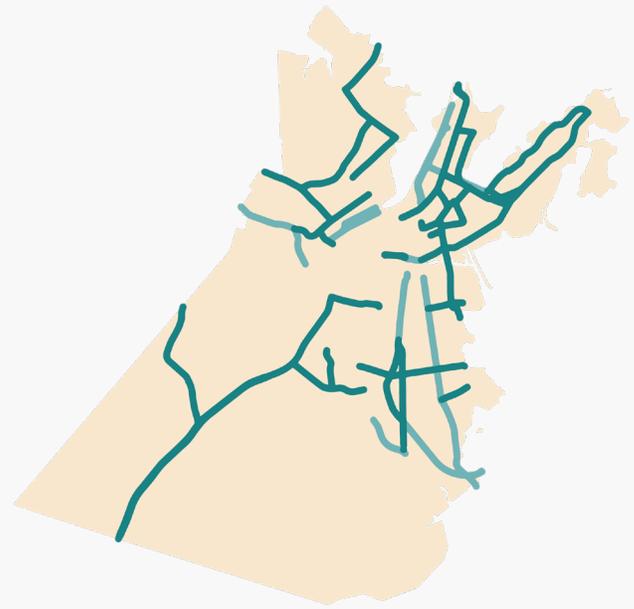
Variable	Total Possible Points
Safety	
High Existing Level of Traffic Stress	25
History of Vulnerable User Crashes	
Demand	
Population Density	25
Commercial/Institutional Land Uses	
Schools	
Employment Density	
Major Transit Hubs (including high-use bus stops)	
Connections to Neighboring Municipalities	
Bikeshare	
Public Input	
Destinations Identified by the Public	25
Desired Routes Identified by the Public	
Challenging Areas Identified by the Public	
Parks	
Equity	
Low Car Ownership Populations	25
High Density of Low Income Residents	
High Density of Minority Residents	
High Density of Elderly Residents	
High Density of Children	
High Density of Disabled Residents	
Total Possible Points Per Project	100

SALEM'S GROWING NETWORK

Existing 0 years



Short-term 1-5 years



Short-term + Quick Build

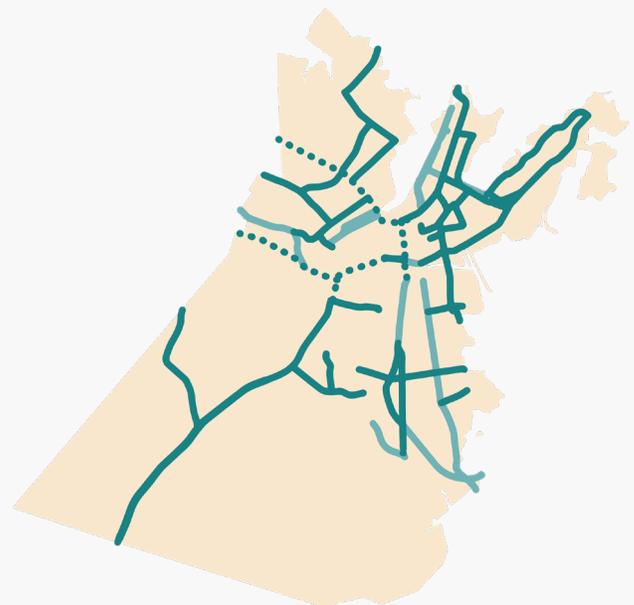
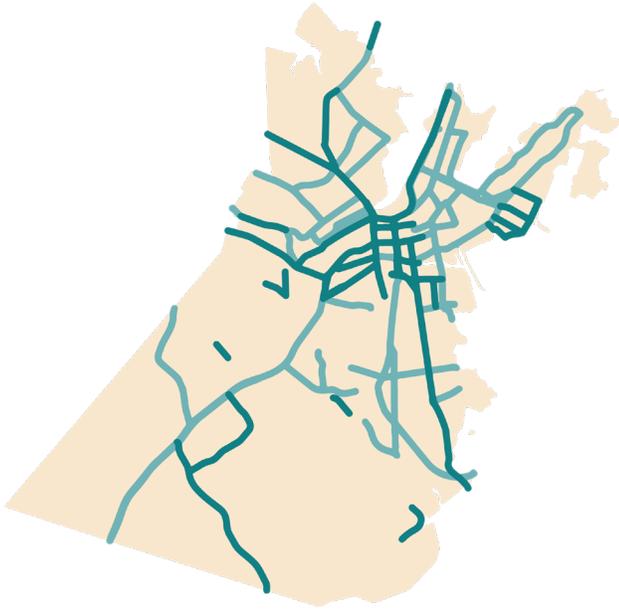


Figure 9: Salem's Growing Network
This series of maps show how the projects in this Plan will take shape over time, building out Salem's network and creating safe, comfortable connections across the City.



