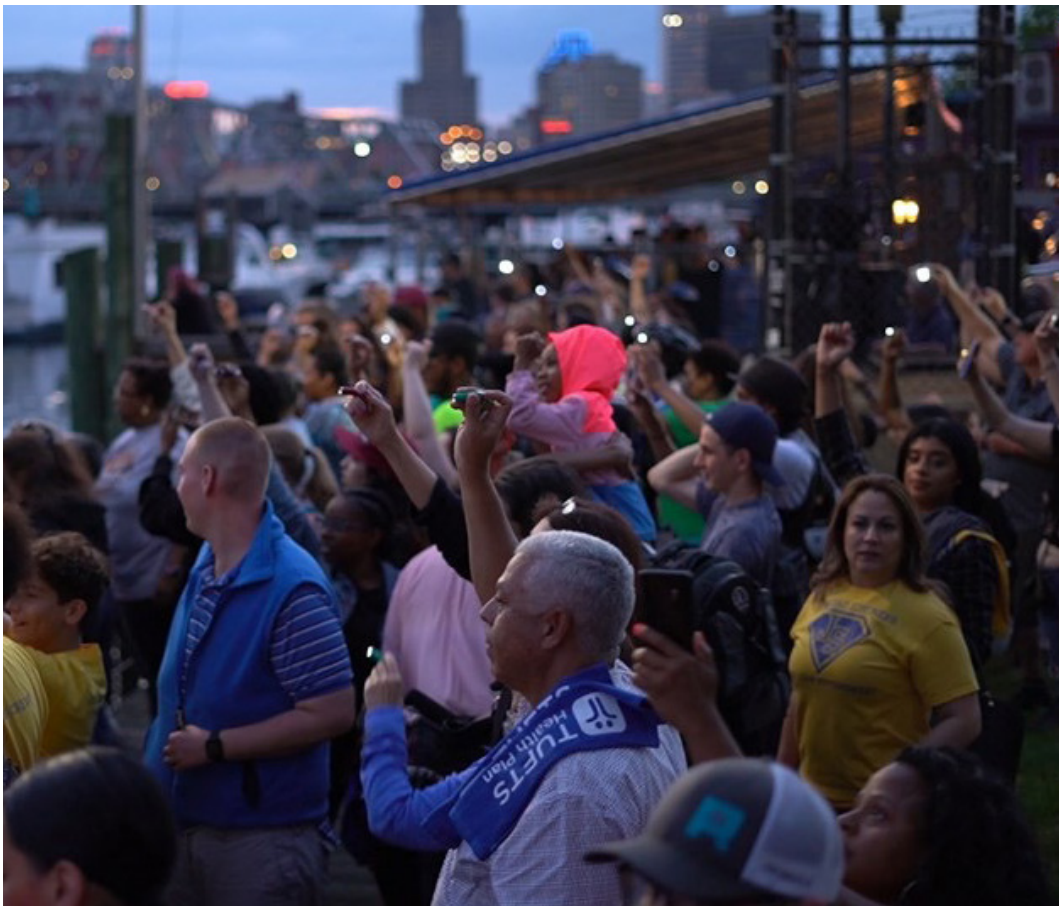
PVD GREAT STREETS



MAYOR JORGE O. ELORZA
CITY OF PROVIDENCE

June 2019 | DRAFT

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Photo: WRWC

Acknowlegments

Jorge O. Elorza, *Mayor*

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Federal Hill House

The Church of the Redeemer

Alan Feinstein Elementary School

The DaVinci Center

Vartan Gregorian Elementary School

West End Community Center

Silver Lake Annex Community Center

Saint Pius V Church

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Photo: Sam Goater

Information contained in this document is for planning purposes and should not be used for final design of any project. All results, recommendations, and commentary contained herein are based on limited data and information, and on existing conditions that are subject to change.

MAYOR JORGE O. ELORZA
CITY OF PROVIDENCE

PVD GREAT STREETS

Contents

Introduction

The Providence Great Streets Initiative is based on the belief that every street in Providence should be safe, clean, healthy, inclusive, and vibrant. As our largest public asset, covering over 13 percent of Providence's total land area (over 1,500 acres), our streets play a central part in shaping our neighborhoods and impact the way we live, work, play, and move around our city.

Our Vision: Every street in Providence should be safe, clean, healthy, inclusive, and vibrant.

What makes a Great Street?

- Safety for all people
- Clean, green, and sustainable
- Inclusive and welcoming for all
- Vibrant and prosperous

What do Great Streets include?

- Improvements to make walking safer
- Improvements to make riding bicycles safer
- Traffic calming improvements to reduce speeding and cut through traffic
- Streetscape and placemaking improvements like lighting, trash and recycling cans, landscaping, pocket parks, and benches
- Creation of a "spine" network of Urban Trails that connect every Providence neighborhood

What does this plan do?

The Great Streets Master Plan establishes a vision and framework for specific public realm improvements citywide that will ultimately connect every Providence neighborhood to a safe, comfortable, high-quality network of public improvements where residents and visitors can walk, run, bike, scoot, and skate to get to schools, jobs, parks, and other important destinations.

Goals

- Improve traffic safety and personal safety within the public realm.
- Ensure our public realm is clean and well-maintained.
- Connect every neighborhood in the city with low-stress, high-comfort facilities for people of all ages and abilities to walk, run, bike, scoot, and skate along.
- Increase opportunities for gathering, socializing, playing, and creating.
- Celebrate the diverse character of the City's neighborhoods, art, and cultures within the public realm.
- Provide equitable access that meets the needs and desires of all neighborhoods.
- Lower greenhouse gas emissions.
- Reduce stormwater runoff and flooding.

Great Streets

Intersections and streets highlighted as Great Streets projects may include improvements to make it safer and more comfortable for people to cross or walk along streets, slow down traffic where speeding is an issue, or improve aesthetics with street trees, landscaping, lighting, or other streetscape improvements. The inclusion of these projects is based on community feedback, crash history, and other data.

Providence Urban Trail Network

Providence's Urban Trail Network will connect every neighborhood with high-quality travelways for people walking, riding bicycles, accessing transit, or using other micromobility options, like scooters and e-bikes, with a goal that residents and visitors can safely and comfortably travel to schools, jobs, and other important destinations like parks, libraries, and museums. The Urban Trail Network will also seamlessly and comfortably connect Providence residents to regional trails and paths, including the East Bay Bike Path, Blackstone Bike Path, Woonasquatucket River Greenway Bike Path, and Washington Secondary Trail.

What are Urban Trails?

Urban Trails are on- or off-street paths that are safe, comfortable, and easily accessible for people of all ages and abilities. On busy streets, Urban Trails are fully separated from vehicle traffic. In other instances, off-road trails and paths like the Blackstone Bike Path and Woonasquatucket River Greenway serve as part of the Urban Trail Network. On smaller neighborhood streets, Urban Trails take the form of "neighborhood greenways" -- where a combination of traffic calming and wayfinding provide a consistent, legible, high-comfort experience for people using the trail.

Network connectivity is a necessary condition for the Urban Trail Network. Using the Urban Trail Network, people will be able to access destinations using active modes without having to traverse high-stress segments or intersections. The Network will be intuitive to use and easy to navigate through the use of consistent design elements and branded wayfinding signage.

In summary, the necessary conditions for an Urban Trail are:

- Meeting one of the following criteria:
  - » Full separation from motor vehicle traffic if on-road
  - » Being an off-road bike path or trail
  - » Being a neighborhood greenway
- Connecting to the rest of the Urban Trail Network
- Being easily identified and understood

How the Plan Was Developed

Intersection improvements

Recommendations for intersection improvements include intersections with a history of numerous crashes, intersections repeatedly mentioned by community members as needing improvements, and key crossing locations for the Urban Trail Network.

Intersections included in the plan were refined based on data analysis, stakeholder input, and comments collected from the neighborhood workshops.

Improvement strategies include, but are not limited to:

- Crossing improvements
- Intersection modifications
- Lane configuration modifications
- Urban Trail crossings (priority treatment based on context)
- Lighting improvements at crossings
- Placemaking and public art opportunities

Certain improvement types should be considered universal for intersection improvement projects, such as ADA/accessibility, signage, pavement marking, and signal upgrades as needed to meet design standards.

An intersection crash cluster is an intersection with at least six reported traffic crashes involving vulnerable users (people walking or riding bicycles) between 2009-17.

Traffic calming

This plan recommends a new approach to traffic calming in Providence: implement traffic calming in small areas, or zones, within neighborhoods instead of on individual streets. A zone-based traffic calming program allows groups of streets within neighborhoods to be comprehensively evaluated for traffic calming. The resulting implementation would strategically occur on several streets, to prevent higher-speed traffic being pushed to adjacent streets from neighborhood greenways and other traffic-calmed streets. The City should establish an application process to evaluate zones proposed by neighborhoods for traffic calming. Candidate traffic calming zones are included for each neighborhood group below, but this should not limit traffic calming implementation on other streets if warranted. Refer to the Assessment of Regulations, Programs, and Policies section of this document for more detailed recommendations.

Streetscape improvements

Streetscape improvements include physical changes to improve walkability, transportation amenities, aesthetics, or green infrastructure. The Implementation Guide (currently in-progress) serves as the primary reference for incorporating streetscape improvements into Great Street and Urban Trail projects, or to implement standalone streetscape projects on other corridors.

Network planning principles

1. To achieve a robust network that reaches all Providence neighborhoods, the target minimum spacing between Urban Trail Network links is ½ mile.
2. The Network will connect all Providence neighborhoods and provide access to major destinations throughout the city including job centers, schools, parks, libraries, museums, and other civic amenities.
3. The Network will connect to the regional trail system, including the Woonasquatucket River Greenway, Washington Secondary Trail, Blackstone Bike Path, and East Bay Bike Path.
4. The Network should be direct and minimize detours.
   a. Note: Direct routes in Providence are generally Commercial Streets, Neighborhood Collector Streets, and other corridors that serve travel between neighborhoods or extend outside of the city. Moderate detours may be used to address barriers when the most direct routes are not feasible. Research on route choice and ridership indicates that a detour should not exceed a 30 percent increase in distance over the most direct route.
5. Where two or more parallel routes may feasibly accommodate an Urban Trail, preference will be given to vibrant and active corridors.

Table 1. Network building blocks and references

Public Input	Public comments at community meetings
	Public comments via online mapper
City staff input	City staff review meetings
Existing conditions research	Data analysis
	Feasibility
	Equity, safety, and connectivity
Bicycle and Pedestrian Advisory Commission (BPAC)	Route suggestions for the Great Streets Plan
	Previous staff reports and committee recommendations
Planning documents and processes	State Bicycle Mobility Plan candidate routes
	Previous plans
	Traffic calming requests
Current Urban Trail Network	In-progress
	Existing

Segment/Link Design Principles

1. The Implementation Guide shall serve as the primary reference for segment, intersection, and public realm improvements.
2. The Urban Trail Network shall provide a consistent experience and level of comfort not to exceed Bicycle Level of Traffic Stress 1 (lowest stress) and the maximum allowable level is Bicycle LTS 2.
3. The Urban Trail Network shall consist of a range of facility types—including physically separated lanes on busy streets, shared use paths in their own rights-of-way, curb-separated paths on the side of the road, and lower-volume, traffic-calmed streets (neighborhood greenways)—depending upon context.
4. Connections and transitions between network links shall be seamless and intuitive with identifying elements that link together different segments of the network.

Bicycle Level of Traffic Stress (LTS) is a rating of streets and roads from 1 to 4 that estimates the comfort level people feel while riding bicycles down the street. The rating takes into account characteristics such as posted speed limit, the type of bike facility, travel lane width, and the presence of on-street parking. LTS 1 represents the lowest stress rating and LTS 4 represents the highest.

Route Feasibility

1. Routes should be feasible, at least over the long term. The Prioritization section (see below) recommends shorter-term priorities. Many factors inform the feasibility of a route, but basic considerations of feasibility include topography, environmental constraints, regulatory constraints, design standards, and available right-of-way.
2. Preference shall be given to designs that can be implemented with minimal modifications to the roadway.
3. Where traffic conditions indicate the need for separated facilities, the following shall be the ranked order of preferred actions to provide necessary space for an Urban Trail:
   a. Narrow existing lane widths
   b. Remove travel lane (on multi-lane streets)
   c. Remove parking lane
   d. Modify curb line/construction project
   e. Alternative route
4. While no one factor determines the suitability of a neighborhood greenway treatment, considerations for neighborhood greenway treatments include:
   a. Street generally has a functional classification of collector or local
   b. Street is low-volume (3,000 ADT or less), or a target low volume can be reasonably achieved with the neighborhood greenway treatment
   c. Target post-project motor vehicle operating speed is a maximum of 20 mph
   d. Street has seen a formal traffic calming request from community members
   e. Due to the width of the street, separation is not feasible or practical after evaluating the above preferred actions
   f. Based on context, need, and neighborhood priorities, neighborhood greenway recommendations may incorporate other components in addition to traffic calming, including basic sidewalk improvements, landscaping, stormwater management, lighting, and art

Public Input

In Spring 2019, the City of Providence hosted 12 neighborhood meetings to gather input on Great Streets improvements during which we collected over 275 mapped comments from more than 180 attendees about topics ranging from traffic calming to street lighting to bike lanes. Attendees provided input by adding green and red “like/dislike” stickers to neighborhood and citywide maps.

Comments and ideas gathered at the neighborhood meetings were then translated into draft recommendations for projects. From early May to mid-June, those projects were presented to the public in an online interactive map, where community members could vote on project ideas and provide additional mapped comments.

The neighborhood meeting materials, presentation, and online map were presented in a bilingual (English and Spanish) format.

The result is a plan closely shaped by the community.

Neighborhood meeting summary

181 Attendees

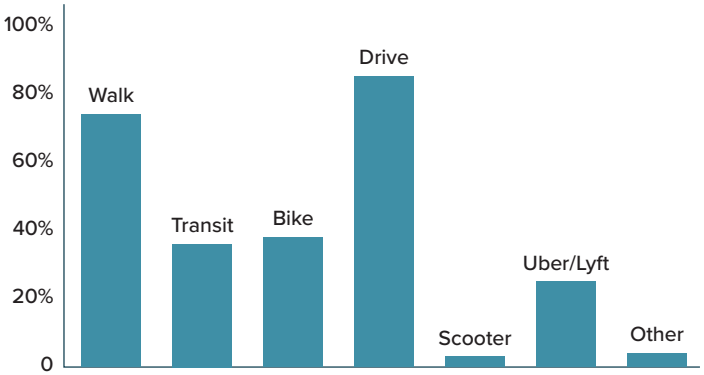
Over **500** Like/Dislike Stickers on the Citywide Map

275 Mapped Comments

146 Surveys filled out at Meetings

How do you travel around Providence? (check all that apply)

Figure 1. Modes Used by Community Meeting Attendees



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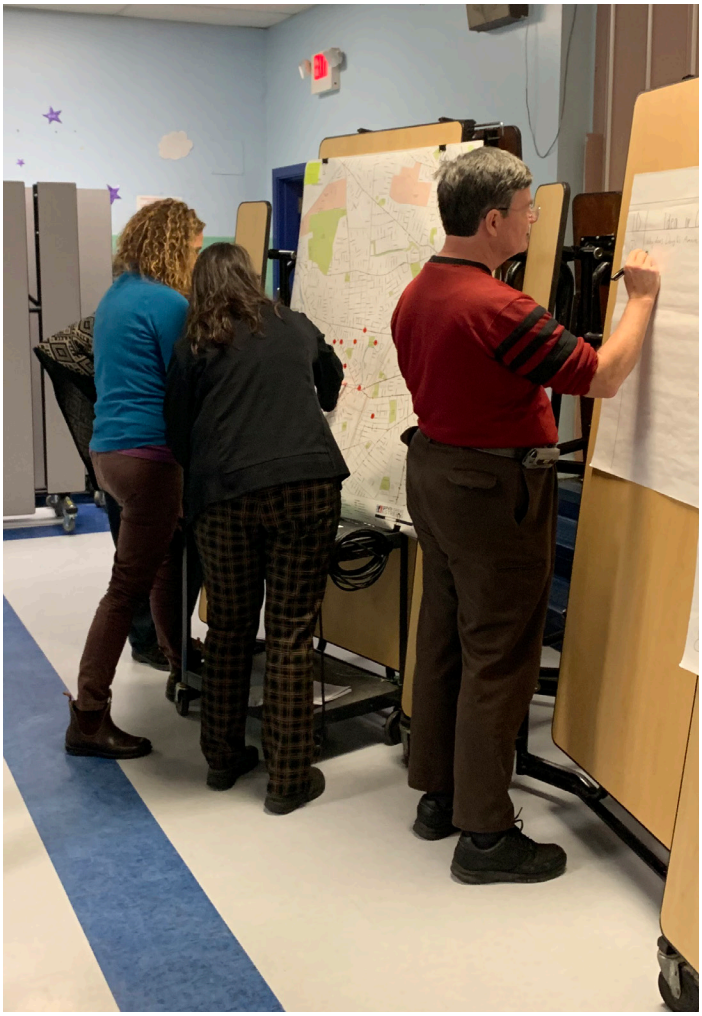
What we heard

"Lots of ped[s] crossing to church. Better crosswalk needed."
(Charles Street at Hawkins Street, Charles)

"Speeding, cut through traffic, parking on sidewalk, [happens a lot on this street], stop sign ignored."
(Windmill Street, Charles)

"Crosswalk is wide. Cars accelerate uphill – dangerous for crossing peds. There are blind spots as well."
(Benefit Street at Benevolent Street, College Hill)

"Unsafe pedestrian crossing; all double lanes. Pedestrians must run across."
(I-95 ramps at Point Street, Downtown)



"Like protected lane, but should be longer and more protected with planters, and [highlighted with] green bike lane paint."
(Fountain Street, Downtown)

"Traffic interferes with usability of the park [Columbus Square]."
(Elmwood Avenue at Reservoir Avenue, Elmwood/Reservoir)

"Difficult vehicle turns, and large intersections makes it difficult for peds to cross."
(Atwells Avenue at Dean Street, Federal Hill)

"Vehicles speed along Knight, and with two way traffic and cars parked on one side, it's dangerous for pedestrians. Consider making it one-way SB with dedicated parking on one side and a posted lower speed limit."
(Knight Street at Grant Street, Federal Hill)

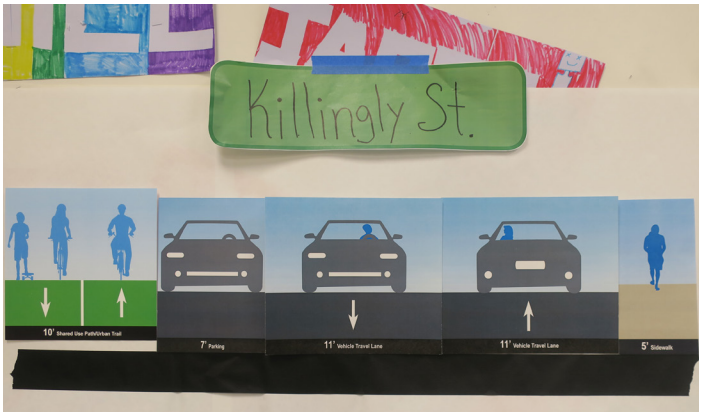
"Hard to cross; fast traffic."
(Gano Street, Fox Point)

"Need a new bridge across the river to Hartford Ave."
(Hartford)

"Complicated/indirect [pedestrian] crossing."
(Hope Street at Blackstone Boulevard, Hope)

"Congestion, people driving run red lights"
(Eddy Street at Thurbers Avenue, Lower South Providence)

"Eliminate the slip lane at Olney + N. Main. It is dangerous to peds."
(Mount Hope)