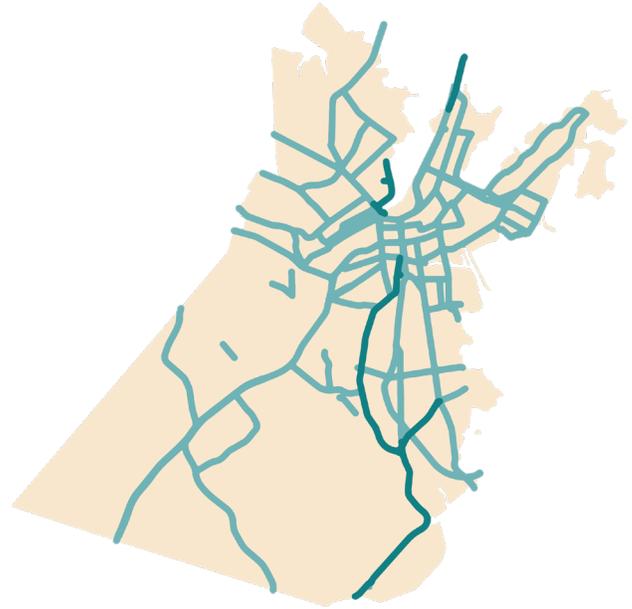
Mid-term

5-10 years



Long-term

10+ years



Quick Build Projects to Achieve Minimum Grid

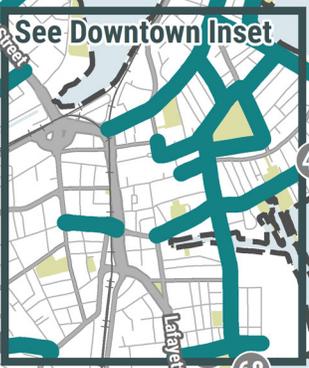
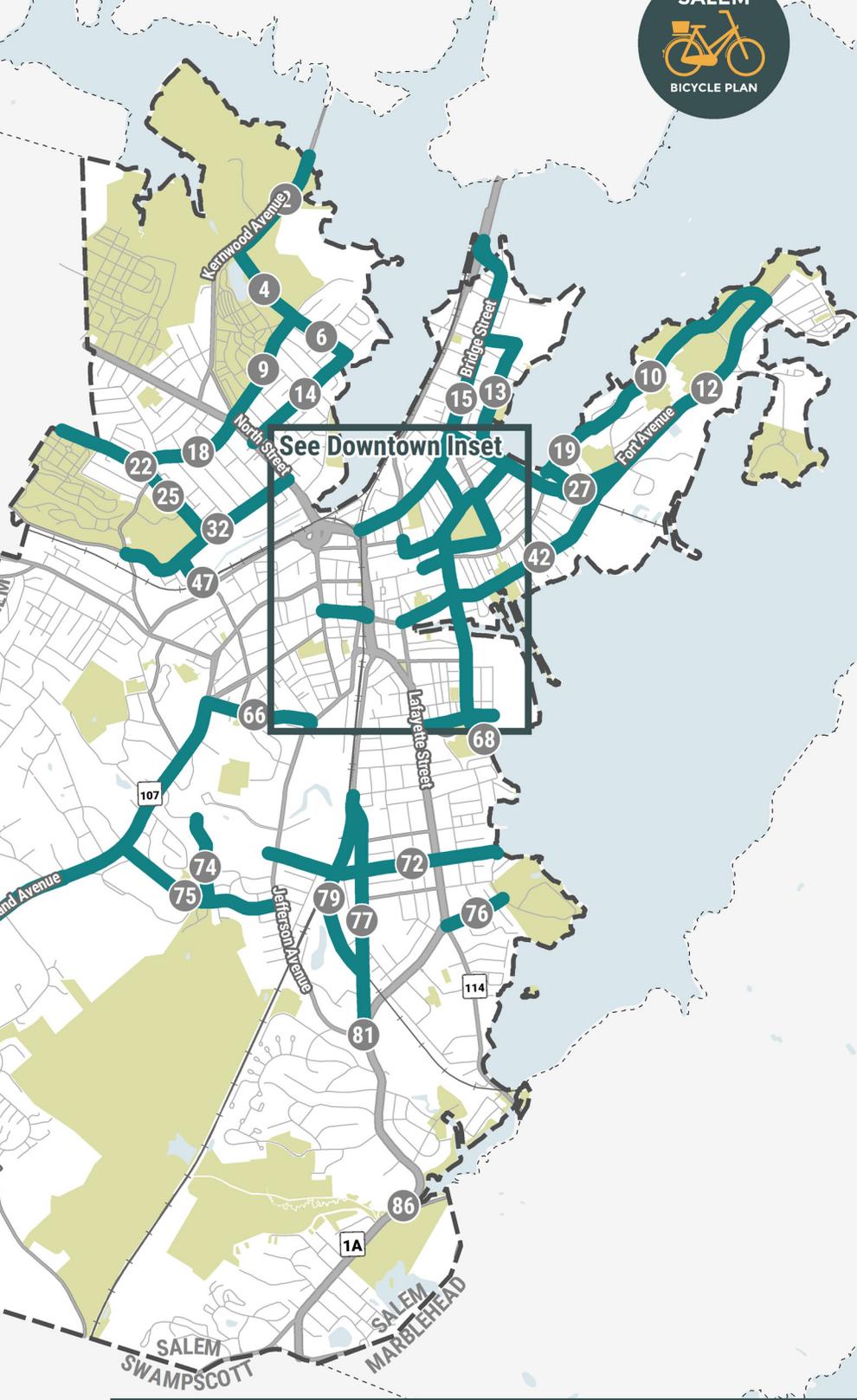
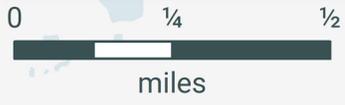
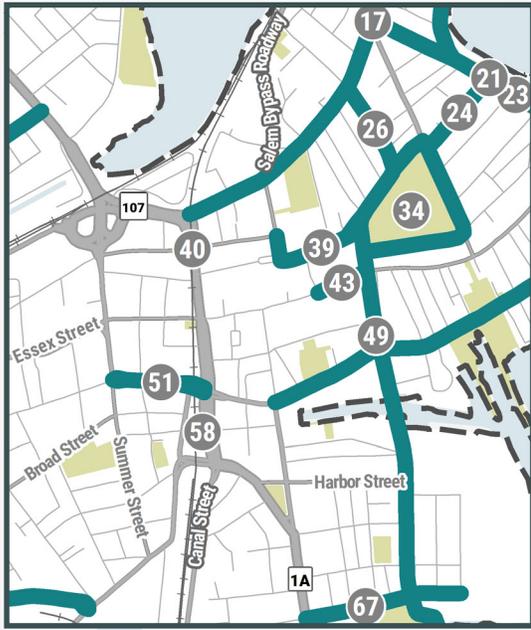
A key component of a low-stress bicycle network is to provide access to and connectivity between origins and destinations on safe and comfortable routes. Segments or intersections that are unsafe or feel uncomfortable to cyclists can render a network incomplete. This Plan's ultimate goal is to create an extensive low-stress network throughout Salem, but a minimum network that provides connectivity between many of the City's origins and destinations can be established much sooner by using inexpensive and temporary materials to implement an interim solution.

Seven projects identified through this Plan as medium-term projects based on their probable cost and feasibility are vital to providing basic connectivity throughout the City. These projects may be temporarily implemented using low-

cost design treatments – such as paint and flex posts – to establish a minimum network before the projects are fully constructed in a permanent state. The 'Short-term + Quick Build' map to the left shows what a connected network will look like in the short-term, with existing facilities and those implemented in the short-term as solid lines, connected by quick-implementation projects in dotted lines. These quick-implementation projects are listed below.

- **16:** North Street
- **29:** North Street Bridge (from #16 terminus to Bridge Street)
- **33:** Bridge Street (MBTA Commuter Rail Station)
- **45:** Washington Street
- **48:** Boston Street
- **52:** Essex Street (from Highland Ave to Chestnut Street)
- **55:** Chestnut Street

DOWNTOWN



Map 4: Short-term Project Recommendations

- # Project ID
- Short-Term Projects



Table 2: Short-term Project Implementation Plan

Priority	Project ID	Location	Funding Source	Cost	Feasibility	MassDOT Road	Bus Route	Notes	Project Recommendation
High Priority	15	Bridge Street Neck	CIP	\$	Medium	X	X	Potential to coordinate with #17	Provide buffered bike lanes on Bridge Street.
	40	Washington Street at Federal Street	State	\$\$	Medium		X	See recommendation: current plans show standard bike lanes	Stripe green bike lanes through the intersection and enhance crosswalk markings and signage to improve pedestrian access to bikeshare station. Consider RRFB, curb extensions, and other crosswalk enhancements plus improvements to left turn from Washington to Federal.
	42	Derby Street	State	\$	Medium		X	See recommendation: cost and term may increase with shared use path; current plans show standard bike lanes	Provide bike lanes on Derby Street between Lafayette Street and Fort Avenue. Consider parking-protected bike lanes on wider section (west of Orange Street). Consider contraflow lanes on Derby Street east of Orange Street. Current Complete Streets Prioritization Plan recommendations include a mix of conventional bike lanes and shared use paths to improve connectivity to the MBTA Ferry Terminal via full reconstruction east of Orange Street.
	49	Congress Street / Hawthorne Boulevard	CIP	\$	High		X		Provide buffered bike lanes as able from Palmer Cove Park north to Salem Common. Where space does not exist for buffering, provide conventional bike lanes.
	58	Washington Street between New Derby Street and Mill Street (Salem Bike Path)	CIP	\$\$	Medium			Potential to coordinate with #54 & #60	Extend bike path to intersection of Washington Street / New Derby Street and connect to separated facility on Washington Street. Consider connection through municipal parking lot instead of on-street.
	66	Jackson Street	CIP	\$	Medium				Provide buffered bike lanes on each side of the street. Between Route 107 and Broad Street, route bike lanes between embankment and parking and work with school district to formalize access to the playground parking lot at Jackson Street and Broad Street, with appropriate bike lanes routing through the intersection.
	82	Route 107 (Highland Avenue)	State	\$\$	Medium	X	X		Provide separated bike lanes along the length of Highland Avenue from the Lynn City Line to Jackson Street. Provide sufficient separation to protect people biking from high-speed traffic. Stripe green paint across all commercial and major driveways. Remove median.

NTCP = Neighborhood Traffic Calm Program
 CIP = Capital Improvement Program
 Eng/DPW = City Engineering Budget/Department of Public Works Repaving Program

Priority	Project ID	Location	Funding Source	Cost	Feasibility	MassDOT Road	Bus Route	Notes	Project Recommendation
High Priority	86	Route 1A at Leggs Hill Road	State	\$\$	Medium	X	X		Prioritize vulnerable user crossings with crosswalk enhancements and ADA upgrades. Consider RRFB, HAWK signal, upgrading advance crosswalk warning signage, enhanced pavement markings, or other treatments.
	12	Fort Avenue	State	\$	High				Narrow parking lanes to provide buffered or separated bike lanes along Fort Avenue. Coordinate with Salem Power Plant development to strengthen bicycle connectivity. Consider a fully separated multi-use path.
Medium Priority	17	Bridge Street at Webb Street	CIP	\$	High		X	Early Action Item: Quick (<1 yr) implementation possible; potential to coordinate with #15 and #27	Provide transition opportunity for bikes exiting path to turn left onto Bridge Street. Add bike box in front of stop bar for northbound Webb Street traffic, and consider signage to allow bikes to use pedestrian signal to cross.
	21	Entry to Peter Tracy Multiuse Path at Andrew Street / Webb Street Intersection	CIP	\$	High				Widen entry to Peter Tracy Multiuse Path north of Andrew Street / Webb Street intersection.
	22	Tremont Street at School Street	CIP	\$\$	High				Tighten intersection.
	23	Webb Street	Eng/DPW, CIP	\$	High				Provide conventional bike lanes from Bridge Street (connecting to Peter Tracy Multiuse Path) to Derby Street.
	34	Salem Common Loop	CIP	\$	Medium		X		Provide continuous bikeway loop around perimeter of Salem Common with strong access/egress connections on feeder streets (Andrew Street, Winter Street, Hawthorne Street, and Brown Street.)
	39	Brown Street	State	\$	High				Provide neighborhood greenway treatment from the Salem Common to St. Peter Street. Coordinate with proposed pedestrian improvements documented in Complete Streets Prioritization Plan.
	43	Essex Street (Hawthorne Boulevard)	NTCP	\$	High			Intensity of traffic calming may affect cost	Consider traffic calming and wayfinding between New Liberty Street and Hawthorne Boulevard to clarify bike connection to high activity pedestrian mall via this low-volume, low-speed segment.
	51	Norman Street	State	\$	Medium		X	Potential to coordinate with #54	Provide bike lanes on each side of the street between Summer Street and Margin Street. Consider removing or shortening right turn lane (coordinate with Margin Street closure recommendation) to provide additional space for separation.
67	Leavitt Street	Eng/DPW	\$	High			Potential to coordinate with #49 & #68	Provide buffered bike lane. Consider providing contraflow lane.	