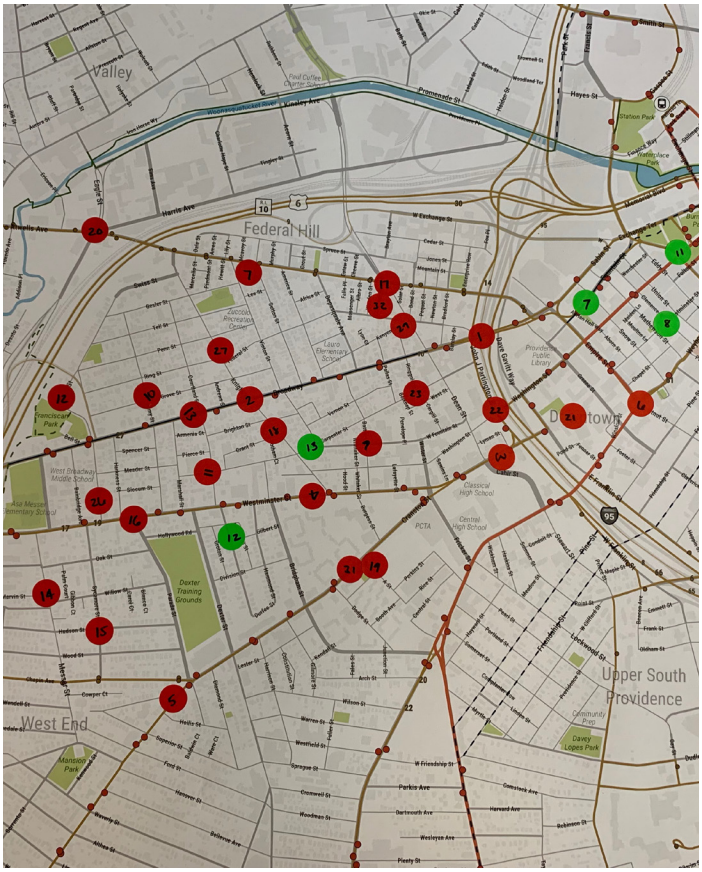
"Speeding issues on Mt Pleasant [Avenue]."
(Mount Pleasant Avenue at Old Road, Mount Pleasant)

"Need crosswalk from parking lot to post office building."
(Hartford Avenue at Atwood Street, Olneyville)

"Add raised crosswalk to park or speed bumps to reduce travel speeds."
(Woonasquatucket River Greenway at Aleppo Street, Olneyville)

"Fear of auto crashes, bad visibility, use of Ruggles as cut-through, speeding"
(Smith Street at Ruggles Street, Smith Hill)

"Speed limit does not equal design speed. Streets too wide."
(Roger Williams Park, South Elmwood)



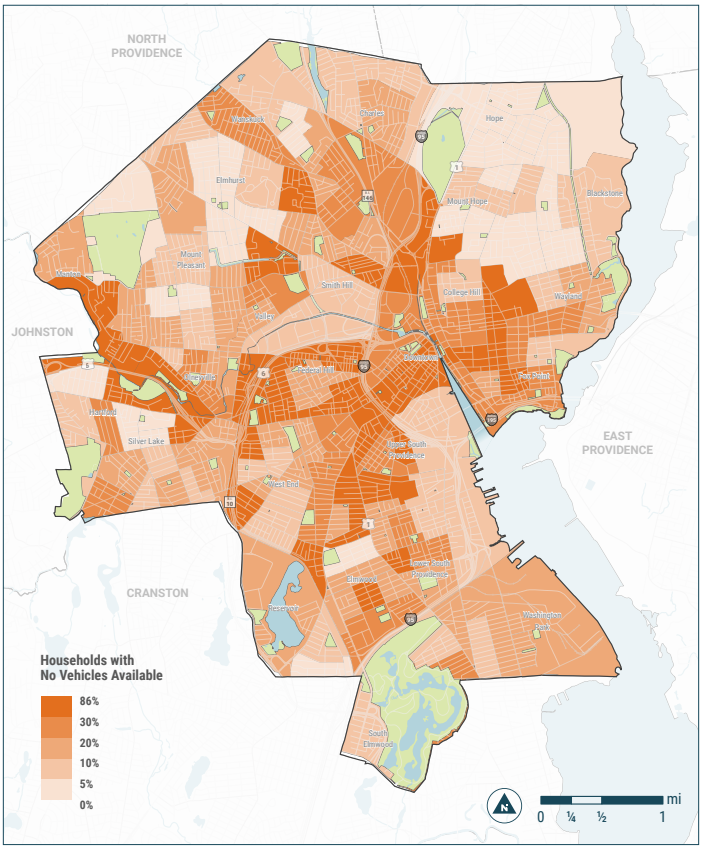
"So congested! Very narrow bridge @ Wanskuck building. People pass through here to detour. Makes it hard to pass through on a bike because it's so congested."
(Branch Avenue at Woodward Road, Wanskuck)

"Burns St is one way, but stop bar @ stop signs only goes half way across street – makes it appear 2 way and encourages wrong way driving."
(Burns Street, Wanskuck)

"Too fast – too wide. People don't obey 35 mph speed limit, which is also too high. High traffic volumes. Lots of trucks. Poor lighting. Not safe at night. Dirty."
(Allens Avenue at Chapman Street, Washington Park)

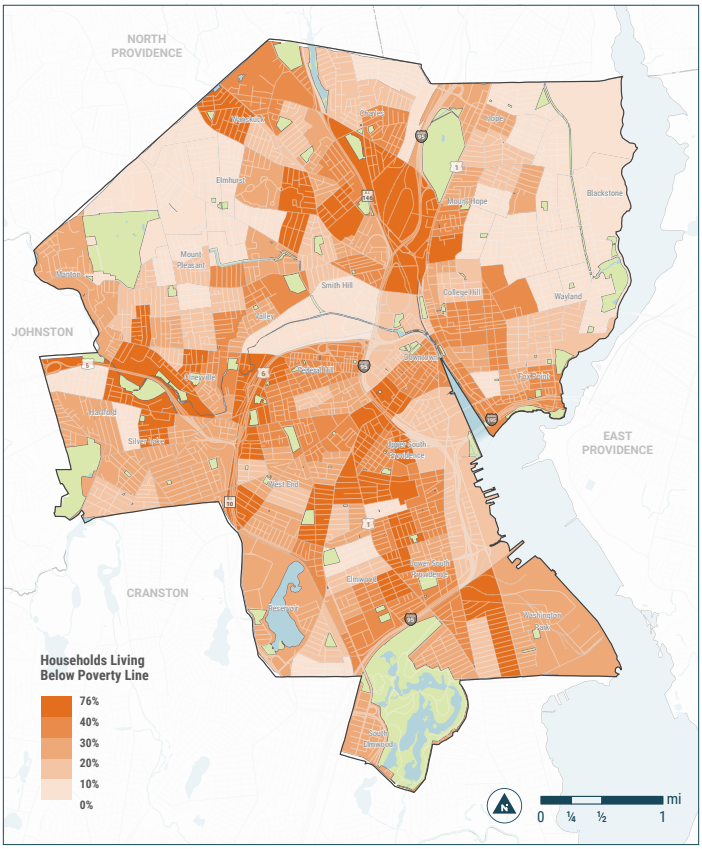
Existing Conditions

Household Vehicle Availability



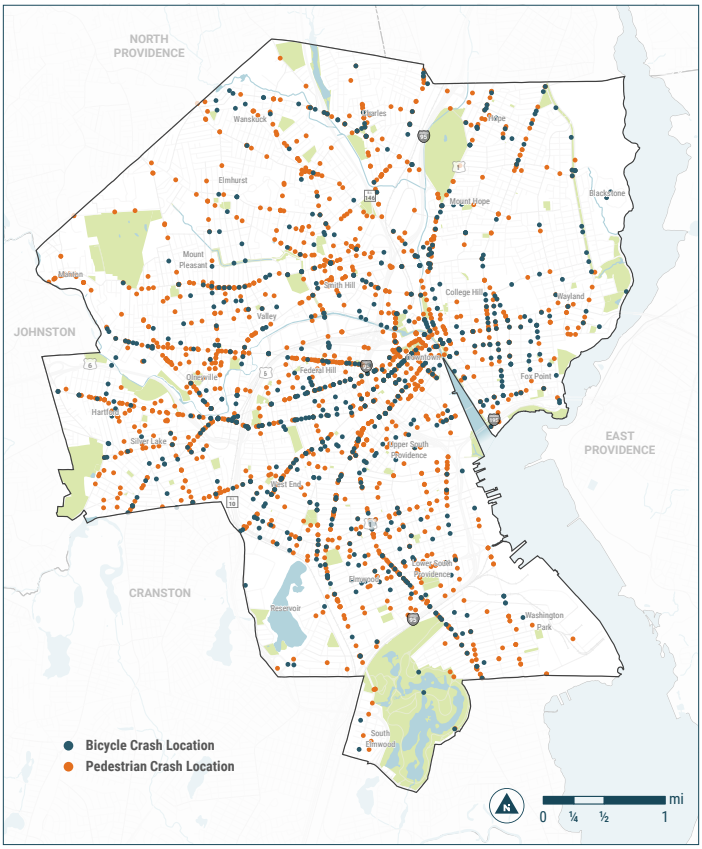
- Nearly 20 percent of households do not have a personal car available. This percentage is even higher in Olneyville, Upper South Providence, and Hartford, where 42, 40, and 39 percent of households, respectively, do not have a car available.
- There are more than 1,000 JUMP pedal-assist bicycles available for use across the city.
- The City's E-Scooter Share Pilot Program allows up to 300 shared e-scooters.
- There are approximately 5.0 centerline miles of existing Urban Trails and 7.4 centerline miles of existing bike lanes in Providence. This includes facilities in Roger Williams Park as part of the existing Urban Trail network.

Household Poverty



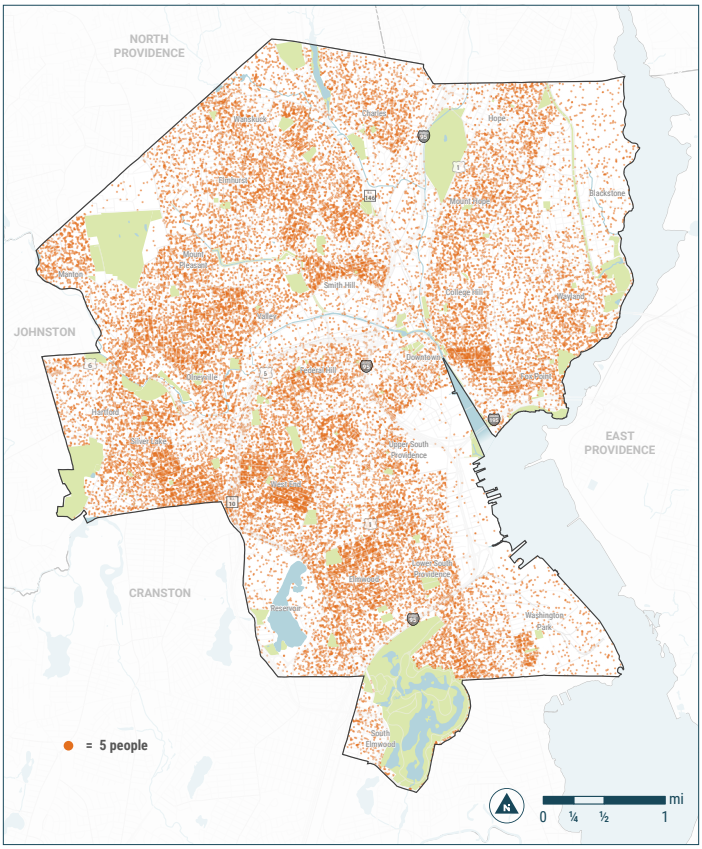
- While over 10 percent of Providence residents currently walk to work, and less than 1 percent ride a bicycle as their primary mode of travel to work, almost two-thirds drive alone. The percentage of people who do not drive to work is significantly higher in College Hill, Fox Point, and Wayland, where 69, 64, and 55 percent of commuters, respectively, do not drive to work.

Crashes Involving People Walking and Bicycling (2009-17)



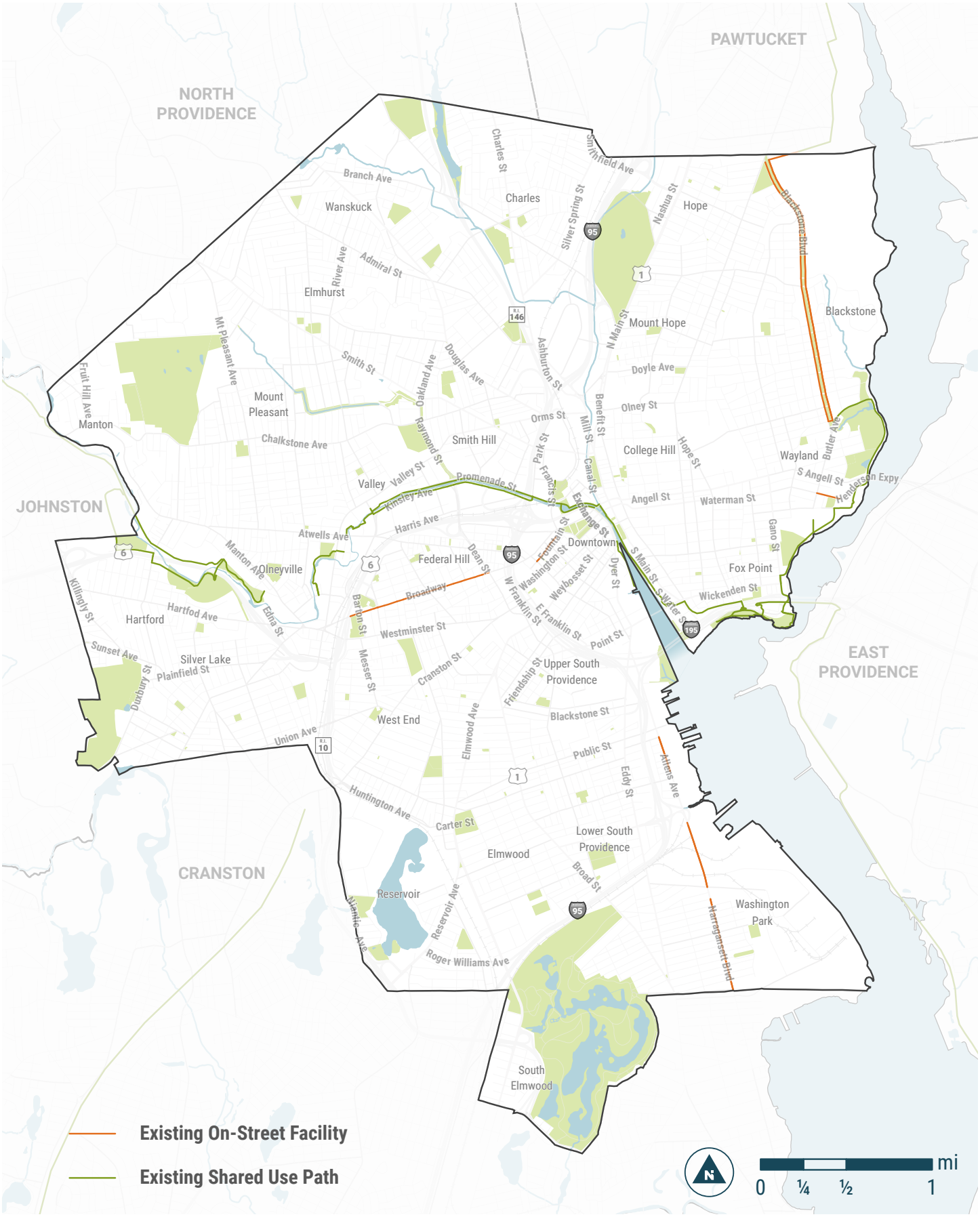
- Every year, on average, from 2009 to 2015, over 150 people walking and over 60 people riding bicycles were hit by cars in Providence.

Population Density



- Providence's compact size and population density (over 9,000 people per square mile) makes it easy to walk, ride a bicycle, and use other micromobility options to get around.
- The average Providence household creates over 18,000 vehicle miles traveled (VMT) per year, which contributes to traffic congestion, noise, physical inactivity, and more than 500,000 tons of carbon dioxide equivalent (CO_2e) emissions from transportation and mobile sources each year.

Existing Network



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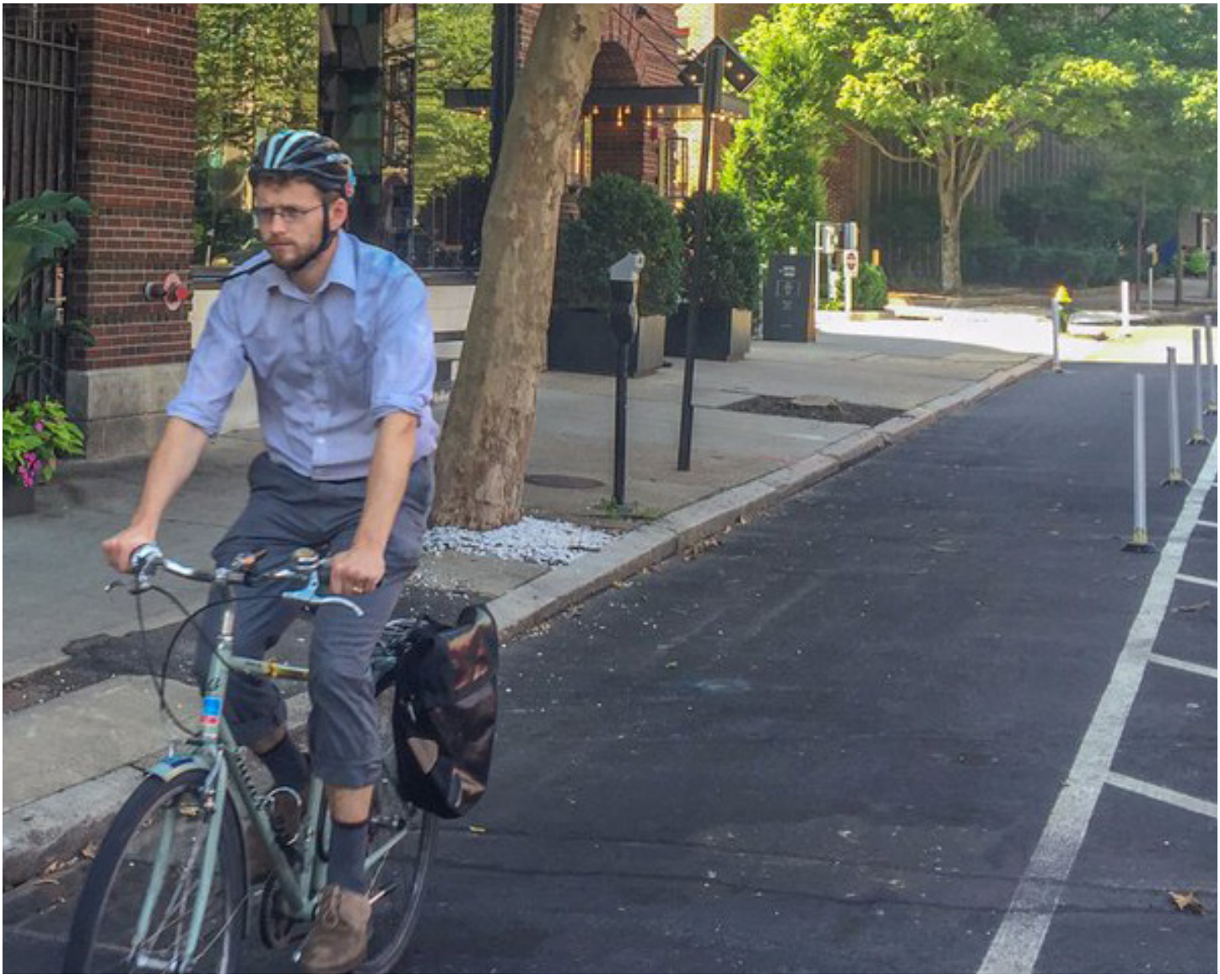
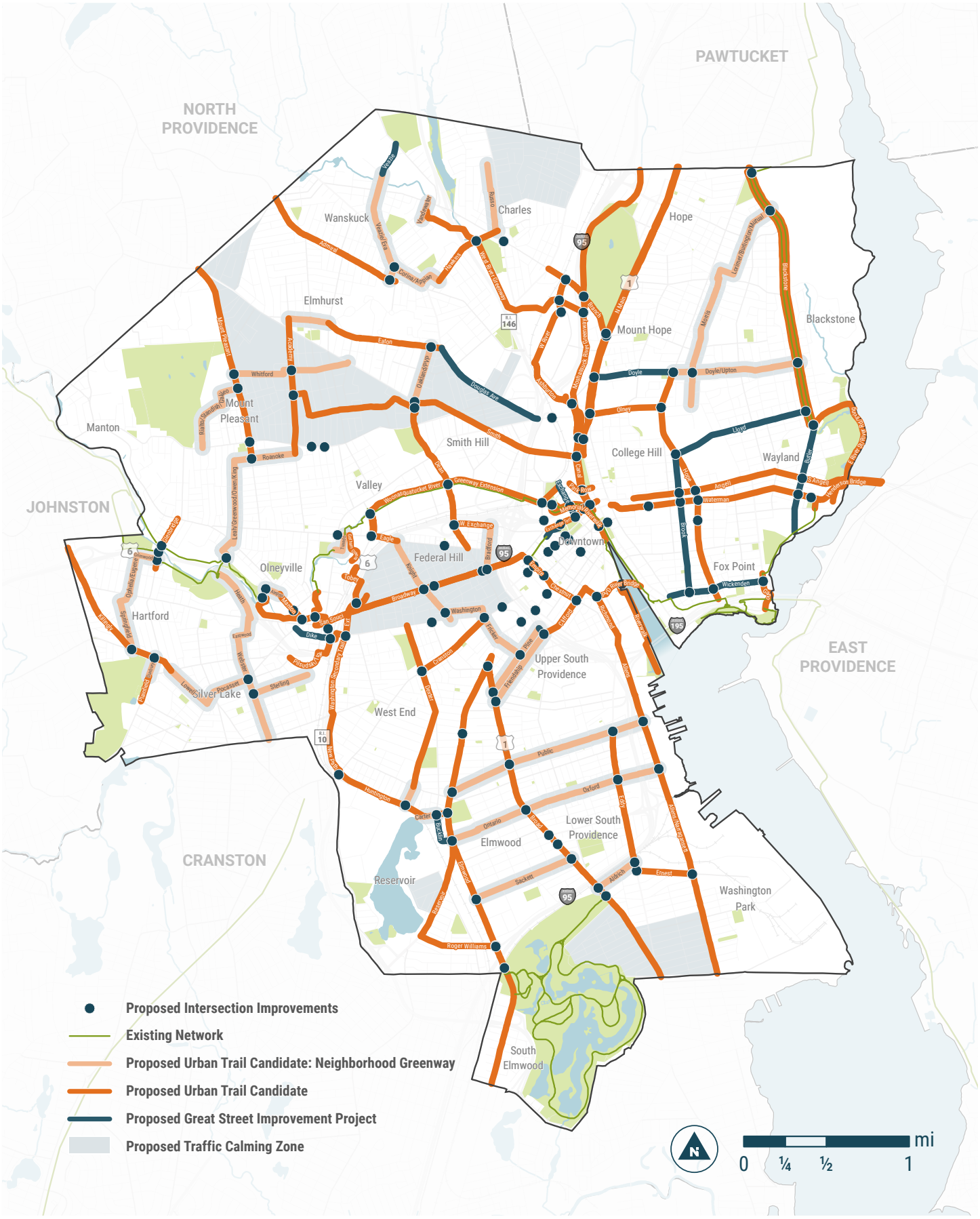
Citywide Urban Trail Network