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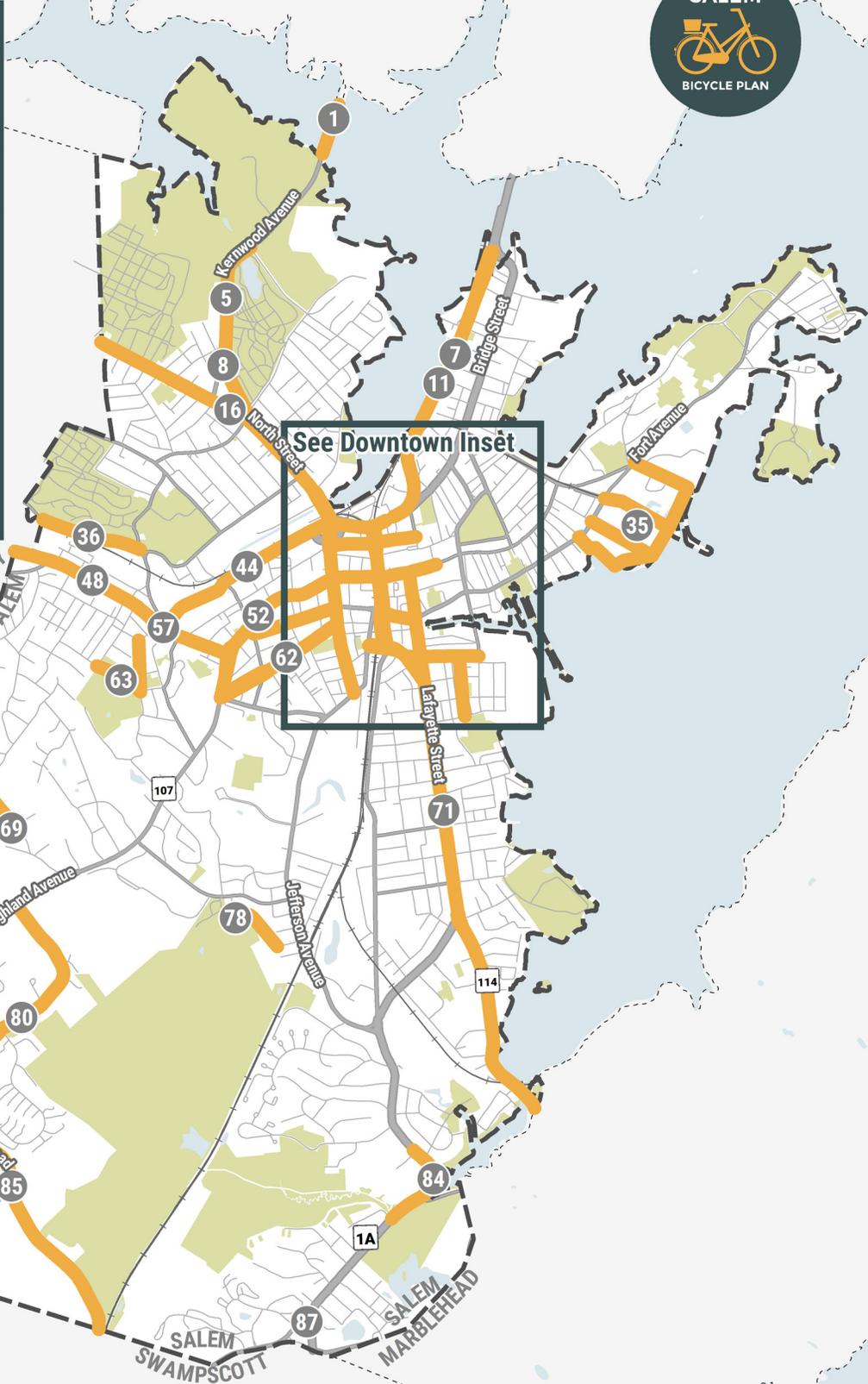
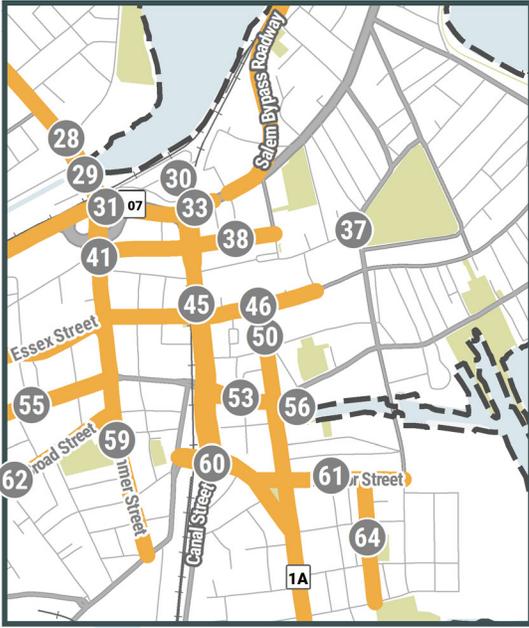
Priority	Project ID	Location	Funding Source	Cost	Feasibility	MassDOT Road	Bus Route	Notes	Project Recommendation
Medium Priority	75	Willson Street	Eng/DPW	\$	High				Provide bike lanes on Willson Street between Highland Ave and Jefferson Avenue. Strengthen connections to the schools and Salem Woods.
	77	Canal Street	State	\$	Medium				Provide buffered bike lanes. Look for opportunities to consolidate curb cuts.
	81	Jefferson Avenue / Canal Street / Route 1A (Loring Avenue)	Eng/DPW	\$\$	High				Consider closing slip lanes and tightening intersection. Stripe bike lanes through intersection. Minimize conflicts between southbound bicyclists on Route 1A and right turning cars. Evaluate signal timing options to protect vulnerable user movements through the intersection.
Lower Priority	4	Sargent Street	NTCP	\$	High				Provide neighborhood greenway treatment from Orne Street to Kernwood Avenue.
	6	Felt Street	NTCP	\$	High				Provide neighborhood greenway treatment from Dearborn Street to Kernwood Avenue.
	9	Orne Street	Eng/DPW	\$	High				Provide neighborhood greenway treatment along Orne Street from North Street to Sargent Street.
	10	Szetela Lane, Memorial Drive, Restaurant Row	Eng/DPW	\$	High				Provide neighborhood greenway treatment from Settlers Way to Bay View Avenue via Memorial Drive and Restaurant Row.
	13	Collins Street, East Collins Street, and Planters Street	NTCP	\$	High				Transition Peter Tracy Multiuse Path / Collins Cove Path to an on-street bike lanes. Provide connection from end of path to Bridge Street Neck via Collins Street, East Collins Street, and Planters Street
	14	Dearborn Street	NTCP	\$	High				Provide neighborhood greenway treatment from North Street to Felt Street.
	18	School Street	NTCP, Eng/DPW	\$	High			Intensity of traffic calming may affect cost	Provide buffered bike lanes on School Street between North Street and Tremont Street. Consider removing center lines or other methods to calm traffic. Provide neighborhood greenway treatment on narrower section (close to North Street).
	19	Collins Cove Path	State/Complete Streets	\$\$	High				Extend and widen Collins Cove Path from terminus at Webb Street to Settlers Way along waterfront desire line in accordance with Complete Streets Prioritization Plan.
	24	Andrew Street	NTCP	\$	High				Provide neighborhood greenway treatment to connect to Salem Common.
	25	Tremont Street	Eng/DPW	\$	High				Provide conventional bike lanes along Tremont Street between Peabody City Line and Mason Street.
	26	Winter Street	CIP	\$\$	High		X		Provide separated bike lanes along Winter Street from Salem Common to Bridge Street.

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CIP = Capital Improvement Program
Eng/DPW = City Engineering Budget/Department of Public Works Repaving Program

Priority	Project ID	Location	Funding Source	Cost	Feasibility	MassDOT Road	Bus Route	Notes	Project Recommendation
Lower Priority	27	Collins Cove Path (Beattie Park)	State	\$\$\$	High				Extend Collins Cove Path east through City land and David J. Beattie Park to connect to Derby Street in accordance with Complete Streets Prioritization Plan. Provide crossing at Fort Avenue.
	32	Mason Street	Eng/DPW	\$	High			Coordinate with private property owners to provide access to Leslie's retreat path	Provide conventional bike lanes along Mason Street between Flint Street and Tremont Street. Provide signage to direct people to high-comfort options for crossing the North River into downtown.
	68	Palmer Cove	CIP	\$\$	High				Formalize and sign bike connections. Consider bike facilities. Provide direct path connection to Saltonstall School with enhanced crossing treatment on Salem Street.
	72	Ocean Avenue	CIP	\$	Medium			Cost and term increases with footbridge reconstruction	Provide bike lanes along Ocean Avenue. Consider reconstructing the footbridge over the rail tracks to form an east-west connection that reduces the north-south disconnect around the rail line from a mile to a half mile. Consider future access ramifications for proposed South Salem Commuter Rail station in future designs.
	73	Marlborough Road	Eng/DPW	\$	High				Provide buffered bike lanes from Route 107 (Highland Avenue) to Peabody Line. Coordinate with Peabody to provide continuous high-comfort route.
	74	Old Road	CIP	\$	High				Consult with North Shore Medical Center regarding feasibility of formalizing and signing bicycle and pedestrian access from Willson Street to North Shore Medical Center via Old Road and parking lots.
	76	West Avenue	NTCP, State	\$\$	High			Intensity of traffic calming may affect cost	Provide neighborhood greenway treatment to Forest River park. Integrate connection to neighborhood greenway with proposed Complete Streets Prioritization Plan to redesign of the Lafayette/Loring/West intersection.
	79	Salem Bike Path	State	\$\$	High				Extend Salem Bike Path in accordance with existing plans.

NTCP = Neighborhood Traffic Calm Program
CIP = Capital Improvement Program
Eng/DPW = City Engineering Budget/Department of Public Works Repaving Program

DOWNTOWN



See Downtown Inset

Map 5: Medium-term Project Recommendations

- # Project ID
- Medium-Term Projects



Table 3: Medium-term Project Implementation Plan

Priority	Project ID	Location	Funding Source	Cost	Feasibility	MassDOT Road	Bus Route	Notes	Project Recommendation
	8	Liberty Hill Avenue at Appleton Street	CIP	\$\$	High			Coordinate with #5	Tighten intersection and improve communication of traffic control.
	16	North Street	State	\$	High			Recommended quick-build project to complete minimum grid	Consider quick build project to complete minimum grid. Evaluate feasibility to eliminate travel lane, and/or narrow travel/parking lanes to provide buffered bike lanes extending from Franklin Street to the Peabody City Line. Carry bike lanes through all intersections. Coordinate with Peabody to provide continuous high-comfort route.
	28	North Street at Franklin Street	State	\$\$	High				Improve crossing conditions for vulnerable users. Formalize and sign connection along North Street spur to Commercial Street and Leslie's Retreat Path.
	29	North Street Bridge	State	\$\$	Medium	X		See recommendation: current plans show standard bike lanes; recommended quick-build project to complete minimum grid	Consider quick build project to complete minimum grid. Provide separated bike lanes along both sides of the North Street Bridge.
High Priority	30	MBTA Commuter Rail Station	State	\$\$\$	Medium		X	Coordinate with #33; recommended quick-build project to complete minimum grid	Strengthen bicycle and pedestrian access to the train station at the Bridge Street / Washington Street entrance and from MBTA parking lots. Clarify bicycle route of travel through main entrance on Bridge Street / Washington Street to lower platform and bike cage. Formalize connections to station from Leslie's Retreat Park and path behind former HMA site. Add additional rail crossing pads
	31	Leslie's Retreat Path at Bridge Street (Path Entrance)	State	\$	High				Formalize connection from Bridge Street and the MBTA Commuter Rail Parking lot driveway to the entrance of Leslie's Retreat Path west of the MBTA Commuter Rail Parking Lot in accordance with Complete Streets Prioritization Plan.
	33	Bridge Street (MBTA Commuter Rail Station)	State	\$\$	Medium		X	Coordinate with #30	Consider quick build project to complete minimum grid. Provide separated bike lanes on Bridge Street between Bridge Street Neck and North Street. Install bike box at Bridge Street / Washington Street intersection and leading bike interval to allow bikes to maneuver into left lane to continue on Bridge Street and into the MBTA parking lot. Stripe green lane across intersection to indicate movement for bikes going to MBTA parking lot at lower level.
	37	North Washington Square at Brown Street	CIP	\$\$\$	Medium		X		Consider squaring off intersection to make plaza.

NTCP = Neighborhood Traffic Calm Program
 CIP = Capital Improvement Program
 Eng/DPW = City Engineering Budget/Department of Public Works Repaving Program

Priority	Project ID	Location	Funding Source	Cost	Feasibility	MassDOT Road	Bus Route	Notes	Project Recommendation
High Priority	41	North Street at Federal Street	State	\$\$	Medium		X	See recommendation: requires traffic analysis for phasing	In the short-term, complete proposed plans to stripe conventional bike lanes through the intersection. In the long-term, consider reconstructing the intersection with tightened geometry and improved crossings for people biking and walking. Consider closing slip lane from North Street southbound, and formalize goat path to create high-comfort connection to Leslie's Retreat path and MBTA commuter rail through green space. Use jug handle to facilitate bikes turning left from Summer Street / North Street into path. Widen crosswalk and path to provide a comfortable shared pedestrian / bike environment. Provide queue box for bikes exiting path and entering Summer Street southbound.
	44	Bridge Street	State	\$\$	Medium				Install separated bike lanes along Bridge Street between Flint Street and Boston Street. Evaluate potential to widen north side of street to accommodate connected bike lanes along Bridge Street between Rt. 114 ramp and Flint Street. Formalize bike connection within shoulder area if widening is not possible. Complete planned project to convert Bridge Street between Flint Street and Boston Street to a three-lane cross section with separated bike lanes. Integrate design with proposed off-street path connection from Grove Street to Bridge Street behind self storage building.
	45	Washington Street	State	\$\$	Medium		X	See recommendation: current plans show standard bike lanes; recommended quick-build project to complete minimum grid	Consider quick build project to complete minimum grid. Provide separated bike lanes on Washington Street between New Derby Street and Bridge Street as a priority north/south bike route. Consider a two-way facility on the west side of the street as an extension of the Salem Bike Path or one-way separated pairs on both sides of the street.
	48	Boston Street	State	\$\$	Medium		X	Recommended quick-build project to complete minimum grid	Consider quick build project to complete minimum grid. Provide separated bike lanes for the length of the street, with buffered bike lanes near Bridge Street intersection. Improve crossings for vulnerable users. Coordinate with Peabody to provide continuous high-comfort route.
	52	Essex Street	CIP/ State	\$\$	Medium		X	Recommended quick-build project to complete minimum grid	Consider quick build project to complete minimum grid. Provide separated bike lanes along Essex Street between Jackson Street / Route 107 and Summer Street. Construct bike lanes in accordance with proposed Complete Streets Prioritization Plan for the segment between Summer Street and Washington Street. Connect to a short traffic calmed or bike lane segment along Flint Street to coordinate with Chestnut Street recommendations (#55).