A central principle of the Providence Great Streets Master Plan is to connect every neighborhood to a complete and intuitive Urban Trail Network. The Urban Trail Network proposed within this Master Plan:

- Comprises 137 segment projects
- Includes 50 candidate standalone node/intersection projects based on neighborhood comments. Other neighborhood comments are embedded in Urban Trail projects to mark important intersections to be addressed in project development.
- Comprises 60.8 centerline miles of new projects (11.12 miles of new off-road paths, 32.62 miles of new separated on-road Urban Trails, 1.12 miles of new striped bike lanes, and 15.94 miles of new neighborhood greenways)
- Touches every part of Providence, bringing 93.1 percent of residents and 94.9 percent of jobs within easy walking distance of the Urban Trail Network
  - » Connects 167,084 Providence residents living within ¼-mile of the proposed network (compared to 37,229 living within ¼-mile of the existing network), resulting in a 448.8 percent increase in the number living within easy walking distance of the Urban Trail Network
  - » Connects 101,085 people who work within ¼-mile of the proposed network (compared to 39,733 working within ¼-mile of the existing network), resulting in a 254.4 percent increase in the number of people working within easy walking distance of the Urban Trail Network



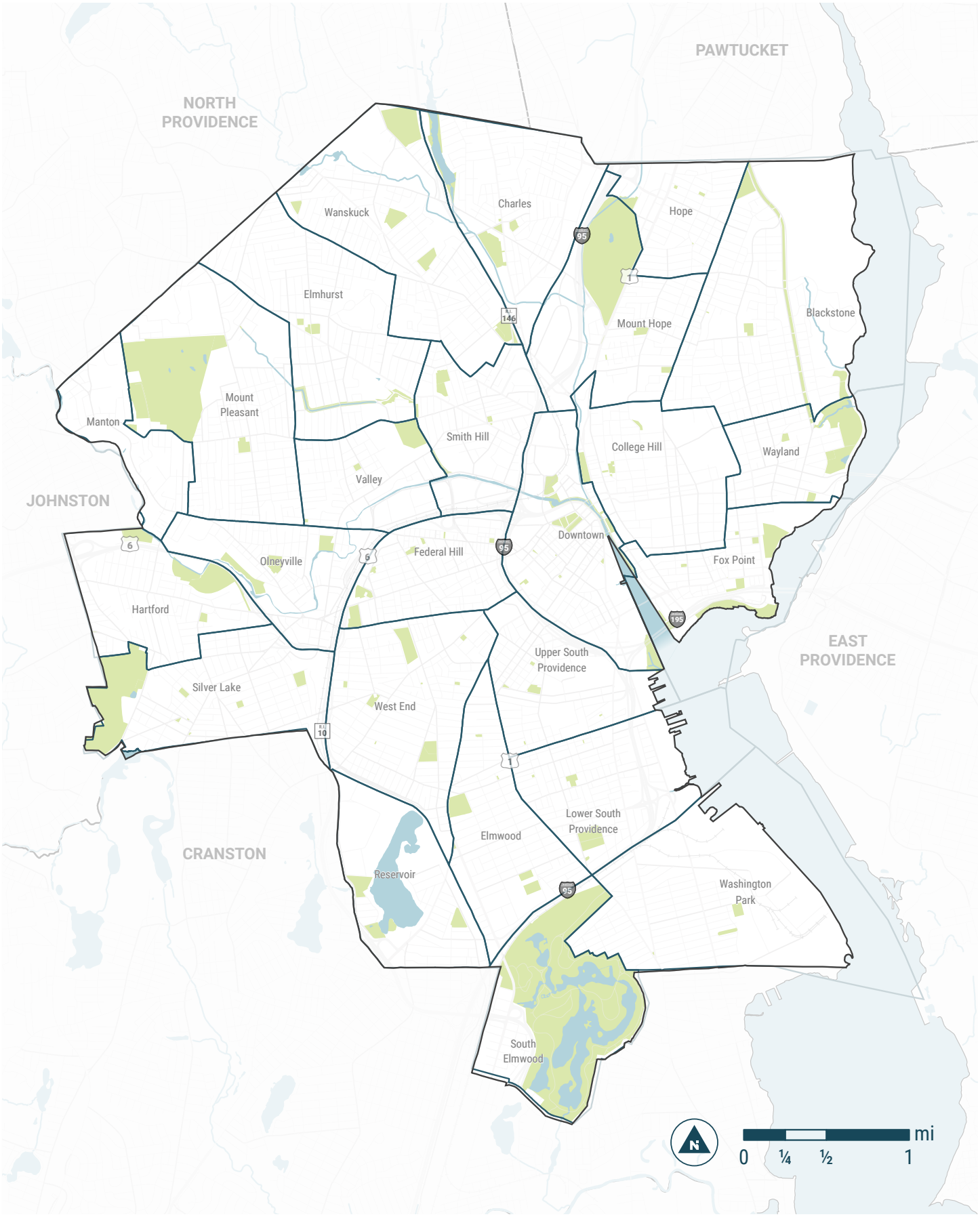
DRAFT Proposed Citywide Urban Trail Network



Neighborhood Visions

It should be safe, intuitive, and easy for residents and visitors to get around every neighborhood in Providence. Recommended improvements in each neighborhood address investments that build toward the community's vision for Great Streets that are safe, clean, healthy, inclusive, and vibrant. During the 12 neighborhood meetings held throughout March and early April, community members provided 275 mapped comments, as well as other general feedback, which informed these neighborhood visions. Many ideas and comments have been translated into specific improvement projects. Other comments that were outside of the purview of the Great Streets Master Plan have been catalogued in Appendix B.

Providence Neighborhoods



Elmwood, Upper South Providence, and Lower South Providence

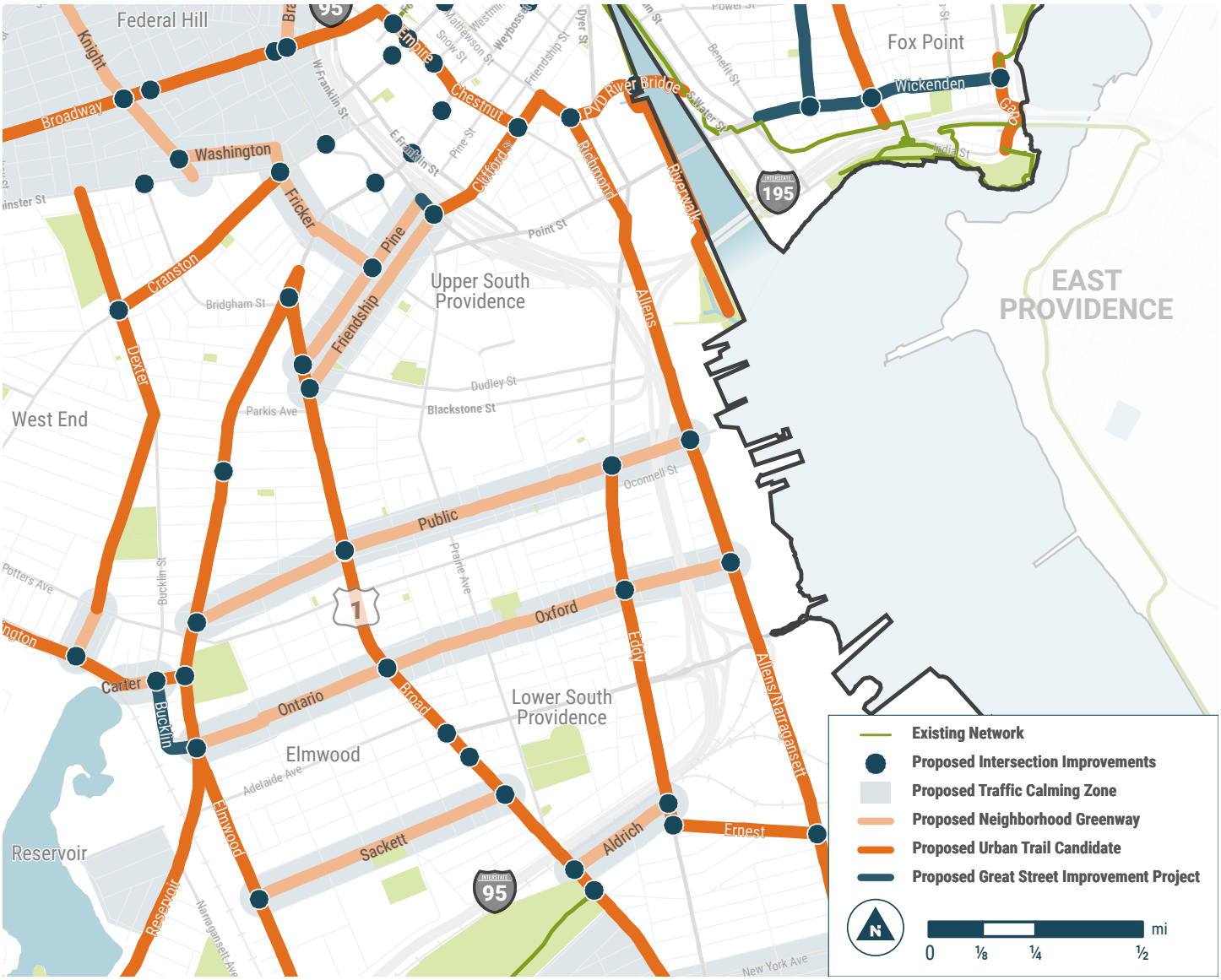
Key Urban Trail Recommendations

Implement City Walk along Broad Street and extend it along all of Elmwood Avenue. City Walk is an in-progress Urban Trail project, planned for construction in 2020 on Broad, Pine, and Friendship streets that will: strengthen connections between South Providence, other neighborhoods, parks, and civic institutions; improve safety for people traveling by all modes; and celebrate the diversity and culture of Providence neighborhoods through public art, wayfinding signage, and vibrant public places. City Walk should be extended along all of Elmwood Avenue as envisioned by the 2014 City Walk study.

Create east-west neighborhood greenways on Public, Ontario/Oxford, and Sackett streets to connect surrounding neighborhoods to City Walk and other Urban Trails and reduce speeding on these neighborhood streets.

Create Urban Trails on Allens Avenue and Eddy Street. Urban Trails on these two major streets will help connect residents and visitors to and between Downtown, the Hospital District, and Washington Park. Since it is a state-owned and state-maintained road, an Urban Trail on Allens Avenue will require partnership and coordination with RIDOT.

Neighborhood Map



Project List

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Friendship	Broad	W Franklin	Urban Trail	City Walk project	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Pine	Broad	W Franklin	Urban Trail	City Walk project	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Broad	Hawthorne	Elmwood	Urban Trail	City Walk project	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Carter	Bucklin	Elmwood	Urban Trail	Part of link between proposed Huntington and Elmwood Urban Trails; provides contraflow connection for micromobility users along this one-block, one-way segment	One-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Carter	Mashapaug	Bucklin	Urban Trail	Part of link between proposed Huntington and Elmwood Urban Trails	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Ontario	Elmwood	Broad	Urban Trail	Connects Elmwood and South Providence; connects to proposed Elmwood Urban Trail and City Walk; uses route with existing traffic calming	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Elmwood	Broad	City limits	Urban Trail	Key north-south connection for West End and Elmwood; connects to several Urban Trails and enhances access to Trinity Square in the north, Roger Williams Park in the south, and many destinations in between	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Public	Elmwood	Allens	Urban Trail	Provides east-west connection for Elmwood and South Providence, connecting proposed Elmwood and Allens Urban Trails, as well as City Walk; enhances access to schools and Rhode Island Hospital	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Sackett	Elmwood	Broad	Urban Trail	Provides east-west connection in south Elmwood between proposed Elmwood Ave. Urban Trail and City Walk	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Bucklin	Earl	Dexter	Great Street	Alternative route connecting proposed Ontario St. and Carter St. Urban Trails	Other Great Street Improvement	Enhance quality of existing facility
Oxford	Broad	Allens	Urban Trail	Along with Ontario St., provides east-west Urban Trail connection between Elmwood and Lower South Providence	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Reservoir	Elmwood	Roger Williams	Urban Trail	Connects Reservoir and Elmwood; connects to proposed Urban Trails on Elmwood Ave. and Roger Williams Ave.	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet), Remove travel lane (Road Diet)
Roger Williams	Reservoir	Elmwood	Urban Trail	Connects Reservoir Ave. and Elmwood Ave. Urban Trails; enhances access to Roger Williams Park	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side
Broad	Hawthorne	Southern City Limit	Urban Trail	Future City Walk phase; enhances access from Washington Park to Roger Williams Park	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Eddy	Public	Ernest	Urban Trail	Connects proposed Public, Oxford, and Ernest/Aldrich Urban Trails	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side, Narrow travel or parking lane (Lane Diet)
Allens	Public	Eddy	Urban Trail	North-south connection between Downtown and South Providence	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet), Move curbs
W Franklin	Pine	Friendship	Great Street	City Walk project	Conventional Bike Lanes	Narrow travel or parking lane (Lane Diet)
Fricker/ Lockwood	Cranston/ Westminster	Pine	Urban Trail	Connects in-progress Pine and Friendship Urban Trails with proposed Cranston and Winter Urban Trails; enhances access to schools	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)

Key Traffic Calming Recommendations

Areas along and around proposed neighborhood greenways:

- Public Street
- Ontario/Oxford Streets
- Sackett Street
- Pine/Friendship Streets
- Lockwood Street

Key Intersection Improvement Recommendations

Street 1	Street 2	Type
Allens	Oxford	Network Crossing
Allens	Public	Network Crossing
Broad	Cahir	Pedestrian/Bicycle Crash Focus Intersection
Broad	Elmwood	Network Crossing
Broad	Friendship	Network Crossing
Broad	Ontario	Network Crossing Pedestrian/Bicycle Crash Focus Intersection
Broad	Pennsylvania	Pedestrian/Bicycle Crash Focus Intersection
Broad	Pine	Network Crossing
Broad	Public	Network Crossing Pedestrian/Bicycle Crash Focus Intersection
Broad	Sackett	Network Crossing
Broad	Thurbers	Pedestrian/Bicycle Crash Focus Intersection
Eddy	Oxford	Network Crossing
Eddy	Public	Network Crossing
Elmwood	Atlantic	Neighborhood comment
Elmwood	Carter	Network Crossing
Elmwood	Ontario	Network Crossing
Elmwood	Plenty	Pedestrian/Bicycle Crash Focus Intersection
Elmwood	Public	Network Crossing
Elmwood	Roger Williams	Network Crossing Pedestrian/Bicycle Crash Focus Intersection
Elmwood	Sackett	Network Crossing
West Franklin	Broad	Neighborhood Comment
West Franklin	Friendship	Network Crossing
West Franklin	Pine	Network Crossing
Westminster	Cahir	Pedestrian/Bicycle Crash Focus Intersection Neighborhood Comment
Westminster	Cranston	Network Crossing
Whitmarsh	Updike	Neighborhood Comment

Olneyville, Valley, and Smith Hill

Key Urban Trail Recommendations

Create new Urban Trail segments to extend and fill in gaps along the Woonasquatucket River Greenway. Extend access for people walking, riding bicycles, and using micromobility options along the Woonasquatucket River by implementing several new segments.

- *An Urban Trail along the Woonasquatucket River* between Eagle Square and Downtown: This segment will fill in the largest Urban Trail gap between Olneyville and Downtown. This project has received approximately $6 million in Statewide Transportation Improvement Program funding and is expected to be completed in 2021 and 2022.
- *An Urban Trail along San Souci Drive:* This project has been designed and construction is scheduled to begin in June 2019. This segment will enhance access for people traveling to and through Olneyville Square.
- *An off-road path along the Woonasquatucket River at the Gotham Greens site:* This project, currently being built as part of the Gotham Greens development, will connect the existing Woonasquatucket Greenway segment across Atwells Avenue at Eagle Square to the future Tobey/Harris Urban Trail being constructed as part of the 6/10 Reconstruction project.
- *A future off-road path from San Souci Drive to Sonoma Court* connecting the San Souci Drive Urban Trail with the Donigian Park Bike Path. This segment requires further study and collaboration with property owners, residents, and other stakeholders.

Create new Urban Trail connections to adjacent neighborhoods.

- Convert the existing bike lanes on Broadway (between Downtown and Olneyville) to an Urban Trail and extend the trail directly into Olneyville Square.
- A new on-road Urban Trail connecting to Silver Lake along Troy and Pilsudski streets.
- Extend the proposed Leah Street neighborhood greenway from Mount Pleasant into Olneyville via Greenwood, Owen, and King streets, to provide access to the Woonasquatucket River Greenway.
- Connect Valley to Federal Hill via on-road Urban Trails on Eagle Street and Atwells Avenue between Eagle and Knight streets.
- The 6/10 Reconstruction Project will provide new Urban Trail connections from Federal Hill via a new Tobey Street/Harris Avenue bridge and to the West End via a new bicycle and pedestrian bridge from Westminster Street to Dike Street behind Olneyville Square.
- Extend the new bicycle and pedestrian connection to Dike Street with a new off-road path connection to the west of the railroad tracks from Dike Street to Magnolia Street.

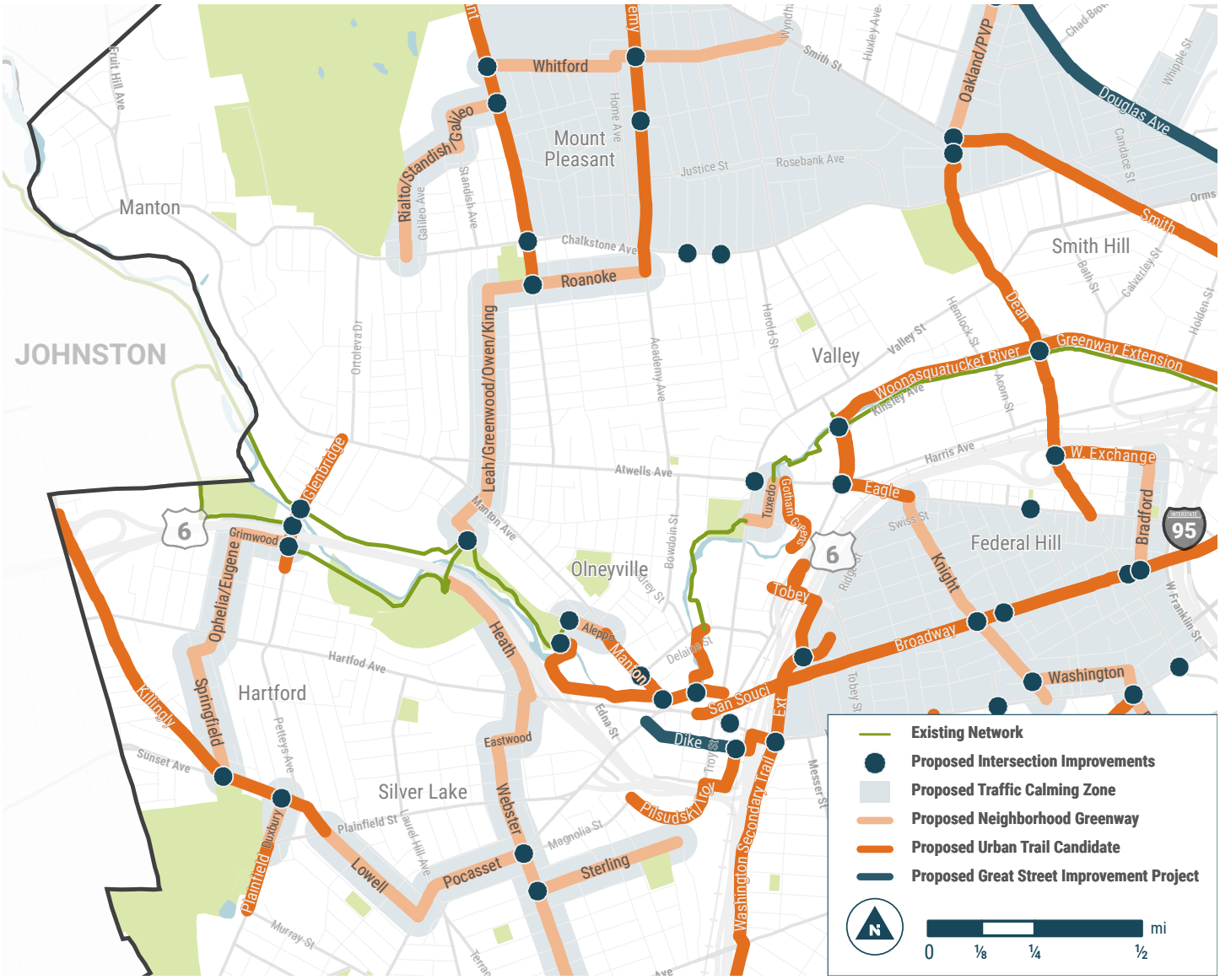
Create an Urban Trail along Dean Street/Pleasant Valley Parkway. Complete an Urban Trail connection along Dean Street and Pleasant Valley Parkway from Atwells Avenue to Eaton Street (via the proposed Oakland Avenue Urban Trail), connecting Elmhurst, Smith Hill, Valley, and Federal Hill.

Improve connectivity within Olneyville. Complete Urban Trail segments along Manton Avenue, Aleppo Street, Amherst Street, and Tuxedo Avenue, and a Great Street project to enhance walkability on Dike Street.

Create an Urban Trail along Smith Street. Work with RIDOT to implement an Urban Trail on Smith Street (a state-owned and state-maintained street) from Canal Street to Oakland Avenue This would connect with RIDOT's in-progress Urban Trail on Canal Street, traversing the steep grade and passing over I-95, enhancing east-west connectivity for the neighborhood. A project on Smith Street would also be an opportunity to address some of the neighborhood comments related to speeding and crossing the street on Smith Street, especially between Oakland Avenue and Orms Street.

Implement Great Streets improvements along Douglas Avenue. In the northern part of the neighborhood, the City will be restriping Douglas Avenue with improved crosswalks and conventional striped bike lanes in 2019.

Neighborhood Map



Project List

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Dean	Atwells	Valley	Urban Trail	Link in project currently in design to enhance access for micromobility users along this key corridor between Federal Hill, Valley, and Smith Hill	Two-Way Urban Trail with Accessible Sidewalk	Move curbs
Dean	Valley	Higgins	Urban Trail	Link in project currently in design to enhance access for micromobility users along this key corridor between Federal Hill, Valley, and Smith Hill	Two-Way Shared Use Path	Move curbs
Manton	San Souci	Aleppo	Urban Trail	Helps connect in-progress San Souci Urban Trail to Woonasquatucket River Greenway via Aleppo St.	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side
Tobey	Washington Secondary Trail Ext	Helme	Urban Trail	New connection between Federal Hill and Olneyville neighborhoods to be completed by 6/10 Reconstruction Project	Two-Way Shared Use Path	Move curbs

Project List continued

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
San Souci	Manton	Valley	Urban Trail	In-progress project providing connectivity and enhancing river access in central Olneyville along the Woonasquatucket River	Two-Way Shared Use Path	Move curbs
Academy	Eaton	Roanoke	Urban Trail	Connects Elmhurst and Mount Pleasant; connects to proposed Eaton St.	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side
Woonasquatucket River Greenway Extension	Eagle	Park	Urban Trail	Project in design that extends Woonasquatucket River Greenway into Downtown	Two-Way Shared Use Path	Remove travel lane (Road Diet)
Broadway	Westminister	Empire	Urban Trail	Key connection for Downtown, Federal Hill, and Olneyville neighborhoods	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Aleppo	Manton	Woonasquatucket River Greenway	Urban Trail	Key Woonasquatucket River Greenway access point	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
New path/ bridge	Washington Secondary Trail Extension at Westminster	Dike	Urban Trail	As part of the 6/10 Reconstruction Project, enhances connectivity between Olneyville and West End	Two-Way Shared Use Path	Move curbs
Woonasquatucket River Greenway	Riverside Park	Manton	Urban Trail	Longer-term project, subject to available right-of-way, to extend the greenway south and enhance access to Olneyville destinations	Two-Way Shared Use Path	Independent ROW
King/Salmon	Woonasquatucket River Greenway	Manton	Urban Trail	Enhances access to the Woonasquatucket River Greenway	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Dike	Plainfield	New path/ bridge	Great Street	Aligns with recommendations in the Dike St. Special Area Plan; street will lead to and from the new path connection over the 6/10 Connector	Other Great Street Improvement	Enhance quality of existing facility
Eagle	Kinsley	Harris/Atwells	Urban Trail	Connects current and future Woonasquatucket River Greenway segments to proposed Urban Trails leading into Federal Hill	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Gotham Greens path	De Soto	Atwells	Urban Trail	Extends the Woonasquatucket River Greenway south of Atwells and connects to the Tobey St. path being built as part of the 6/10 Reconstruction Project	Two-Way Shared Use Path	Independent ROW
Woonasquatucket River Greenway	Future Gotham Greens bike path/De Soto	Donigian Park	Urban Trail	Links the Donigian Park path to the future Woonasquatucket River Greenway segment on the Gotham Greens site and the new Tobey St. path being built as part of the 6/10 Reconstruction Project	Two-Way Shared Use Path	Independent ROW
Woonasquatucket River Greenway	San Souci	Donigian Park Bikeway	Urban Trail	Connects the Donigian Park path with in-progress San Souci Urban Trail	Two-Way Shared Use Path	Independent ROW
Leah/ Greenwood/ Owen/King	Roanoke	Woonasquatucket River Greenway	Urban Trail	Provides connections to schools and the Woonasquatucket River Greenway	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
New path	Dike/6-10 Connector	Pilsudski	Urban Trail	Connects proposed Pilsudski Urban Trail with 6-10 Connector in-progress path connection	Two-Way Shared Use Path	Independent ROW
Amherst/Tuxedo	Valley	Atwells	Urban Trail	Connects Donigian Park path to Woonasquatucket River Greenway at Atwells	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Smith	Oakland	Orms	Urban Trail	Completes Smith Hill connection from Oakland to College Hill; enhancing access to schools, parks, downtown, and other destinations	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side
Smith	Orms	Park	Urban Trail	Extends proposed Smith St. Urban Trail by State Capitol west to Smith Hill neighborhood; enhances access to park	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side, Narrow travel or parking lane (Lane Diet)

Project List continued

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Smith	Park	Canal	Urban Trail	Provides connectivity through State Capitol area to in-progress Urban Trail on Canal St.	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Charles/Mill/ Canal	Ashburton/ Randall	Smith	Urban Trail	Connects to in-progress RIDOT project on Canal and proposed W. River St. Urban Trail; moves toward better access to Downtown from Charles and Mount Hope	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet), Move curbs
Oakland/PVP	Higgins	Eaton	Urban Trail	North-south connection between neighborhoods; enhances access to Providence College, Davis Park, and schools; extends proposed Dean St./ Pleasant Valley Pkwy. Urban Trail north to in-progress Eaton St. Urban Trail	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Douglas	Orms	Eaton	Great Street	Connects to in-progress Eaton St. Urban Trail, enhances access to parks, schools, and Providence College	Conventional Bike Lanes	Narrow travel or parking lane (Lane Diet)
Glenbridge	Richland/ Sacramento	Mattie	Urban Trail	Proposed long-term recommendation for enhancing connectivity between Manton, Olneyville, Mount Pleasant, and Hartford, potentially when the bridge is rebuilt	Two-Way Urban Trail with Accessible Sidewalk	Enhance quality of existing facility
Glenbridge	Manton	Richland St/ Sacramento St	Urban Trail	Extends proposed Glenbridge Urban Trail north, enhancing connectivity between Manton and Hartford	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)

Key Traffic Calming Recommendations

The area of Smith Hill between Smith Street and Douglas Avenue:

- Investigate speeding concerns along Camden Avenue, Wayne Street, and the area north of Douglas, including Whipple Street.
- Area has seen over 10 traffic calming requests over the last 10 years, including on Candace, Goddard, Wayne, Nolan, Chalkstone, Ruggles, Camden, Osborn, Pekin, and Jefferson streets

Areas along and around proposed neighborhood greenways:

- Aleppo Street
- Amherst Street and Tuxedo Avenue
- Greenwood, Owen, and King streets

Key Intersection Improvement Recommendations

Street 1	Street 2	Type
6/10 Connector path	Dike	Network crossing
Atwells	Manton	Neighborhood comment
Atwells	Bowdoin	Neighborhood comment
Atwells	Valley	Pedestrian/Bicycle Crash Focus Intersection
Atwells	Eagle	Pedestrian/Bicycle Crash Focus Intersection
Broadway	Westminster	Pedestrian/Bicycle Crash Focus Intersection
Dean	Kinsley	Network crossing
Dean	Promenade	Network crossing
Eagle	Kinsley	Network crossing
Florence	Amherst	Neighborhood comment
Glenbridge	Buttonhole	Network crossing
Hartford	Atwood	Neighborhood comment
Manton	Delaine	Pedestrian/Bicycle Crash Focus Intersection
Manton	San Souci	Network crossing
Manton	Hyat	Neighborhood comment
Oakland	Eaton	Network crossing
Orms	Jefferson	Neighborhood comment
San Souci	Woonasquatucket River Greenway Extension	Network crossing
Smith	Oakland	Network crossing
Westminster	Stokes	Neighborhood comment
Woonasquatucket River Greenway	Aleppo	Network crossing
Woonasquatucket River Greenway	King	Network crossing
Woonasquatucket River Greenway	Woonasquatucket River Greenway Extension	Network crossing

Federal Hill and West End

Key Urban Trail Recommendations

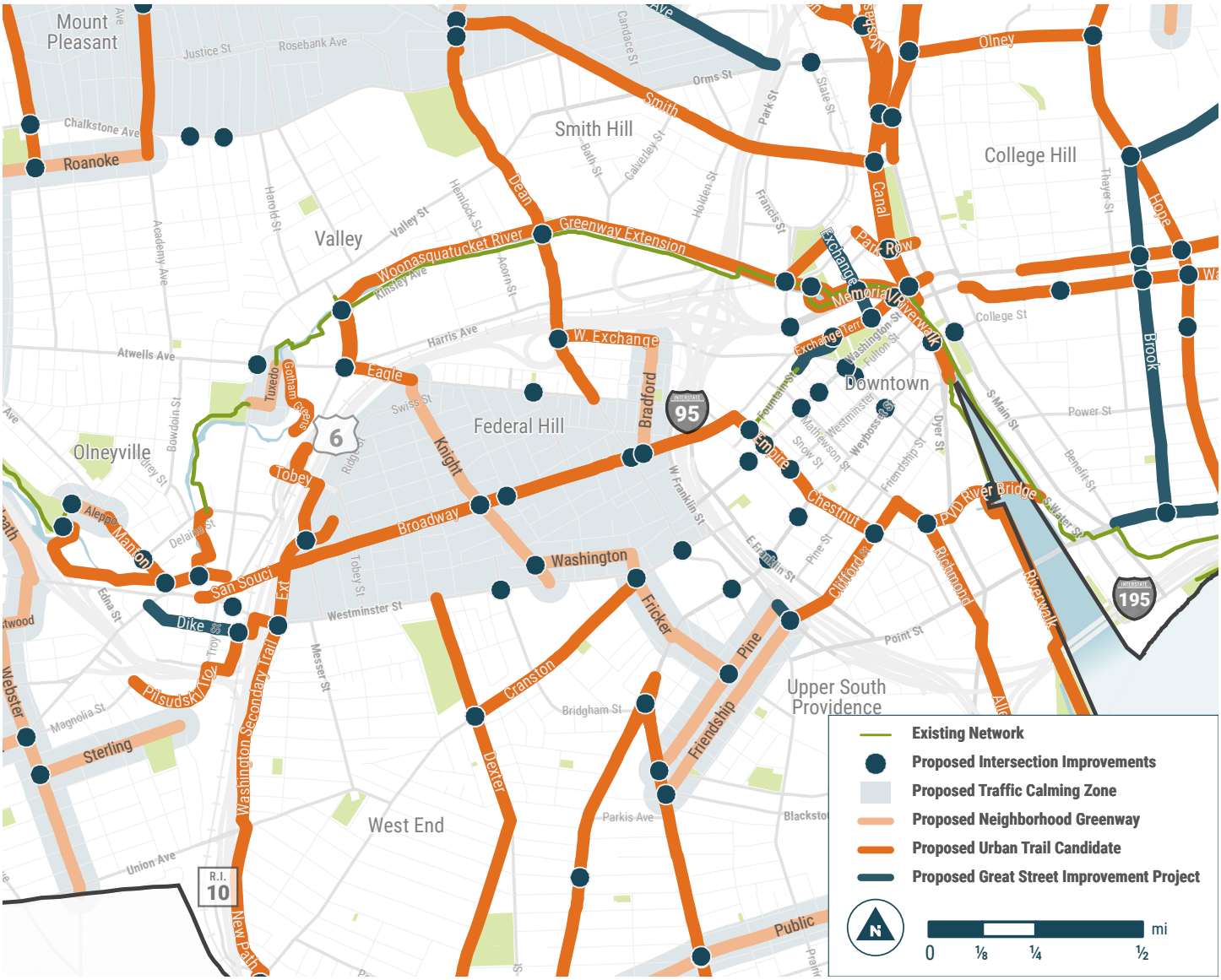
Create an Urban Trail along Broadway. Convert the existing bike lanes on Broadway to an Urban Trail to create a primary route for people walking, riding bicycles, and using micromobility options within and through the neighborhood, connecting with Olneyville and Downtown as well as new 6/10 Connector Project Urban Trails.

Create new Urban Trail connections to adjacent neighborhoods. Implement Urban Trails on Dean, Dexter, and Cranston streets to better connect Federal Hill to Valley, Smith Hill, the West End. Create neighborhood greenways on Knight, Bradford, Washington, Winter, and Fricker streets to fill the gaps in the neighborhood's Urban Trail network.

Create Urban Trails along the 6/10 Connector and Huntington Avenue. Extend the Washington Secondary Trail from its terminus in Cranston to Union Avenue to connect with the new off-road Urban Trail being constructed to the east of the 6/10 Connector between Union and Tobey streets, using Salvati Way. Connect the West End to Elmwood and Reservoir via a new off-road Urban Trail along Huntington Avenue.

Create an Urban Trail along Dean Street/Pleasant Valley Parkway. Complete an Urban Trail connection along Dean Street and Pleasant Valley Parkway from Atwells Avenue to Eaton Street, connecting Elmhurst, Smith Hill, Valley, and Federal Hill.