NTCP = Neighborhood Traffic Calm Program
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Priority	Project ID	Location	Funding Source	Cost	Feasibility	MassDOT Road	Bus Route	Notes	Project Recommendation
	53	New Derby Street	State	\$\$	Medium			See recommendation: current plans show standard bike lanes	Provide parking-protected bike lanes on New Derby Street between Margin Street and Lafayette Street. Note: Current Complete Streets Prioritization Plan recommends conventional bike lanes.
	56	Salem Harborwalk	CIP	\$	Medium			Requires coordination with new development	Formalize and sign harborwalk bike connections. Consider bike facilities in conjunction with waterfront park and path development. Utilize Chapter 91 review process to identify and leverage new path opportunities.
High Priority	57	Bridge Street at Boston Street	State	\$\$\$	Medium		X	Intersection reconfiguration and traffic control	Square off intersection corners to slow traffic movements. Carry bike lane striping through the intersection. Evaluate signal timing options to protect vulnerable user movements through the intersection.
	71	Lafayette Street	CIP	\$\$	Low	X	X		From Front Street to Dow Street consider removing parking to provide space for bike lanes with greater separation. Upgrade existing bike lanes to parking-separated bike lanes from Dow Street south to Salem Bike Path. Stripe bike lane between West Avenue and Savoy Road. Strengthen connection to bike path. Coordinate with Marblehead to provide continuous high-comfort route.
	87	Vinnin Square	State	\$\$-\$\$\$	Low	X	X	See recommendation: requires feasibility study	Consider feasibility study for reconfiguring ROW to provide buffered bike lanes or working with private developers to provide shared use (bicycle and pedestrian) path(s) through parking areas.
	11	Sgt. James Ayube Memorial Drive	State	\$\$\$	Medium	X		Potential to coordinate with #3	Install vertical separation along existing bike lane on Sgt. James Ayube Memorial Drive from Bridge Street to proposed connection on Essex Street Bridge.
Medium Priority	46	Essex Street Pedestrian Mall	CIP	\$\$\$	Low			Potential to coordinate with #50	Reconstruct the Essex Pedestrian Mall in accordance with the Essex Street Pedestrian Mall Improvements project to improve accessibility and clarify travel zones. Consider revising City ordinance to permit bike travel along the Mall outside of the busy season (October). Provide signage to inform people biking of seasonal bike restrictions. Provide wayfinding to bike parking locations outside of mall, and consider providing moveable bike racks within mall.
	59	Summer Street	CIP	\$\$	Medium		X		Provide separated bike lanes along Summer Street from Essex Street to Gedney Street. Transition to contraflow lane with neighborhood greenway treatments on Summer Street from Gedney Street to Jefferson Street to maintain bi-directional bike connectivity.

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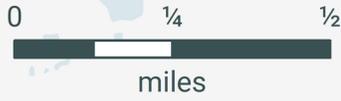
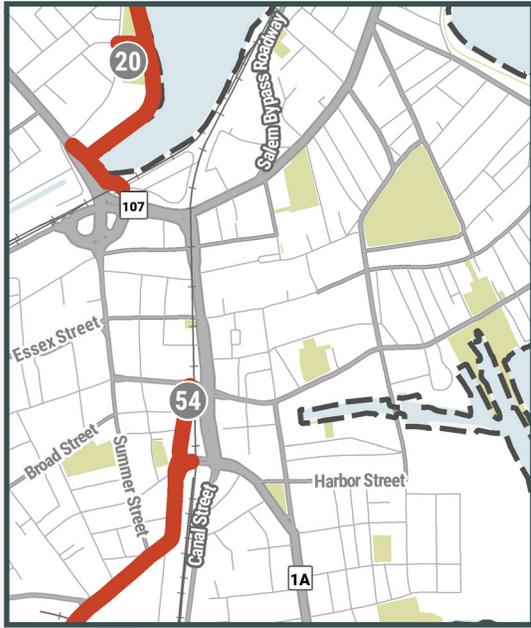
Priority	Project ID	Location	Funding Source	Cost	Feasibility	MassDOT Road	Bus Route	Notes	Project Recommendation
	60	Washington Street at Mill Street / Canal Street	CIP	\$\$	Medium			See recommendation: current plans show standard bike lanes. Potential to coordinate with #54 & #58	Tighten intersection and improve crossings for people biking and walking. Consider closing slip lanes. Enhance terminus of existing bike path to direct people biking to crosswalk instead of mid-block location.
Medium Priority	61	Harbor Street	Eng/DPW	\$	Medium				Provide buffered or separated bike lane. Consider providing contraflow lane.
	62	Broad Street / Dalton Parkway	CIP	\$\$	Medium				Provide parking-protected bike lanes with formalized crossings at each intersection.
	64	Prince Street	NTCP	\$	High			Intensity of traffic calming may affect cost	Provide neighborhood greenway treatment from Harbor Street to Leavitt Street. Consider coordinating with Salem Public Space Project.
	1	Kernwood Avenue Bridge	State	\$	Medium	X		See recommendation: cost reflects bike lanes only. Shared use path increases cost	Add conventional bike lanes to Kernwood Avenue bridge. Consider a wider shared use path on one side of the bridge to accommodate people biking and walking in a completely separated environment. Consider adding non-slip plates across bridge grates to improve traction. Coordinate with MassDOT on maintaining boardwalk sidepath.
	5	Liberty Hill Avenue, Appleton Street	CIP	\$	Medium			See recommendation: cost reflects buffered bike lanes option. Coordinate with #8	Provide buffered or separated bike lane on Liberty Hill Avenue from Appleton Street to Kernwood Avenue. Consider a shared use path along the east side of the street (against the cemetery).
Lower Priority	7	Bridge Street Neck Path	CIP	\$\$	Medium			Coordinate with school	Evaluate feasibility of extending Bridge Street Path to close gap between Skerry Street and Burnside Street between Sgt. James Ayube Memorial Drive and Essex Bridge.
	35	Salem Power Station Redevelopment	State/Federal	\$	High				Consider providing bike facilities and wayfinding throughout Salem Power Station Redevelopment site.
	36	Harmony Grove Road	CIP	\$\$	High				Consolidate right-of-way and narrow travel lanes to provide shared use path along one or both sides of Harmony Grove between Grove Street and Peabody City Line.
	38	Federal Street	NTCP	\$	High			Intensity of traffic calming may affect cost	Provide neighborhood greenway treatment from St. Peter Street to North Street.
	50	Central Street at Essex Street Pedestrian Mall	CIP	\$\$\$	Low			Potential to coordinate with #46	Consider converting Central Street to shared street from near Essex Street Pedestrian Mall to intersection with Lafayette Street and Charter Street.