Neighborhood Map



Project List

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Dean	Atwells	Valley	Urban Trail	Link in project currently in design to enhance access for micromobility users along this key corridor between Federal Hill, Valley, and Smith Hill	Two-Way Urban Trail with Accessible Sidewalk	Move curbs
Dexter	Cranston	Westminster	Urban Trail	Trail segment enhancing access to Cranston St. Armory and Dexter Training Grounds	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side
Washington Secondary Trail Ext	Union	Tobey	Urban Trail	New extension of the existing trail to be completed by the 6/10 Reconstruction Project	Two-Way Shared Use Path	Move curbs
Tobey	Washington Secondary Trail Ext	Helme	Urban Trail	New connection between Federal Hill and Olneyville neighborhoods to be completed by 6/10 Reconstruction Project	Two-Way Shared Use Path	Move curbs
Winter	Westminster	Washington	Urban Trail	Provides one-block connection between Cranston and Washington Urban Trails	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Dexter	Huntington	Potters	Urban Trail	With other Dexter project, provides north-south connection between West End and Federal Hill; connects proposed Huntington Ave. and Cranston Urban Trails	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Dexter	Potters	Cranston	Urban Trail	With other Dexter project, provides north-south connection between West End and Federal Hill; connects proposed Huntington Ave. and Cranston Urban Trails	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side
Cranston	Fricker	Dexter	Urban Trail	Connects Dexter and proposed Winter/ Washington/Knight Urban Trails; enhances school access	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side, Narrow travel or parking lane (Lane Diet)
Huntington	Mashapaug	Cranston	Urban Trail	Provides key east-west connection for West End and Elmwood; connects to proposed Dexter and Elmwood Urban Trails	Two-Way Shared Use Path	Narrow travel or parking lane (Lane Diet)
New path	Cranston	Union	Urban Trail	Connects proposed Huntington Ave Urban Trail with in-progress Washington Secondary Trail extension being built as part of the 6/10 Reconstruction Project	Two-Way Shared Use Path	Narrow travel or parking lane (Lane Diet)
Washington	Knight	Winter	Urban Trail	Connects to proposed Knight and Winter Urban Trails	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Atwells	Eagle	Knight	Urban Trail	Uses the bridge over the 6-10 Connector to connect the proposed Eagle and Knight Urban Trails; enhances Olneyville-Federal Hill neighborhood connectivity	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side, Narrow travel or parking lane (Lane Diet)
Knight	Atwells	Westminster	Urban Trail	Connects proposed Atwells, Broadway, and Washington Urban Trails; enhances connections between Olneyville, Federal Hill, and West End neighborhoods	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Broadway	Westminister	Empire	Urban Trail	Key connection for Downtown, Federal Hill, and Olneyville neighborhoods	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
New path/ bridge	Washington Secondary Trail Extension at Westminster	Dike	Urban Trail	As part of the 6/10 Reconstruction Project, enhances connectivity between Olneyville and West End	Two-Way Shared Use Path	Move curbs
W Exchange St	Dean	Bradford	Urban Trail	Connects proposed Dean St. Urban Trail to proposed Bradford St. Urban Trail	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side, Move curbs
Bradford	W Exchange St	Broadway	Urban Trail	Connects proposed W Exchange St. Urban Trail with proposed Broadway Urban Trail; enhances access to park and retail	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Fricker/ Lockwood	Cranston/ Westminster	Pine	Urban Trail	Connects in-progress Pine and Friendship Urban Trails with proposed Cranston and Winter Urban Trails; enhances access to schools	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)

Key Traffic Calming Recommendations

The area between Westminster Street and Atwells Avenue in Federal Hill:

- Includes Knight, Washington, and Winter neighborhood greenways
- Neighborhood meeting comments received on speeding and cut-through traffic on multiple streets, including Almy, America, Courtland, Marshall, Sutton, and Vinton streets, and Bainbridge Avenue
- Neighborhood comments also included traffic calming requests at the intersections of Carpenter and Ringgold streets and West Fountain and Battey streets

Areas along and around proposed neighborhood greenways:

- Bradford Street
- Fricker Street
- Dexter Street between Huntington and Potters Avenues

Key Intersection Improvement Recommendations

Street 1	Street 2	Type
Atwells	De Pasquale	Pedestrian/Bicycle Crash Focus Intersection
Broadway	Knight	Network crossing
Broadway	Vinton	Pedestrian/Bicycle Crash Focus Intersection
Broadway	Dean	Pedestrian/Bicycle Crash Focus Intersection
Broadway	Bradford	Network crossing
Carpenter	Ringgold	Neighborhood comment
Carpenter	John J. Partington Way	Neighborhood comment
Carter	Bucklin	Network crossing
Cranston	Dexter	Network crossing Pedestrian/Bicycle Crash Focus Intersection
Elmwood	Greenwich	Neighborhood comment
Huntington	Dexter	Network crossing
Huntington	New path along Salvati Way	Network crossing
Knight	Washington	Network crossing
Messer	Marvin	Neighborhood comment
Sycamore	Hudson	Neighborhood comment
Tobey	Washington Secondary Trail Ext	Network crossing
W Exchange	Dean	Network crossing
W Fountain	Battey	
Westminster	Winter	Network crossing
Westminster	Bridgham	Pedestrian/Bicycle Crash Focus Intersection
Westminster	Washington Secondary Trail Ext	Network crossing
Westminster	Cahir	Pedestrian/Bicycle Crash Focus Intersection

Mount Hope, Hope, and Blackstone

Key Urban Trail Recommendations

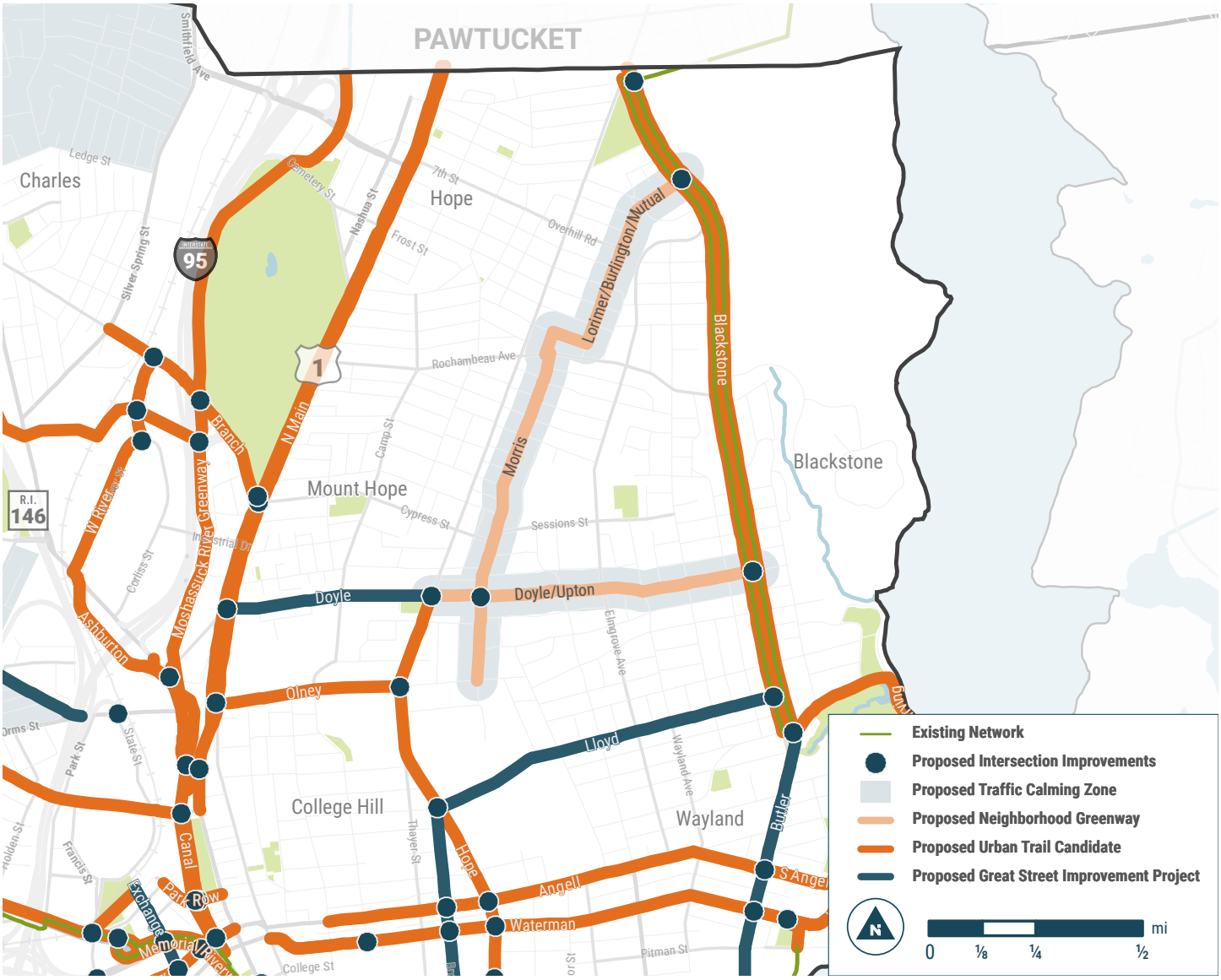
Create north-south Urban Trails on North Main Street, Lorimer/ Morris avenues, and Blackstone Boulevard. Address north-south connectivity for people walking, riding bicycles, and using other micromobility options on these three corridors, while responding to each of the their contexts with different conceptual designs.

- *North Main Street:* North Main Street is a commercial street, RIPTA R-Line route, and high-ranking crash corridor in the City's Vulnerable Road User Safety Action Plan (2009-15). Implement an on road Urban Trail from Smith Street to the northern city limit.
- *Lorimer and Morris avenues:* Implement a neighborhood greenway generally paralleling Hope Street, to provide north-south connectivity near commercial destinations along Hope Street. With existing traffic calming features, Lorimer Avenue is well-suited for a neighborhood greenway. Morris Avenue was identified as a route that is already a preference for people riding bicycles.
- *Blackstone Boulevard:* Blackstone Boulevard is a key segment on the Statewide Bicycle System and East Coast Greenway. It already provides space for people to walk via the boulevard and ride bicycles via conventional striped bike lanes. The plan envisions minor upgrades to the bike lanes to better buffer and separate them from the adjacent travel lane.

Create an Urban Trail along Doyle Avenue. Implement an Urban Trail along Doyle Avenue to provide east-west connectivity in the southern part of Mount Hope and Blackstone.

Reduce barriers to Urban Trail connectivity in Mount Hope. Implement Urban Trails on Branch Avenue, West River Street, and Ashburton Street to increase overall connectivity within Mount Hope and mitigate the east-west barrier posed by I-95.

Neighborhood Map



Project List

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Hope	Doyle	Lloyd	Urban Trail	Connects proposed Doyle Urban Trail to Olney St. Urban Trail and further south to Waterman; enhances access to schools and Brown University	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side
Doyle & Upton	Blackstone Blvd	Hope	Urban Trail	Provides central east-west Urban Trail for the east side of the City; connects several neighborhoods and proposed Hope St. and Morris Ave. Urban Trails with the Blackstone River path	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Doyle	Hope	N Main	Great Street	Enhances walking conditions; connects to propoesd N. Main St.; Hope St., and Doyle Ave. Urban Trails; enhances access to parks and schools	Other Great Street Improvement	Enhance quality of existing facility
N Main	North City Limit	Branch/ Cypress	Urban Trail	Long-term recommendation to improve connectivity between Hope, Mount Hope, College Hill, and Downtown, as well as north to Pawtucket	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Olney	Hope	N Main	Urban Trail	Connects proposed N. Main St. and Hope Urban Trails (corridor includes existing striped bike lanes)	One-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side, Narrow travel or parking lane (Lane Diet)
Ashburton	Charles	Randall/ Charles	Urban Trail	Links proposed W. River St. and Charles/Mill/ Canal Urban Trails	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side, Remove travel lane (Road Diet)
W River	Charles	Branch	Urban Trail	Connects proposed Ashburton and Branch Urban Trails	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet), Move curbs
Branch	N. Main	Silver Spring	Urban Trail	Connects Charles and Mount Hope neighborhoods and proposed N. Main St. and W. River St. Urban Trails	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet), Move curbs
Lorimer/ Burlington/ Mutual	Blackstone	Rochambeau	Urban Trail	Neighborhood street alternative to Hope St.; enhances access to Rochambeau retail area; connects to Blackstone Blvd path	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Morris	Rochambeau	Olney	Urban Trail	Neighborhood street alternative to Hope St.; enhances access to Rochambeau retail area, schools, and parks; connects to proposed Lorimer/Burlington/Mutual Neighborhood Greenway	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
N Main	Branch	Smith	Urban Trail	Key north-south Urban Trail connection; enhances access to Downtown; connects to future Urban Trails on Smith St. and Canal St.	One-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
E River St/River Rd/Irving	Blackstone River Bikeway/Pitman	Irving/ Blackstone Blvd	Urban Trail	Fills in a gap in the Blackstone River Bikeway and East Coast Greenway; connects to future Henderson Bridge path and proposed Waterman St. Urban Trail	Two-Way Shared Use Path	Move curbs, Independent ROW
Blackstone	Irving Ave	Hope St	Urban Trail	Improves conditions for people bicycling and using micromobility with additional separation from motor vehicle traffic	One-Way Urban Trail with Accessible Sidewalk	Enhance quality of existing facility

Key Traffic Calming Recommendations

Areas along and around proposed neighborhood greenways:

- Lorimer Avenue, Burlington Street, Mutual Place, and Morris Avenue
- Doyle and Upton avenues

Key Intersection Improvement Recommendations

Street 1	Street 2	Type
Blackstone	Hope	Neighborhood comment
Blackstone	Alfred Stone	Pedestrian/Bicycle Crash Focus Intersection
Blackstone	Lorimer	Network crossing
Blackstone	Elmgrove	Neighborhood comment
Blackstone	Doyle	Network crossing
Blackstone	Lloyd	Network crossing
Blackstone	Irving	Network crossing
Branch	W River	Network crossing
Branch	I-95 northbound ramps	Pedestrian/Bicycle Crash Focus Intersection
Branch	N Main	Network crossing Pedestrian/Bicycle Crash Focus Intersection
Camp	Abbott	Neighborhood comment
Charles	Ashburton	Network crossing
Doyle	Morris	Network crossing
Firglade	Elgin	Neighborhood comment
Hope	Olney	Network crossing
Hope	Doyle	Network crossing
Hope	Doyle	Network crossing
Hope	Olney	Network crossing
N Main	Doyle	Network crossing
N Main	Olney	Network crossing
Orms	State	Pedestrian/Bicycle Crash Focus Intersection
Rochambeau	Cole	Neighborhood comment
Summit	Edgehill	Neighborhood comment
Summit	7th	Neighborhood comment
West River Greenway	W River	Network crossing
West River Greenway	Moshassuck River Greenway	Network crossing

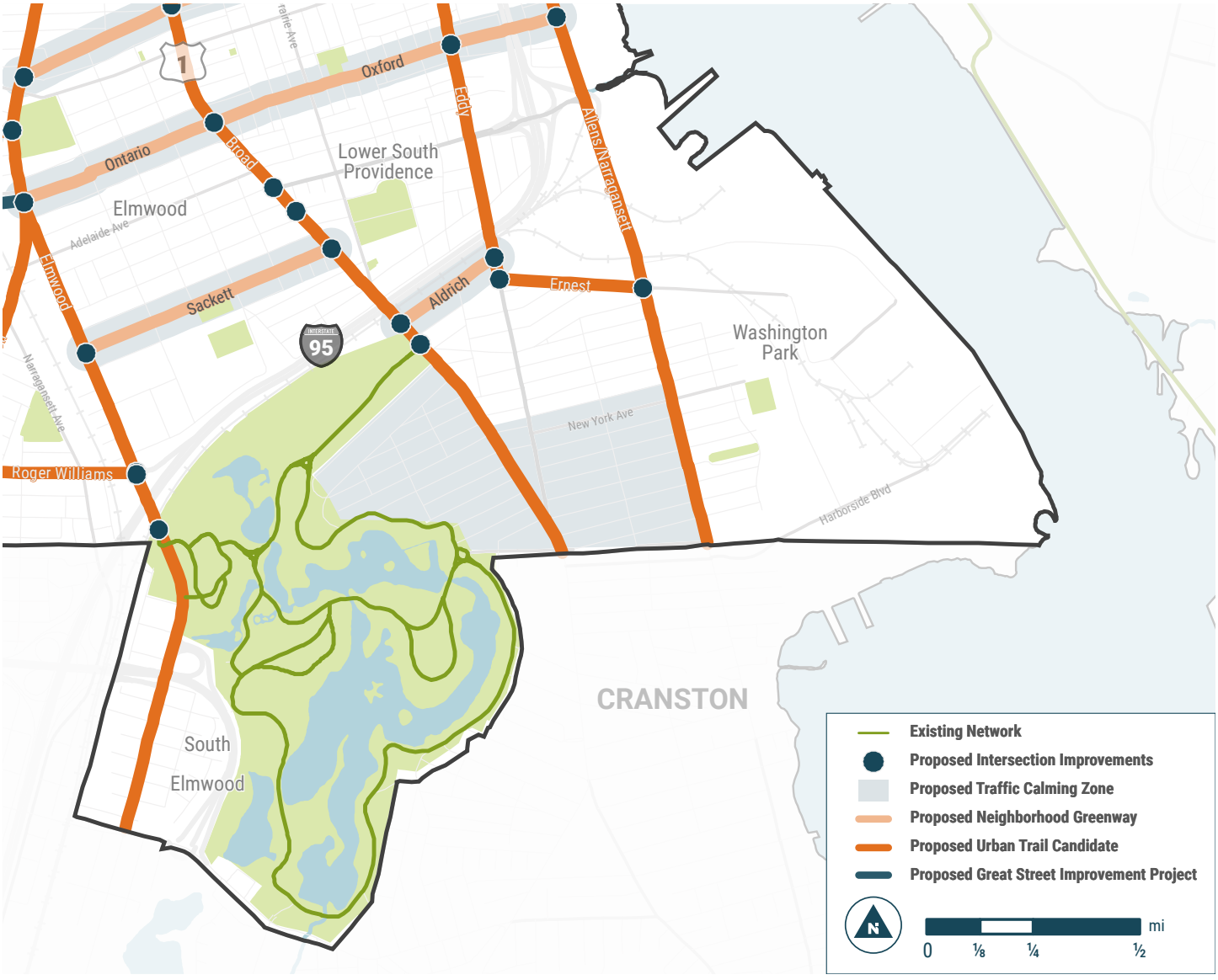
South Elmwood and Washington Park

Key Urban Trail Recommendations

Implement and extend City Walk along Broad Street and Elmwood Avenue. City Walk is an in-progress Urban Trail project, planned for construction in 2020 on Broad, Pine, and Friendship Streets that will: strengthen connections between South Providence, other neighborhoods, parks, and civic institutions; improve safety for people traveling by all modes; and celebrate the diversity and culture of Providence neighborhoods through public art, wayfinding signage, and vibrant public places. City Walk should be extended from its current planned terminus at Hawthorne Street, along the rest of Broad Street to the city line, and along all of Elmwood Avenue as envisioned by the 2014 City Walk study.

Create Urban Trails on Allens Avenue and Eddy Street. Urban Trails on these two major streets will help residents connect to Downtown, the Hospital District, and Washington Park. Since it is a state-maintained road, an Urban Trail on Allens Avenue will require partnership and coordination with RIDOT.

Neighborhood Map



Project List

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Broad	Hawthorne	Elmwood	Urban Trail	City Walk project	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Reservoir	Elmwood	Roger Williams	Urban Trail	Connects Reservoir and Elmwood; connects to proposed Urban Trails on Elmwood Ave. and Roger Williams Ave.	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet), Remove travel lane (Road Diet)
Roger Williams	Reservoir	Elmwood	Urban Trail	Connects Reservoir Ave. and Elmwood Ave. Urban Trails; enhances access to Roger Williams Park	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side
Broad	Hawthorne	Southern City Limit	Urban Trail	Future City Walk phase; enhances access from Washington Park to Roger Williams Park	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Eddy	Public	Ernest	Urban Trail	Connects proposed Public, Oxford, and Ernest/Aldrich Urban Trails	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side, Narrow travel or parking lane (Lane Diet)
Ernest	Eddy	Allens	Urban Trail	Along with Aldrich, connects proposed Allens Ave Urban Trail with City Walk	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side, Narrow travel or parking lane (Lane Diet)
Allens/ Narragansett	Montgomery	Public	Urban Trail	North-south connection benefits	One-Way Urban Trail with Accessible Sidewalk	Enhance quality of existing facility, Narrow travel or parking lane (Lane Diet)
Aldrich	Eddy	Broad	Urban Trail	Along with Ernest St., connects proposed Allens Ave. Urban Trail with City Walk; enhances access to Roger Williams Park	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)

Key Traffic Calming Recommendations

The area of Washington Park west of Broad Street, adjacent to Roger Williams Park

- Comment received regarding cut-through traffic on Calla Street
- Area has seen 3 traffic calming requests in the last 10 years

The area of southern Washington Park, between Broad Street and Allens Avenue

- Comment received regarding speeding in the neighborhood

Along and around the proposed Aldrich Street neighborhood greenway

Key Intersection Improvement Recommendations

Street 1	Street 2	Type
Allens	Ernest	Network crossing
Broad	Aldrich	Network crossing
Broad	Hawthorne	Network crossing
Eddy	Ernest	Network crossing
Eddy	Aldrich	Network crossing
Elmwood	Linden	Network crossing

Downtown

Key Urban Trail Recommendations

Complete in-progress Urban Trails.

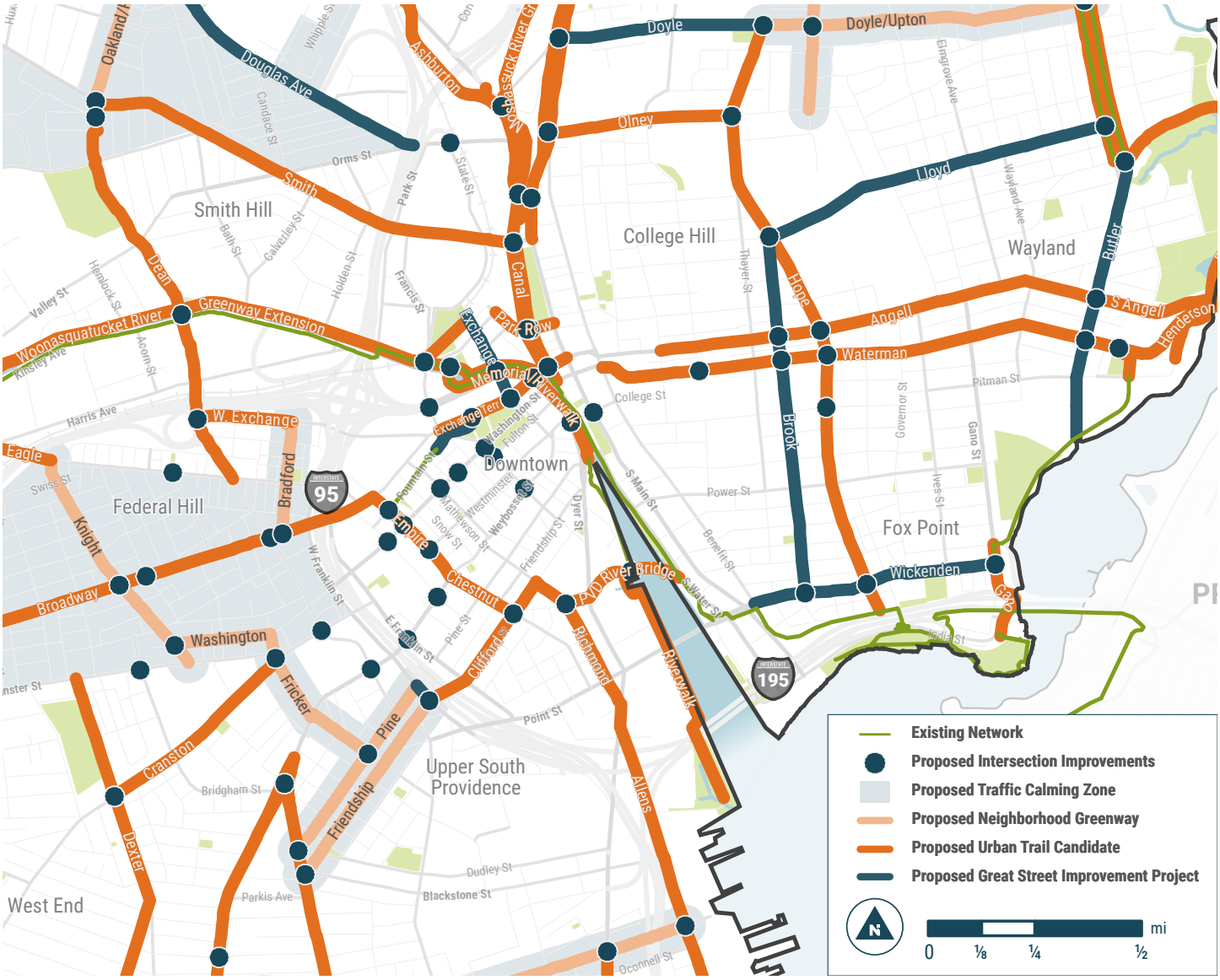
- The completion of the Providence River Bridge project in 2019 will provide a new connection for people walking, riding bicycles, and using other micromobility options between Downtown, Fox Point, and College Hill and help link the Providence Riverwalk, City Walk, and East Bay Bike Path.
- Improvements to Kennedy Plaza will include an Urban Trail on Exchange Terrace.
- Convert the existing separated bike lane on Fountain Street to a permanently protected two-way Urban Trail and extend it from Union Street through the Dorrance Street intersection to connect to the planned Exchange Terrace project.
- The construction of the Urban Trail segment along Canal Street and Canal Walk between Smith and Washington streets in 2019 will provide an important north-south connection connecting part of the East Side to Downtown.

Create a continuous Urban Trail route on Empire, Chestnut, and Richmond streets to offer enhanced north-south connectivity within Downtown. The Empire/Chestnut/Richmond trail will perpendicularly intersect City Walk on Clifford Street and connect on the north and south with the Broadway and Allens Avenue (via a one-block segment on Eddy Street) proposed Urban Trails.

Enhance and extend the Riverwalk. Enhance the accessibility of the Providence Riverwalk and access points to it for people with limited mobility and for people riding bicycles. Study an extension of the Riverwalk to Collier Point Park.

Connect to Exchange Street Great Streets improvements. Striped bike lanes will be added to Exchange Street between Providence Station and Exchange Terrace as part of RIPTA's Downtown Transit Connector project.

Neighborhood Map



Project List

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Clifford	W Franklin	Richmond	Urban Trail	City Walk project	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Chestnut	Weybosset	Clifford	Urban Trail	In-progress project that extends Empire St. and Clifford St. Urban Trails	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side, Consolidate parking one side
Richmond	Clifford	Eddy	Urban Trail	In-progress project that serves as part of an Urban Trail route through Downtown; connects in-progress Clifford St. Urban Trail segment with proposed Ship St. Urban Trail and in-progress Providence River Bridge project	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side, Remove travel lane (Road Diet)
Exchange Terr	Fountain	Exchange St	Urban Trail	In-progress Downtown Urban Trail and transit improvements as part of Kennedy Plaza Project	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Providence River Bridge	Dyer/Eddy/Ship	S Water	Urban Trail	Project under construction	Two-Way Shared Use Path	Independent ROW
Empire	Broadway/Sabin	Broad/ Weybosset	Urban Trail	Serves as part of an Urban Trail route through Downtown; connects to existing Fountain St. Urban Trail and proposed Broadway Urban Trail	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Ship	Richmond	Eddy	Urban Trail	Serves as part of an Urban Trail route through Downtown; connects to India Point Park via the in-progress Providence River Bridge and existing Fox Point Trails	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Riverwalk	Existing southern terminus	Collier Point Park	Urban Trail	Extends existing Riverwalk south to serve Collier Point Park; expanding riverfront access	Two-Way Shared Use Path	Independent ROW
Exchange St	Railroad St	Exchange Terr	Great Street	Adds dedicated space for people bicycling and using micromobility as part of the Downtown Transit Connector project	Conventional Bike Lanes	Remove parking two sides, Remove travel lane (Road Diet)
Broadway	Westminister	Empire	Urban Trail	Key connection for Downtown, Federal Hill, and Olneyville neighborhoods	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Park Row	Railroad St	N Main	Urban Trail	Provides a cross-river connection between Downtown and College Hill, connecting the in-progress RIDOT Canal St. project to the railroad station	One-Way Urban Trail with Accessible Sidewalk	Remove parking two sides
Steeple	Exchange Terr	N Main	Urban Trail	Provides a cross-river connection between Downtown and College Hill, connecting the in-progress Kennedy Plaza and RIDOT Canal St. projects	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Memorial Blvd/ Riverwalk	Dyer/S Water	Park	Urban Trail	Connects to several Downtown proposed Urban Trails and destinations, enhances micromobility options along the river	Two-Way Urban Trail with Accessible Sidewalk	Enhance quality of existing facility
Enhance existing path	Francis/Finance Way intersection	Amtrak station	Urban Trail	Better connects existing path along River under Providence Place Mall	Two-Way Shared Use Path	Independent ROW
Eddy	Richmond	Allens	Urban Trail	Key link between Downtown Urban Trail network and proposed Allens Ave Urban Trail	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Fountain/Emmet Square	Union	Exchange	Great Street	Fills a gap by connecting the Fountain Street and future Exchange Terrace Urban Trails	Buffered Bike Lanes	Remove parking one side

Key Traffic Calming Recommendations

Although all Downtown streets should be designed for slow movement of motor vehicles, focus corridors for traffic calming interventions in Downtown include:

- Washington Street
  - » Five intersections with crash clusters involving people walking and riding bicycles (six or more crashes per intersection between 2009-17): Dorrance Street, Union Street, Mathewson Street, Empire Street, and Greene Street
- Dorrance Street
  - » Three intersections with crash clusters involving people walking and riding bicycles: Washington Street, Fulton Street, Weybosset Street
  - » The complex intersection with Fountain and Sabin Streets and Exchange Terrace (Emmet Square)
- Greene Street
  - » Two intersections with crash clusters involving people walking and riding bicycles: Washington Street, Broad Street
- Memorial Boulevard
  - » Two intersections with crash clusters involving people walking and riding bicycles: Francis Street, Westminster Street
  - » Neighborhood meeting comments regarding traffic calming, crossing concerns, and conditions for people riding bicycles at College/Westminster streets and Exchange Terrace
- I-95 service roads
  - » The East Franklin Street/Broad Street intersection is a crash cluster for people walking and riding bicycles.
  - » Neighborhood meeting comments regarding general safety concern with I-95 crossings and a specific concern about speeding and pedestrian safety at the I-95 off-ramp/Point Street intersection

Key Intersection Improvement Recommendations

Street 1	Street 2	Type
Broad	Greene	Pedestrian/Bicycle Crash Focus Intersection
Broad	E Franklin	Pedestrian/Bicycle Crash Focus Intersection
Broad	Claverick	Pedestrian/Bicycle Crash Focus Intersection
Canal	Park Row	Network Crossing Pedestrian/Bicycle Crash Focus Intersection
Chestnut	Clifford	Network Crossing
Chestnut	Bassett	Neighborhood comment
Clifford	Dyer	Neighborhood comment
Empire	Fountain	Network Crossing
Exchange St	Exchange Terr	Network Crossing
Francis	Path to Providence Station	Network Crossing
Fulton	Dorrance	Pedestrian/Bicycle Crash Focus Intersection
I-95 northbound ramps	Point	Neighborhood comment
Memorial Blvd	Francis	Pedestrian/Bicycle Crash Focus Intersection
Memorial Blvd	Exchange Terr	Network crossing
Memorial Blvd	Exchange St	Network crossing
Memorial Blvd	Westminster	Pedestrian/Bicycle Crash Focus Intersection
Moshassuck River Greenway	Park Row	Network crossing
Richmond	Ship	Network crossing
Riverwalk	Providence River Bridge	Network crossing
Riverwalk	Waterplace Park	Network crossing
Washington	Dorrance	Pedestrian/Bicycle Crash Focus Intersection
Washington	Union	Pedestrian/Bicycle Crash Focus Intersection
Washington	Mathewson	Pedestrian/Bicycle Crash Focus Intersection
Washington	Empire	Pedestrian/Bicycle Crash Focus Intersection
Washington	Greene	Pedestrian/Bicycle Crash Focus Intersection
Westminster	Cathedral Square	Neighborhood comment
Weybosset	Dorrance	Pedestrian/Bicycle Crash Focus Intersection

Charles and Wanskuck

Key Urban Trail Recommendations

Create a neighborhood greenway on Veazie Street to provide connectivity to schools, a library, and Wanskuck Park and serve as a parallel route to Douglas Avenue, whose narrowness creates challenges for an Urban Trail. Create neighborhood greenways on Eva, Corina, and Appian streets that will extend from the Veazie Street neighborhood greenway to enhance access to Providence College and Hawkins Street.

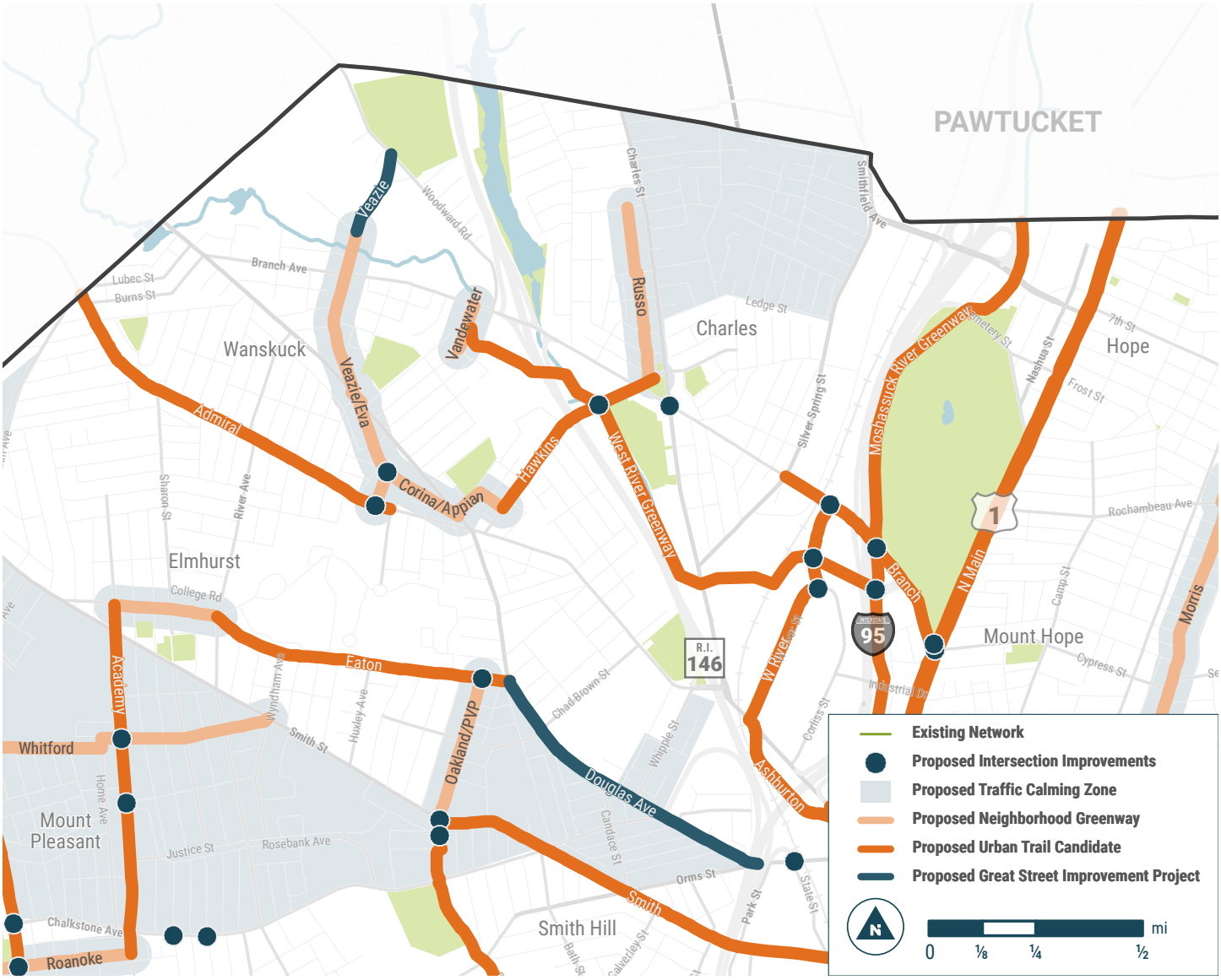
Implement a neighborhood greenway on Russo Street as a parallel route to Charles Street. In coordination with residents, property owners, and other stakeholders, study the feasibility of making the informal path north of Paul Street more accessible to people with limited mobility and enhancing access north to Hagan Street by widening the path to 5-10 feet wide, installing a firm, stable, and slip-resistant surface, and installing an ADA-compliant ramp at Paul Street.

Implement an Urban Trail on Hawkins Street, whose bridge over Route 146 is currently being replaced, to connect the two neighborhoods. This project would extend to Hawkins Square.

Implement an Urban Trail on Admiral Street from the North Providence city limits to Huxley Avenue adjacent to the Providence College campus. In the short term, an Urban Trail on the one-block segment of Admiral Street between Eva Street to Huxley Avenue would fully connect the Veazie/Eva neighborhood greenway to Providence College. A connection to Elmhurst through and-or around the Providence College campus should be studied further in collaboration with Providence College.

Establish off-road Urban Trails along the West and Moshassuck rivers. A long-term vision is for Charles and Wanskuck to one day be connected to the Urban Trail Network with an off-road path and greenway along the West and Moshassuck rivers. The City should begin collaboration with property owners, residents, and other stakeholders to establish a concept and bring these segments from vision to reality.

Neighborhood Map



Project List

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Hope	Doyle	Lloyd	Urban Trail	Connects proposed Doyle Urban Trail to Olney St. Urban Trail and further south to Waterman; enhances access to schools and Brown University	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side
Hope	Lloyd	Waterman	Urban Trail	Extends proposed Waterman Urban Trail connection to Brown University destinations and schools	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side, Narrow travel or parking lane (Lane Diet)
Hope	Waterman	George M Cohan Blvd	Urban Trail	Connects College Hill and Fox Point; links proposed Waterman Urban Trail with India Point Park	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side
Providence River Bridge	Dyer/Eddy/Ship	S Water	Urban Trail	Project under construction	Two-Way Shared Use Path	Independent ROW
Charles/Mill/ Canal	Ashburton/ Randall	Smith	Urban Trail	Connects to in-progress RIDOT project on Canal and proposed W. River St. Urban Trail; moves toward better access to Downtown from Charles and Mount Hope	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet), Move curbs
Wickenden	Benefit	Gano	Great Street	Enhances walkability along this key east-west street	Other Great Street Improvement	Enhance quality of existing facility
Canal	Smith	Washington	Urban Trail	Enhances access to Downtown, the train station, and the Providence and Woonasquatucket Rivers	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Brook	Lloyd	Wickenden	Great Street	Serves as parallel to Hope St. to enhance micromobility connectivity while enhancing parking options for commercial areas and Brown University	Other Great Street Improvement	Enhance quality of existing facility
S Angell/Angell	Henderson Bridge	Hope	Urban Trail	Connects to in-progress Henderson Bridge path and proposed River Dr./Blackstone River Path and Hope St. Urban Trails; enhances access to schools, parks, and Brown Univ.	One-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Angell	Hope	Prospect	Urban Trail	Connects to proposed Hope St. Urban Trail, enhances access to Brown University	One-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Henderson Bridge	Angell/ Waterman	East Providence	Urban Trail	RIDOT bridge reconstruction project, currently in design, will provide critical connection between East Providence	Two-Way Shared Use Path	Move curbs
Gano	India	Trenton/ Gano Park	Urban Trail	In-progress trail extension project providing key connection between the Blackstone River path, East Bay path, and India Point Park	Two-Way Shared Use Path	Move curbs
Doyle & Upton	Blackstone Blvd	Hope	Urban Trail	Provides central east-west Urban Trail for the east side of the City; connects several neighborhoods and proposed Hope St. and Morris Ave. Urban Trails with the Blackstone River path	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Waterman	Butler	Henderson Bridge	Urban Trail	Completes connection from Brown University to Blackstone River path (via proposed Witherby Park path) and new path to be built by RIDOT as part of the Henderson Bridge project	One-Way Urban Trail with Accessible Sidewalk	Enhance quality of existing facility
Waterman	Hope	Butler	Urban Trail	Connects College Hill and Wayland	One-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Waterman	Prospect	Hope	Urban Trail	Provides a central micromobility route for Brown University and College Hill; connects to proposed Hope St. Urban Trail	One-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Waterman	Benefit	Prospect	Urban Trail	Allows separated space for micromobility users to climb the hill	One-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)

Project List continued

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Butler	Pitman	Blackstone Blvd	Great Street	Enhances walkability along this street, which would connect with proposed River St. and Blackstone Bike path	Other Great Street Improvement	Enhance quality of existing facility
Witherby Park path	Waterman	Pitman	Urban Trail	Key connection between existing Blackstone River path access at Pitman St., future Henderson Bridge path, and proposed Waterman Urban Trail	Two-Way Shared Use Path	Independent ROW
Lloyd	Hope	Blackstone	Great Street	Enhances walkability along this route connecting several schools, recreational areas, and the Blackstone Blvd path	Other Great Street Improvement	Enhance quality of existing facility
E River St/River Rd/Irving	Blackstone River Bikeway/Pitman	Irving/ Blackstone Blvd	Urban Trail	Fills in a gap in the Blackstone River Bikeway and East Coast Greenway; connects to future Henderson Bridge path and proposed Waterman St. Urban Trail	Two-Way Shared Use Path	Move curbs, Independent ROW

Key Traffic Calming Recommendations

Charles neighborhood east of Charles Street

- Neighborhood meeting comments included concerns about speeding on Windmill and Ledge streets

Areas along and around proposed neighborhood greenways:

- Veazie Street
- Eva, Corina, and Appian streets
- Russo Street
- Vandewater Street

Key Intersection Improvement Recommendations

Street 1	Street 2	Type
Admiral	Eva	Network crossing
Branch	Woodward	Neighborhood comment
Charles	Branch	Pedestrian/Bicycle Crash Focus Intersection
Douglas	River	Neighborhood comment
Greenley	Alaska	Neighborhood comment
Job	Bismark	Neighborhood comment
Veazie	Eva	Network crossing
West River Greenway	Hawkins	Network crossing

Fox Point, College Hill, and Wayland

Key Urban Trail Recommendations

Complete in-progress Urban Trails. The completion of the Providence River Bridge project in 2019 will provide a new connection for people walking, riding bicycles, and using other micromobility options between Downtown, Fox Point, and College Hill and help link the Providence Riverwalk, City Walk, and the East Bay Bike Path. The India Point Park bridge overpass and George Redman Linear Park continue this east-west connectivity and directly tie the East Bay Bike Path, which runs nearly 15 miles southeast to Bristol, into Fox Point. Wayfinding will be an important strategy for the navigability of this connection. RIDOT is also adding an important north-south connection on the east side of Fox Point, where the Gano Gateway project will connect the Blackstone Bikeway with India Point Park and the East Bay Bike Path. RIDOT's Henderson Bridge Reconstruction Project will add a new shared-use path to the Henderson Bridge, which will enhance multimodal travel options to and from East Providence.