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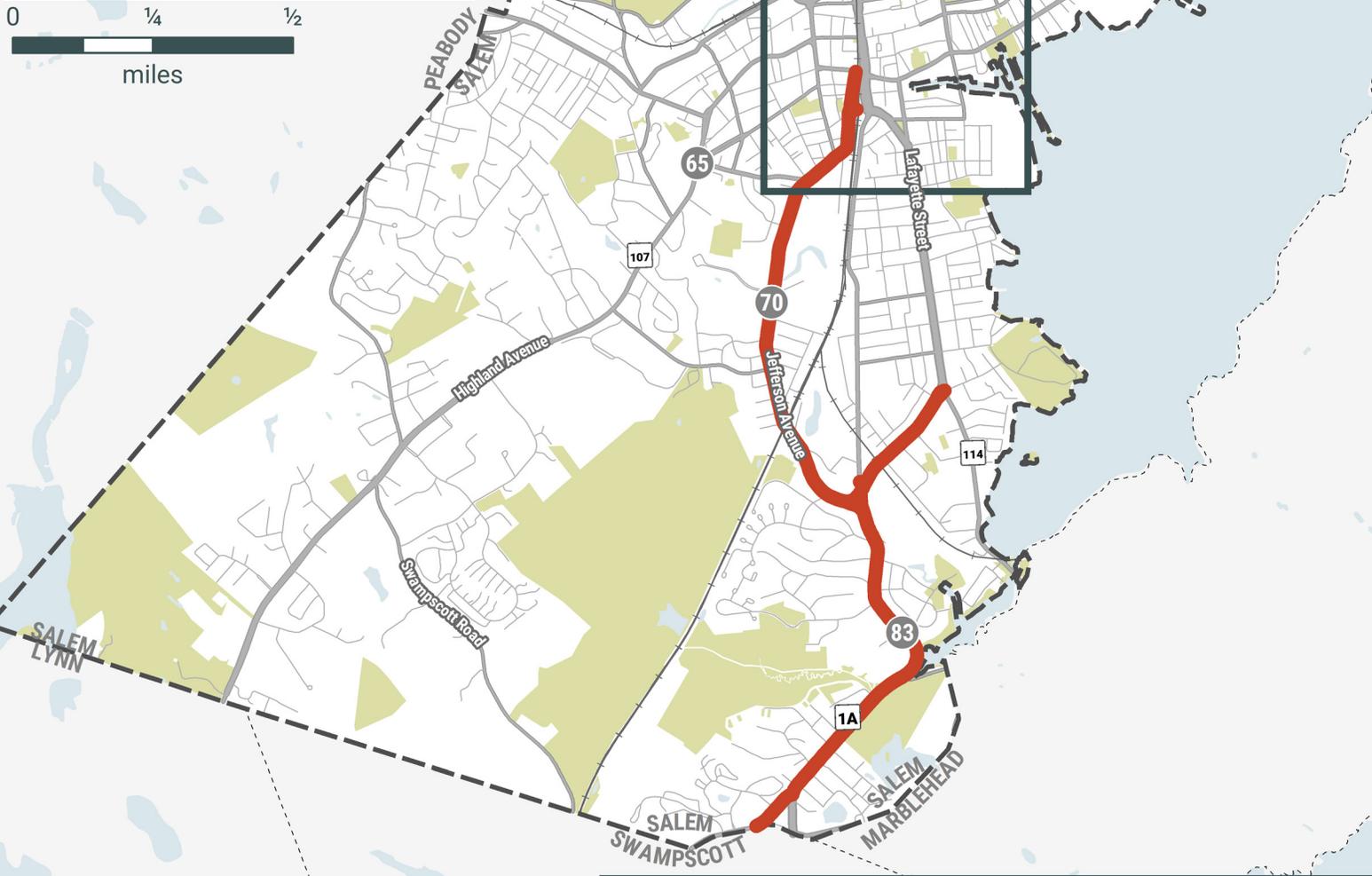
Priority	Project ID	Location	Funding Source	Cost	Feasibility	MassDOT Road	Bus Route	Notes	Project Recommendation
	55	Chestnut Street	NTCP; CIP	\$	Medium			See recommendation: traffic control important at Summer Street for contraflow. Intensity of traffic calming may affect cost. Recommended quick-build project to complete minimum grid	Consider quick build project to complete minimum grid. Provide neighborhood greenway treatments on Chestnut Street from Flint Street to Summer Street as an alternative east/west connection. Consider contraflow connection with street calming while maintaining residential parking on both sides. Modify geometry of Summer Street / Chestnut Street / Norman Street intersection and stripe contraflow bike movement through intersection, including consideration of neighborhood roundabout.
	63	Gallows Hill Park Paths	CIP	\$\$	High				Formalize path through Gallows Hill Park connecting the ends of Witch Hill Road and Hanson Street. Formalize and sign path connecting Witch Hill Road and Varney Street through existing path.
	69	Martin Lane / Circle Hill Road	CIP	\$	High				Formalize a non-motorized connection from Martin Lane to Circle Hill Road through Dibiasse Park.
Lower Priority	78	Story Road / Castle Hill Park	CIP	\$	High				Formalize path through Castle Hill Park to connect Willson Street to Jefferson Avenue through Story Road.
	80	First Street	CIP	\$\$	High				Provide buffered or separated bike lanes or shared-use paths from Highland Avenue to Swampscott Road.
	84	Route 1A Shared Use Path		\$\$	Medium	X			Consider an off-road path connection in green space on southbound Loring Avenue between Salem State South Campus and Riverview Street. Improve crossing treatments at Intersection with Lincoln Road and provide signage to direct people to Salem Bike Path via local, low-stress streets.
	85	Swampscott Road	CIP	\$	High			See recommendation: widening of road for shared use path would affect cost	Provide bike lanes along Swampscott Road between the Swampscott town line and Highland Avenue. Consider installation of a two-way facility or shared use path along the north side of the street. On-street bike lanes may substitute if widening is infeasible.