Implement Urban Trails on Angell and Waterman streets to serve as a one-way couplet connecting College Hill, RISD, and Brown University with Wayland, the Blackstone Bike Path, and the Henderson Bridge. A north-south path through Witherby Park is recommended as a key link between Waterman Street and the Blackstone River Bikeway.

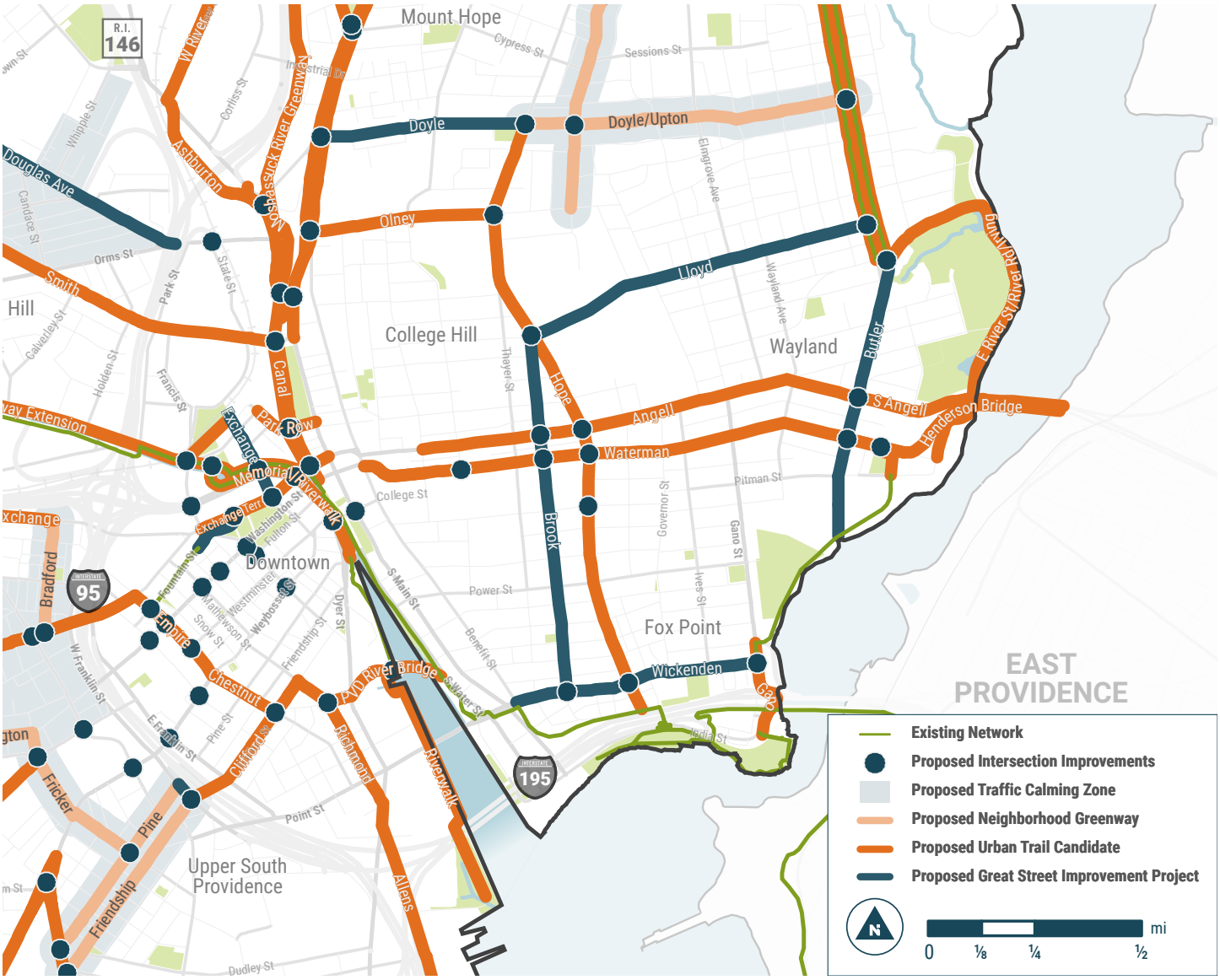
Implement an Urban Trail on Hope Street between Doyle Avenue and George M. Cohan Boulevard to connect the Mount Hope, Blackstone, College Hill, and Fox Point neighborhoods. This project will enhance access to India Point Park and the East Bay Bike Path in the south and join together several east-west Urban Trails. The City should work closely with community members, Brown University, and other stakeholders to investigate converting Brook and Hope into a one-way pair for vehicular circulation and providing angled parking along Brook Street to increase local parking capacity.

Complete an Urban Trail on East River Street, River Road, and Irving Avenue between Richmond Square and Blackstone Boulevard to connect Wayland and Blackstone, fill in a gap on the Statewide Bicycle System, and complete a segment of the East Coast Greenway.

Implement Great Streets to improve walkability on Wickenden, Brook, Lloyd, and Butler and supplement the connectivity provided by the recommended Urban Trail Network.

Study uphill routes from the Providence River. A remaining challenge is topography, especially with regard to identifying relatively direct routes up the hill from the river to Brown University.

Neighborhood Map



Project List

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Hope	Doyle	Lloyd	Urban Trail	Connects proposed Doyle Urban Trail to Olney St. Urban Trail and further south to Waterman; enhances access to schools and Brown University	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side
Hope	Lloyd	Waterman	Urban Trail	Extends proposed Waterman Urban Trail connection to Brown University destinations and schools	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side, Narrow travel or parking lane (Lane Diet)
Hope	Waterman	George M Cohan Blvd	Urban Trail	Connects College Hill and Fox Point; links proposed Waterman Urban Trail with India Point Park	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side
Providence River Bridge	Dyer/Eddy/Ship	S Water	Urban Trail	Project under construction	Two-Way Shared Use Path	Independent ROW
Charles/Mill/ Canal	Ashburton/ Randall	Smith	Urban Trail	Connects to in-progress RIDOT project on Canal and proposed W. River St. Urban Trail; moves toward better access to Downtown from Charles and Mount Hope	Two-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet), Move curbs
Wickenden	Benefit	Gano	Great Street	Enhances walkability along this key east-west street	Other Great Street Improvement	Enhance quality of existing facility
Canal	Smith	Washington	Urban Trail	Enhances access to Downtown, the train station, and the Providence and Woonasquatucket Rivers	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Brook	Lloyd	Wickenden	Great Street	Serves as parallel to Hope St. to enhance micromobility connectivity while enhancing parking options for commercial areas and Brown University	Other Great Street Improvement	Enhance quality of existing facility
S Angell/Angell	Henderson Bridge	Hope	Urban Trail	Connects to in-progress Henderson Bridge path and proposed River Dr./Blackstone River Path and Hope St. Urban Trails; enhances access to schools, parks, and Brown Univ.	One-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Angell	Hope	Prospect	Urban Trail	Connects to proposed Hope St. Urban Trail, enhances access to Brown University	One-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Henderson Bridge	Angell/ Waterman	East Providence	Urban Trail	RIDOT bridge reconstruction project, currently in design, will provide critical connection between East Providence	Two-Way Shared Use Path	Move curbs
Gano	India	Trenton/ Gano Park	Urban Trail	In-progress trail extension project providing key connection between the Blackstone River path, East Bay path, and India Point Park	Two-Way Shared Use Path	Move curbs
Doyle & Upton	Blackstone Blvd	Hope	Urban Trail	Provides central east-west Urban Trail for the east side of the City; connects several neighborhoods and proposed Hope St. and Morris Ave. Urban Trails with the Blackstone River path	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Waterman	Butler	Henderson Bridge	Urban Trail	Completes connection from Brown University to Blackstone River path (via proposed Witherby Park path) and new path to be built by RIDOT as part of the Henderson Bridge project	One-Way Urban Trail with Accessible Sidewalk	Enhance quality of existing facility
Waterman	Hope	Butler	Urban Trail	Connects College Hill and Wayland	One-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)
Waterman	Prospect	Hope	Urban Trail	Provides a central micromobility route for Brown University and College Hill; connects to proposed Hope St. Urban Trail	One-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Waterman	Benefit	Prospect	Urban Trail	Allows separated space for micromobility users to climb the hill	One-Way Urban Trail with Accessible Sidewalk	Remove travel lane (Road Diet)

Project List continued

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Butler	Pitman	Blackstone Blvd	Great Street	Enhances walkability along this street, which would connect with proposed River St. and Blackstone Bike path	Other Great Street Improvement	Enhance quality of existing facility
Witherby Park path	Waterman	Pitman	Urban Trail	Key connection between existing Blackstone River path access at Pitman St., future Henderson Bridge path, and proposed Waterman Urban Trail	Two-Way Shared Use Path	Independent ROW
Lloyd	Hope	Blackstone	Great Street	Enhances walkability along this route connecting several schools, recreational areas, and the Blackstone Blvd path	Other Great Street Improvement	Enhance quality of existing facility
E River St/River Rd/Irving	Blackstone River Bikeway/Pitman	Irving/ Blackstone Blvd	Urban Trail	Fills in a gap in the Blackstone River Bikeway and East Coast Greenway; connects to future Henderson Bridge path and proposed Waterman St. Urban Trail	Two-Way Shared Use Path	Move curbs, Independent ROW

Key Traffic Calming Recommendations

Using the Implementation Guide as a reference, install traffic calming elements as part of Great Streets projects on Wickenden, Butler, Lloyd streets.

Areas along and around the proposed Morris Avenue neighborhood greenway.

Key Intersection Improvement Recommendations

Street 1	Street 2	Type
Angell	Butler	Network crossing
Benefit	Benevolent	Neighborhood comment
Brook	Wickenden	Network crossing
Brook	Angell	Network crossing
Brook	Waterman	Network crossing
Canal	Steeple	Neighborhood comment
Canal	Park Row	Network crossing Pedestrian/Bicycle Crash Focus Intersection
Gano	Amy	Neighborhood comment
Hope	Wickenden	Network crossing
Hope	Angell	Network crossing
Hope	Waterman	Network crossing
Hope	George	Pedestrian/Bicycle Crash Focus Intersection
Hope	Lloyd	Network crossing
Hope	Olney	Network crossing
Ives	Williams	Neighborhood comment
N Main	College	Pedestrian/Bicycle Crash Focus Intersection
N Main	Thomas	Neighborhood comment
N Main	Olney	Network crossing
Thayer	Meeting	Neighborhood comment
Waterman	Witherby Park Path	Network crossing Pedestrian/Bicycle Crash Focus Intersection
Waterman	Butler	Network crossing
Waterman	Brown	Pedestrian/Bicycle Crash Focus Intersection
Wickenden	Gano	Network crossing

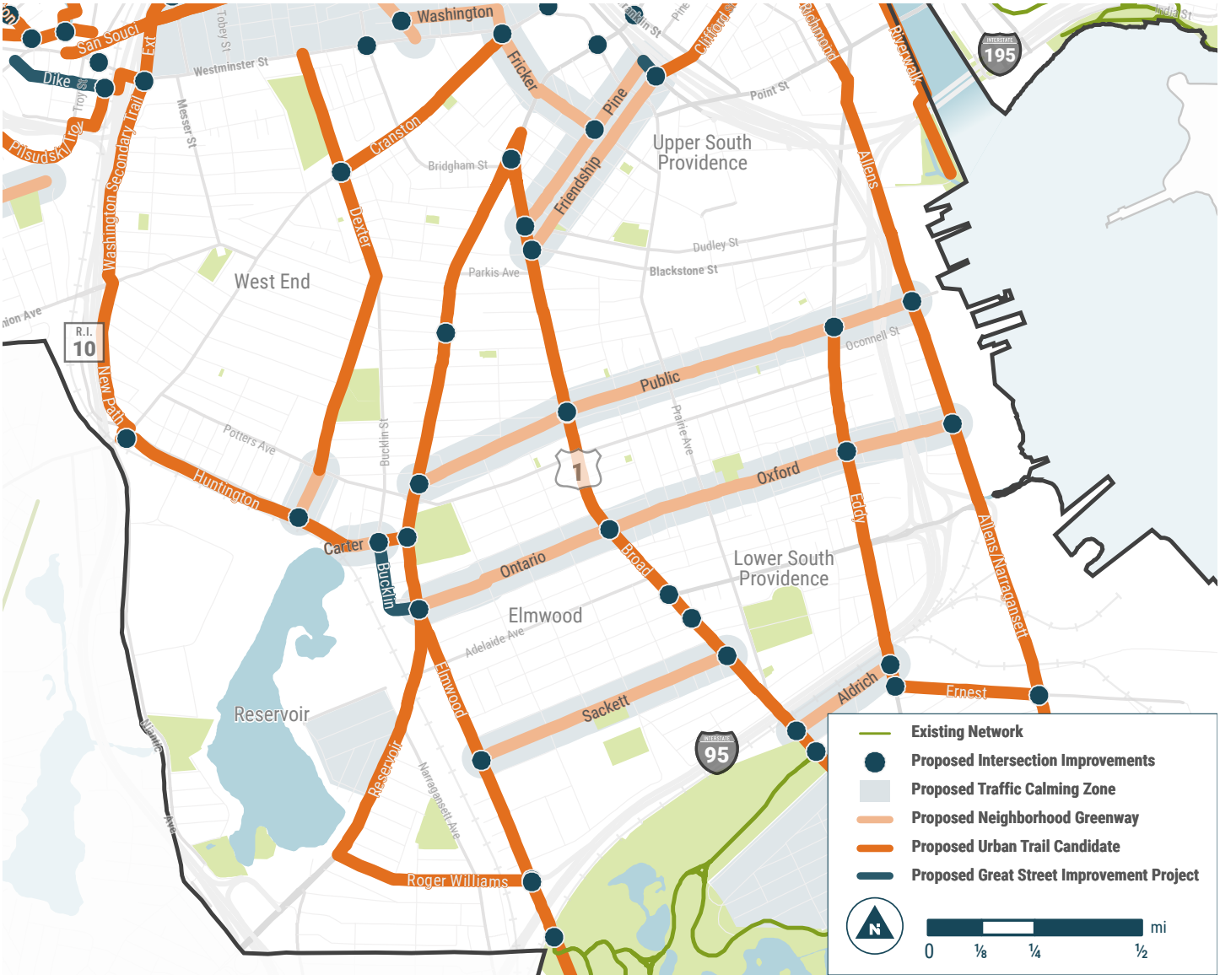
Reservoir

Key Urban Trail Recommendations

Create Urban Trails along the 6/10 Connector and Huntington Avenue. Urban Trails along Salvati Way and Huntington Avenue will combine with the Washington Secondary Trail to create an Urban Trail arc that threads together Elmwood, Reservoir, and West End.

Create Urban Trails on Reservoir and Roger Williams avenues. These projects would complete a loop of trails serving the Reservoir neighborhood and connect to the Elmwood and Public Street Urban Trails.

Neighborhood Map



Project List

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Reservoir	Elmwood	Roger Williams	Urban Trail	Connects Reservoir and Elmwood; connects to proposed Urban Trails on Elmwood Ave. and Roger Williams Ave.	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet), Remove travel lane (Road Diet)
Roger Williams	Reservoir	Elmwood	Urban Trail	Connects Reservoir Ave. and Elmwood Ave. Urban Trails; enhances access to Roger Williams Park	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side

Key Traffic Calming Recommendations

The area between Reservoir Avenue and Mashapaug Pond:

- Includes Dr. Jorge Alvarez High School
- Area has seen traffic calming requests on Algonquin, Crescent, and Sibley streets
- As part of the proposed Reservoir Avenue Urban Trail project, prioritize improvements at intersections in the vicinity of Reservoir Avenue Elementary School for people walking, including crossing improvements for students walking to school and people accessing bus stops

The area around the proposed Roger Williams Avenue Urban Trail:

- Area has seen traffic calming requests on Stadden Street, Rounds Avenue, and the intersection of Rutherglen Avenue and Parkman Street

Key Intersection Improvement Recommendations

Street 1	Street 2	Type
Reservoir	Roger Williams	Network Crossing
Elmwood	Reservoir	Network Crossing

Silver Lake and Hartford

Key Urban Trail Recommendations

Create neighborhood greenways to connect Hartford and Silver Lake to Merino Park and the Woonasquatucket River Greenway. These projects leverage the existing Hartford-Olneyville connection of the Woonasquatucket River Bridge over US 6 in Merino Park with proposed neighborhood greenways leading to it from the southwest and southeast. The traffic-calmed route along Grimwood, Ophelia, Eugene, and Springfield streets will not only better connect both Hartford and Silver Lake to the Greenway but would also enhance Safe Routes to School for DelSesto Middle School and Anthony Carnevale Elementary School, as well as connectivity to Neutaconkanut Park. A new neighborhood greenway using Webster Avenue, Eastwood Avenue, and Heath Street would connect the east sides of Hartford and Silver Lake to Merino Park and the Greenway.

Create an Urban Trail along Glenbridge Avenue as part of RIDOT's planned replacement of the Glenbridge Avenue bridge over US 6. This will enhance connectivity for people walking, riding bicycles, and using other micromobility options between Hartford, Olneyville, and Manton and serve as a parallel route to the Woonasquatucket River Greenway crossing of US 6.

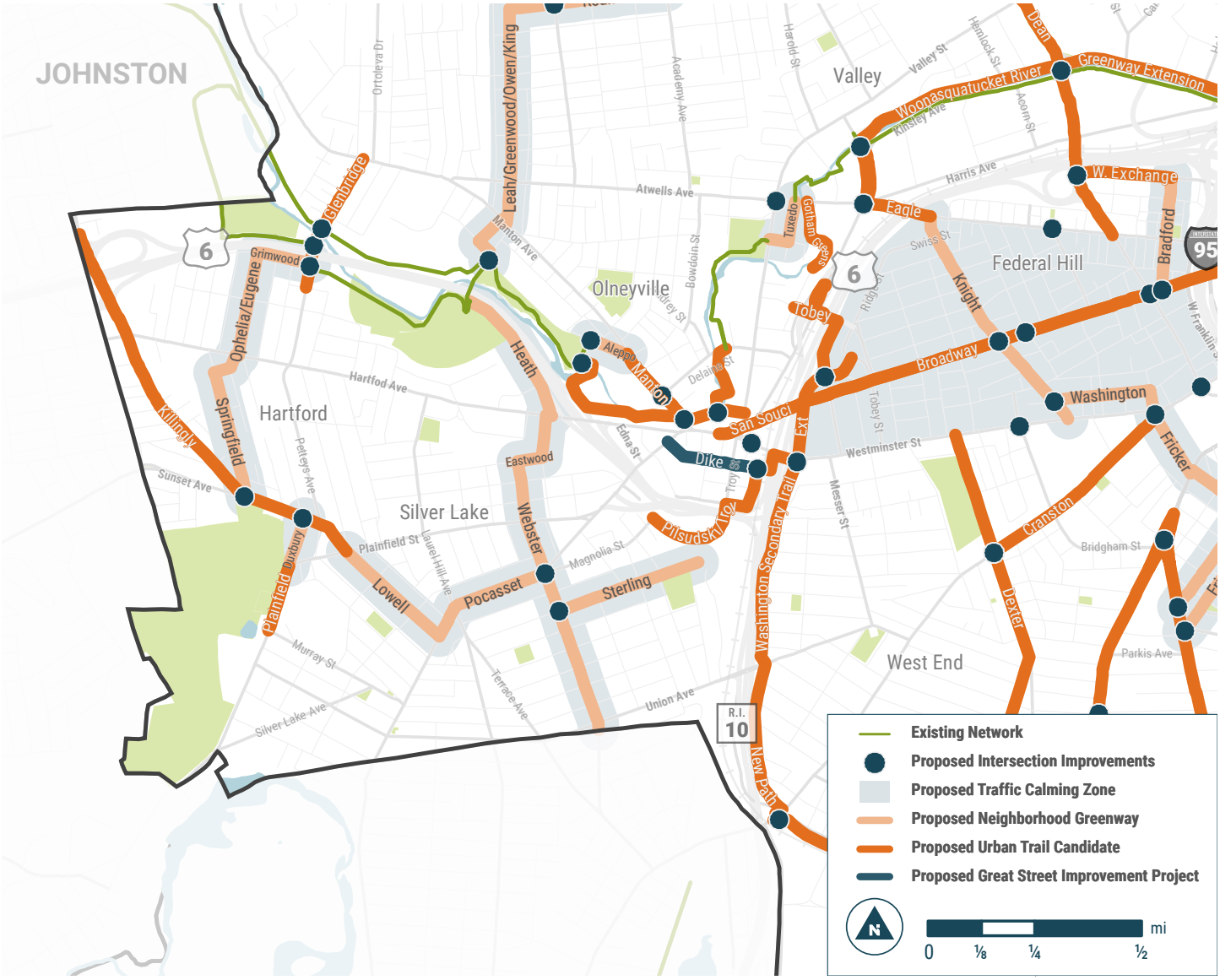
Create an Urban Trail along Killingly Street to better connect Hartford and Silver Lake to Johnston. Conveying a high-comfort route for people walking, riding bicycles, and using other micromobility options through the US 6 interchange is one of this project's greatest design challenges.