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DOWNTOWN



See Downtown Inset



Map 6: Long-term Project Recommendations

- # Project ID
- Long-Term Projects

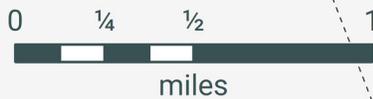


Table 4: Long-term Project Implementation Plan

Priority	Project ID	Location	Funding Source	Cost	Feasibility	MassDOT Road	Bus Route	Notes	Project Recommendation
High Priority	65	Route 107 (Highland Avenue / Essex Street) at Jackson Street	State	\$\$\$	Low	X	X		Provide bike lane striping and bike boxes on N/S route. Consider providing contra flow lane to Dalton Parkway / Broad Street by widening Warren Court. Stripe Dalton Parkway across to Warren Court for bike access. Consider removing slip lane on Dalton Parkway.
	70	Jefferson Avenue, Margin Street	State	\$	Low	X	X		From Margin Street to Dove Avenue, provide buffered bike lane. From Dove Avenue to Adams Street provide conventional bike lanes.
	83	Route 1A (Loring Avenue)	State	\$	Medium	X	X		In accordance with Complete Streets Prioritization Plan pilot project, provide buffered or separated bike lanes from Lafayette Street to Lincoln Road and separated bike lanes south to Vinnin Square, with appropriate design treatments at bus stops.
Medium Priority	3	Essex Bridge (Sgt. James Ayube Memorial Drive)	State/ Federal	\$\$	Low	X	X		Coordinate with MassDOT to provide separated bike lanes on the Essex Bridge extending from Sgt. Ayube Drive into Beverly. Consider grade-separated or concrete barriers to provide adequate protection from high-speed traffic. Coordinate with Beverly to provide continuous high-comfort route.
	54	Margin Street between Norman Street and Gedney Street	State/ Federal	\$\$\$	Low			Potential to coordinate with #51, #58, and #60	Consider closing or restricting motor vehicle access on Margin Street between Norman Street / New Derby Street and Gedney Street. Enable two-way operations between Gedney Street and Mill Street. Create shared street between Riley Plaza and Post Office. Clarify preferred bike crossing movement from Riley Plaza to Washington Street northbound through intersection striping and phasing.
Lower Priority	20	Furlong Park / Ferris Lot	CIP	\$\$	Medium			See recommendation: right-of-way acquisition likely	Coordinate with landowners to provide shared use path connection along waterfront behind Furlong Park and Ferris lot. Formalize goat path along North River across train tracks to connect to MBTA Commuter Rail station.

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Action Plan for Policies and Programs

While policies are generally implemented by the City, coordination with various City agencies, and potentially non-City entities, will be required. The Action Plan for implementing policy and program recommendations focuses on identifying a champion for each initiatives with additional partners identified, as shown in Table 5.

Table 5: Policy and Programming Implementation Plan

	Recommendation	Champion	City Partners	Other Partners
Education and Encouragement	Continue to host educational opportunities on bike safety, maintenance, and infrastructure for all ages, with a focus on children.	Planning & Community Development	Schools, Health Department	MassRIDES, Safe Routes To School, Salem State University, Bike Shops
	Provide education and training to City staff on bicycle planning and engineering.	Engineering	Planning & Community Development, Public Works	Bay State Roads, NACTO
	Continue to provide training to law enforcement personnel on bicycle and pedestrian rights and responsibilities.	Police Department	Planning & Community Development	MassDOT
	Continue to provide and enhance on-line and printed materials on biking in Salem.	Planning & Community Development	Information Technology	Tourist Attractions, Developers, Hotels, Businesses
	Organize more bike-focused events.	Recreation Department	Planning & Community Development, Bicycling Advisory Committee	Advocate Groups
	Work with Salem businesses and employers to encourage bicycling.	Planning & Community Development		Local Businesses
Regulations and Operations	Review and improve crash reporting procedures.	Salem Police Department	Planning & Community Development	MassDOT
	Codify bike parking into development and retrofit requirements.	Bicycling Advisory Committee	Mayor's Office, City Council, Planning & Community Development	Developers
	Establish a regular review of the road repaving program to identify opportunities where bicycle facilities may be implemented as part of routine maintenance.	Public Works	Planning & Community Development, Bicycling Advisory Committee	
	Use the Bike Master Plan for project and development review.	Planning & Community Development	Bicycling Advisory Committee	
	Coordinate with Salem's other planning initiatives and those of neighboring municipalities.	Planning & Community Development	Bicycling Advisory Committee	MassDOT, Neighboring Towns and Cities
	Establish snow clearance and other maintenance procedures for bike facilities.	Public Works	Planning & Community Development	
	Continue to expand bike parking program including maintenance of inventory, working with schools to site new racks, and addition of new bike racks in high-activity areas.	Traffic & Parking	Bicycling Advisory Committee, Planning & Community Development, Schools, Recreation Department	Developers
Continue to work with a bikeshare operator to maintain and expand bikeshare in Salem.	Planning & Community Development	Bicycling Advisory Committee, Traffic & Parking	Salem State University, Neighboring Towns and Cities, Bikeshare, Businesses	
Evaluation	Evaluate and communicate progress on the Plan yearly.	Planning & Community Development	Police, Public Works, Bicycling Advisory Committee	

SALEM

MASSACHUSETTS



PARKS & CULTURAL HERITAGE SITES ●

- Artists' Row D4
- Swanitch State Park D3
- Broad Street Cemetery B5
- Chastnut Street A4
- Custom House H6
- Derby House H4
- Derby Light Station J7
- Friendship of Salem H4
- Gardner-Pingree House F3
- Hamilton Hall B4
- House of the Seven Gables J4
- Howard Street Cemetery F2
- John Ward House F2
- Narbonne House H3
- Nathaniel Hawthorne Statue G3
- National Park Service Regional Visitor Center F3
- Old Burying Point Cemetery E4
- Old Town Hall D4
- Peabody Essex Museum F3
- Phillips House A4
- Phillips Library A3
- Pickering House F5
- Roger Conant Statue G2
- Ropes Mansion and Garden B3
- St. Joseph's Hall H4
- Salem Common G/H2
- Salem Maritime National Historic Site H4
- Scale House F2
- West India Goods Store H4
- Witch House B3
- Witch Trials Memorial F4

ATTRACTIONS ●

- Griffen Theatre F4
- Museum Place Mall D4
- New England Pirate Museum F4
- North Shore Children's Museum B3
- Salem Wax Museum F4
- Salem Witch Museum G2
- Salem Witch Village F4
- Schooner Fame H5
- Spellbound Museum E3
- Witch Dungeon Museum C2
- Witch History Museum E3

ACCOMMODATIONS ●

- Annella Poyden House G1
- The Danforth House U
- Hawthorne Hotel G3
- Henry Derby House B5
- The Inn on Washington Square H1
- Morning Glory Bed & Breakfast J4
- The Salem Inn B4
- Salem Waterfront Hotel & Suites G5
- Stepping Stone Inn F3
- Suzannah Flint House G3

PUBLIC SERVICES ●

- District Court G2
- MBTA Commuter Rail Station D1
- Museum Place Mail Parking Garage E3
- Probate and Family Court G2
- Superior Chamber of Commerce G2
- Salem City Hall G2
- Salem Ferry to Boston G1
- Salem Fire Station B5
- Salem Police Station G4
- Shortland Properties G4
- South Harbor Parking Garage G2
- Superior Court G2
- US Post Office G3
- YMCA G3

Welcome

Conclusion

A more bikeable Salem is one that aligns with the values and goals of this great City. Access to opportunity, safety for all users, and multimodal connectivity are key priorities for Salem. Through smart investments that support people biking as integrated members of the transportation system, Salem may realize significant safety, environmental, quality of life, economic, and health benefits for its residents and visitors. This Plan represents a significant first step toward this vision, but significant work remains. The Plan should be treated as a living document where achievements are measured and celebrated, and updates are made according to changing conditions. Through collaboration and patience, the City of Salem is on the path to realizing its potential as one of the most bikeable cities in all of New England.

SALEM



BICYCLE PLAN