Create neighborhood greenways through Silver Lake on Lowell, Pocasset, Webster, and Sterling avenues to fill in the network, and on Pilsudski Street to improve access between Silver Lake and Olneyville, the West End, and Federal Hill.

Create an Urban Trail along Pilsudski Street from Magnolia Street in Silver Lake to Troy Street to connect Silver Lake and Olneyville. Activate the Troy Street underpass of US 6 with lighting and placemaking elements to make it more comfortable for people walking, riding bicycles, and using other micromobility options. This Urban Trail will connect to the recommended off-road path connection to the west of the railroad tracks from Dike Street to Magnolia Street in Olneyville. Work with the property owner of the vacant parcel between Pilsudski Street and the end of Sterling Avenue to determine the feasibility of an off-road path connecting the two Urban Trails.

Create Urban Trails along Duxbury and Plainfield streets to enhance access to Neutaconkanut Park.

Neighborhood Map



Project List

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Grimwood	Glenbridge	Ophelia	Urban Trail	Connects Merino Park path to proposed Ophelia/Eugene Urban Trail	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Ophelia/Eugene	Grimwood	Springfield	Urban Trail	Connects to proposed Grimwood and Springfield Urban Trails; enhances access to Merino Park, the Woonasquatucket River Greenway, and schools	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Killingly	Dennis J. Roberts Expy (US 6)	Sunset	Urban Trail	Provides future connection to Johnston	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side
Killingly	Sunset	Plainfield	Urban Trail	Connects to proposed Springfield, Duxbury/ Plainfield, and Lowell Urban Trails; enhances access to Neutaconkanut Park and schools	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side
Lowell	Plainfield	Pocasset	Urban Trail	Connects to proposed Killingly and Pocasset Urban Trails	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Pocasset	Lowell	Webster/ Magnolia	Urban Trail	Connects to proposed Webster and Lowell Urban Trails;	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Pilsudski/Troy	Magnolia (s/o US 6)	Magnolia (n/o US 6)	Urban Trail	Key connection between Silver Lake and Olneyville underneath US 6	Two-Way Urban Trail with Accessible Sidewalk	Move curbs
Duxbury	Killingly	Plainfield	Urban Trail	Connects to Killingly Urban Trail; enhances access to Neutaconkanut Park	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Plainfield	Duxbury	Murray	Urban Trail	Connects to Killingly Urban Trail via Duxbury; enhances access to Neutaconkanut Park	Two-Way Shared Use Path	Independent ROW
Webster	Eastwood	City Limits	Urban Trail	Provides a north-south connection between the Hartford and Silver Lake neighborhoods	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Springfield	Eugene	Killingly	Urban Trail	Enhances access for travel to schools, connects proposed Ophelia-Eugene and Killingly Urban Trails	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Sterling	Eastern terminus	Webster	Urban Trail	Connects proposed Webster Urban Trail with proposed trail connection near Forys Playground; enhances access to playground and school	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Eastwood	Webster	Heath	Urban Trail	One-block connection between proposed Webster and Heath/Merino Park Urban Trails	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Heath	Eastwood	Merino Park (trailhead in parking lot)	Urban Trail	Enhances access to Merino Park	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Glenbridge	Richland/ Sacramento	Mattie	Urban Trail	Proposed long-term recommendation for enhancing connectivity between Manton, Olneyville, Mount Pleasant, and Hartford, potentially when the bridge is rebuilt	Two-Way Urban Trail with Accessible Sidewalk	Enhance quality of existing facility

Key Traffic Calming Recommendations

The area of Hartford north of Hartford Avenue

- Grimwood and Ophelia Streets are proposed for neighborhood greenways.
- Area has seen over 10 traffic calming requests in the last 10 years

In Hartford, along and around the proposed Springfield Street, Heath Street, Eastwood Avenue, and Webster Avenue neighborhood greenways

In Silver Lake, along and around the proposed Sterling/Pocasset, Webster, and Lowell Avenue neighborhood greenways

Key Intersection Improvement Recommendations

Street 1	Street 2	Type
Daniel	Ethan	Neighborhood comment
Dorchester	Daniel	Neighborhood comment
Glenbridge	Grimwood	Network crossing
Hartford	Kinfield	Neighborhood comment
Hartford	Ponagansett	Neighborhood comment
Killingly	Springfield	Network crossing
Killingly	Sunset	Network crossing
Killingly	Duxbury	Network crossing
Mercy	Ethan	Neighborhood comment
Webster	Pocasset	Network crossing
Webster	Sterling	Network crossing

Elmhurst, Manton, and Mount Pleasant

Key Urban Trail Recommendations

Create an Urban Trail along Mount Pleasant Avenue between Smith Street and Beaufort Street. This project will enhance Safe Routes to School for Mount Pleasant High School, George West Elementary School, and Saint Augustine's School, and connect to neighborhood greenways proposed along Whitford Avenue, Roanoke Street, and Leah Street.

Implement an Urban Trail on Academy Avenue between Eaton Street and Roanoke Street. This project will connect to the Eaton Street Urban Trail to the north, and to neighborhood greenways proposed along Whitford Avenue and Roanoke Street.

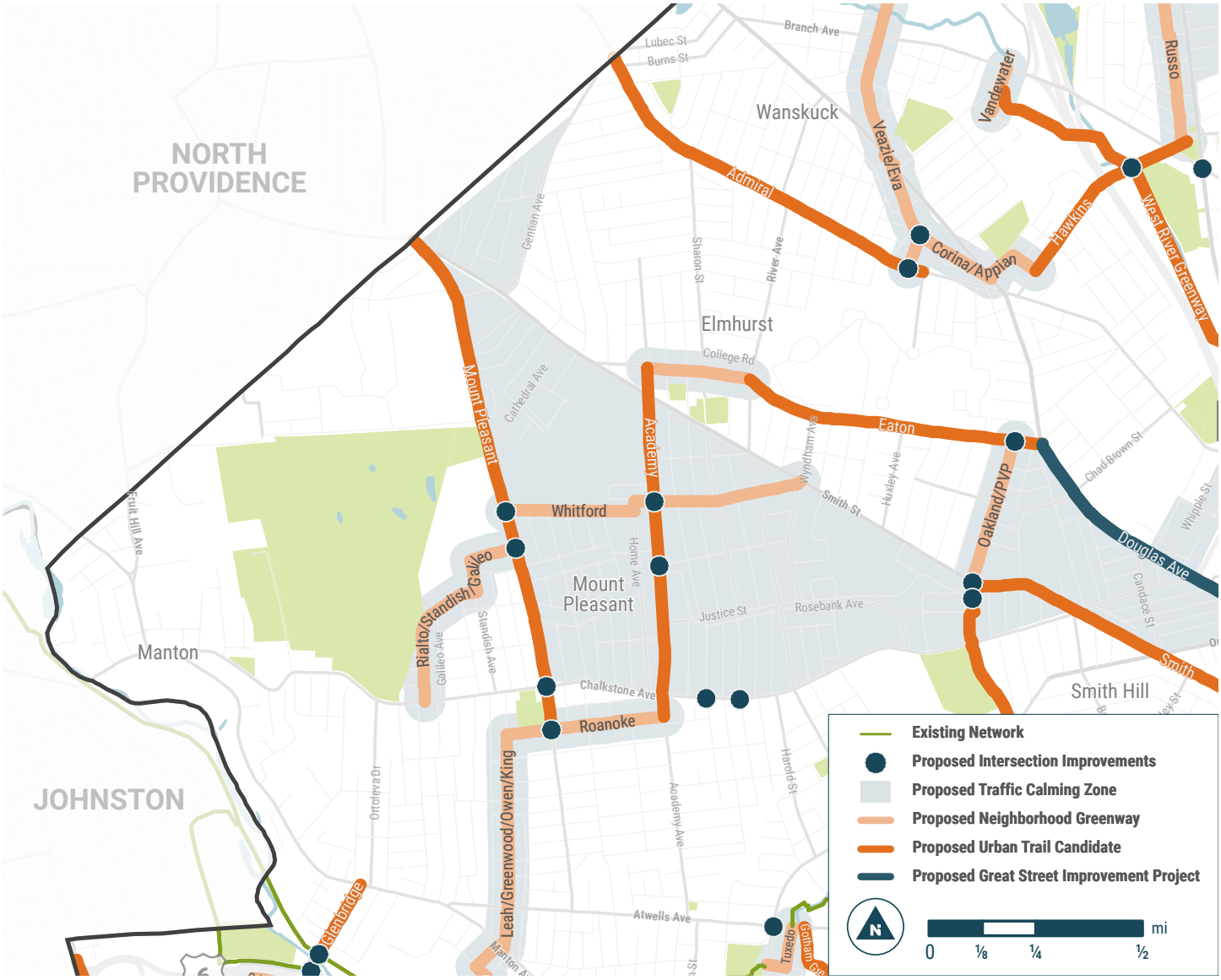
Create an Urban Trail along Eaton Street. An Urban Trail on Eaton Street from River Avenue to Douglas Avenue is in design and will be implemented in 2019. Extending this Urban Trail west from River Avenue to Academy Avenue as a neighborhood greenway will connect it to the north end of the Academy Avenue Urban Trail. At the east end of Eaton Street, the Urban Trail will connect to bike lanes being striped on Douglas Avenue in 2019.

Create north-south neighborhood greenways. Implement three primarily north-south neighborhood greenways to better connect the three neighborhoods to each other, adjacent neighborhoods, and key destinations on traffic-calmed routes.

- *Leah Street* will provide a traffic-calmed route connecting Mount Pleasant to Olneyville and the Woonasquatucket River Greenway.
- *Rialto Street, Standish Avenue, and Galileo Avenue* will help connect the Manton neighborhood to Mount Pleasant Avenue and destinations further north.
- *Oakland Avenue* will extend the Dean Street/Pleasant Valley Parkway Urban Trail north, connecting to the Smith Street and Eaton Street Urban Trails and completing an Urban Trail loop between Mount Pleasant, Elmhurst, and Wanskuck.

Create east-west neighborhood greenways. Implement east-west neighborhood greenways on Whitford Avenue and Roanoke Street to fill in the Urban Trail network and better connect Mount Pleasant, Elmhurst, and Valley. These projects will benefit access to Mount Pleasant High School, La Salle Academy, George J. West Elementary School, Mount Pleasant Academy, and Rhode Island College.

Neighborhood Map



Project List

Street or Trail Name	From	To	Project Type	Why is this important?	Recommendation	Implementation Action
Mount Pleasant	Smith	Roanoke	Urban Trail	In-progress RIDOT project to provide traffic calming and enhance conditions for micromobility users	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side, Narrow travel or parking lane (Lane Diet)
Eaton	River	Douglas	Urban Trail	In-progress Urban Trail enhancing access to Providence College and schools; future connections include proposed Providence college internal Urban Trails and Oakland Ave. proposed Urban Trail	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)
Academy	Eaton	Roanoke	Urban Trail	Connects Elmhurst and Mount Pleasant; connects to proposed Eaton St.	Two-Way Urban Trail with Accessible Sidewalk	Consolidate parking one side
Eaton	Academy	River	Urban Trail	Extends in-progress Urban Trail on Eaton St. to the west; enhances access to schools and Providence College	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Whitford	Mt Pleasant	Smith	Urban Trail	Connects in-progress Mt. Pleasant Urban Trail with proposed Academy Urban Trail; enhances access to schools and Rhode Island College	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Roanoke	Leah	Academy	Urban Trail	Connects proposed Roanoke and in-progress Mount Pleasant Urban Trails south to Woonasquatucket River Greenway; enhances access to schools	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Admiral	City Limit near Gentian Ave	Eva	Urban Trail	Longer-term recommendation to enhance Urban Trail connectivity to North Providence	Two-Way Urban Trail with Accessible Sidewalk	Remove parking one side
Oakland/PVP	Higgins	Eaton	Urban Trail	North-south connection between neighborhoods; enhances access to Providence College, Davis Park, and schools; extends proposed Dean St./ Pleasant Valley Pkwy. Urban Trail north to in-progress Eaton St. Urban Trail	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Leah/ Greenwood/ Owen/King	Roanoke	Woonasquatucket River Greenway	Urban Trail	Provides connections to schools and the Woonasquatucket River Greenway	Neighborhood Greenway	Neighborhood Greenway Toolbox (Speed management, major intersections, wayfinding)
Douglas	Orms	Eaton	Great Street	Connects to in-progress Eaton St. Urban Trail, enhances access to parks, schools, and Providence College	Conventional Bike Lanes	Narrow travel or parking lane (Lane Diet)
Glenbridge	Manton	Richland St/ Sacramento St	Urban Trail	Extends proposed Glenbridge Urban Trail north, enhancing connectivity between Manton and Hartford	Two-Way Urban Trail with Accessible Sidewalk	Narrow travel or parking lane (Lane Diet)

Key Traffic Calming Recommendations

The area bordered by Mount Pleasant Avenue, Smith Street, and Chalkstone Avenue

- Includes proposed Urban Trail/traffic calming on Mount Pleasant Avenue and Academy Avenue and neighborhood greenways/traffic calming on Pleasant Valley Parkway and Whitford Avenue
- Area has seen over 20 traffic calming requests over the last 10 years

Northwest Elmhurst centered around Gentian Avenue

- Comments on speeding and wide intersection geometry along Gentian Avenue. Consider coordination with North Providence.

Key Intersection Improvement Recommendations

Street 1	Street 2	Type
Academy	Whitford	Network crossing
Admiral	Eva	Network crossing
Atwells	Manton	Neighborhood comment
Chalkstone	Canton	Pedestrian/Bicycle Crash Focus Intersection
Chalkstone	Tiffany	Pedestrian/Bicycle Crash Focus Intersection
Gentian	Hillside	Neighborhood comment
Gentian	Isabella	Neighborhood comment
Manton	Baltimore	Neighborhood comment
Manton	Ortoleva	Neighborhood comment
Mount Pleasant	Rialto	Network crossing
Mount Pleasant	Whitford	Network crossing
Mount Pleasant	Chalkstone	Pedestrian/Bicycle Crash Focus Intersection
Mount Pleasant	Roanoke	Network crossing
Oakland	Eaton	Network crossing
Oakland	Smith	Network crossing
Smith	Longwood	Neighborhood comment
Smith	Eaton	Neighborhood comment

Assessment of Regulations, Programs, and Policies

This chapter includes an assessment of and recommendations regarding policies, processes, and regulations that govern and provide context for Great Streets and Urban Trails in the City of Providence. This includes descriptions of the existing framework of regulations, policies, programs, and stakeholders, identification of gaps in the current process, and recommendations for improvement. The recommendations derive from a number of sources, including document review, interviews and discussions with key stakeholders, and best practices research. Although this chapter includes many recommendations related to a variety of needed improvements to policies, processes, and regulations, the recommendations generally align with five key areas of focus:

- Revise Outdated and Enact New City Ordinances Related to Mobility
- Align City Policies and Procedures to Invest in and Preserve Great Streets
- Prioritize Safety and Comfort for People Who Walk, Ride Bicycles, and Use Public Transit
- Advocate for Friendlier State Laws and Policies Related to Mobility
- Expand Opportunities for Engagement, Education, and Encouragement

Legal Framework

The legal framework for City departments profiled in this chapter is City Charter Article X – City Departments (Providence, RI Code of Ordinances). Ordinance Articles VII–IX½ cover Public Works, the City Engineer, Traffic Engineering, and Planning and Development. Appendix A[1] presents relevant ordinance language. The City Departments section of this chapter contains additional discussion of ordinances governing each profiled department.

Several other City Ordinance sections are flagged and recommended to be updated to further support the Great Streets Initiative. See the actual ordinance language for specifics and Appendix A for more detail.

2014 Zoning Ordinance

The City's current Zoning Ordinance became effective on December 24, 2014, and contains amendments up to and including July 27, 2018. The Zoning Ordinance guides building dimensions, design, and uses in established zoning districts. Sections of the Ordinance important to Great Streets govern off-street parking requirements – including shared vehicular parking, bicycle parking requirements, placement and dimensions of driveways and curb cuts, trees and landscaping, signs, and lighting.

City of Providence Code of Ordinances Chapter 14 – Licenses

Vendors

Article IX, last revised in 2015, regulates temporary vendors, including those operating in the public realm. Section 14-171 assigns the Department of Public Works with responsibility for reviewing and confirming that proposed locations do not "interfere with public access to and along the sidewalk" before granting approval.

Registration and Licensing of Bicycles

While Article XI is titled, "Registration and Licensing of Bicycles," other than the title and definition of a bicycle, there are no requirements relating to bicycles in this article; the remainder of this article applies to pedicabs.

City of Providence Code of Ordinances Chapter 15 – Motor Vehicles and Traffic

Parking

Section 15-2 includes the following penalties for violating parking rules that are directly applicable to bicycle and pedestrian movement. There is no specific fine listed for parking in or blocking a bicycle facility.

- Parking so as to obstruct the flow of traffic: $75
- Parking within twenty-five (25) feet of corner: $30
- Parking in marked bus stop: $30
- Parking on marked crosswalk or within intersection: $30
- Parking on sidewalk: $100

1 Pending

Bus Lanes

Sections 15-55—15.57 established exclusive bus lanes on portions of Washington Street, Weybosset Street, and Empire Street in 1962 with implementation of the Westminster pedestrian mall. This is notable because many cities, including Providence, are establishing bus-only lanes to improve transit operations.

Bicycles

Sections 15-70—15-75 date from 1946 and cover a number of requirements for operating a bicycle. These requirements are out of date and likely not enforced as written. For example, Section 15-73 prohibits carrying a passenger on a bike. This effectively prohibits carrying passengers on cargo bikes, bikes with trailers, child seats, and other common desired means of bicycle transportation.

Reasonable Speeds

Sections 15-108–15-109 include provisions for reducing speeds at intersections, and when geometry dictates care. Some cities have updated such ordinances to lower citywide speed limits.

Use of Motorized Devices on Sidewalks

Section 15-131 prohibits use of some motorized devices (except scooters, wheelchairs for persons with disabilities, and Segways) on sidewalks, streets, public parks, or other City-owned property.

City of Providence Ordinance Chapter 18 – Parks and Recreation

Section 18-29 (subsection a) obligates the Board of Parks Commissioners to superintend maintenance and control of public parks, including "avenues…and all other property thereon or therein."

City of Providence Ordinance Chapter 23 – Streets, Sidewalks, and Public Places

Snow and Ice Removal

Sections 23-13–23-17 cover removal of snow and ice and prohibit placement of removed snow into already plowed areas or onto streets. See Implementation Guide Chapter 4 for details on the importance of snow removal from sidewalks and Urban Trails.

Skateboards

Passed in 1965, Section 23-31 prohibits riding a skateboard on any street, highway, sidewalk, or pedestrian mall within city limits. This is antiquated and should be repealed.

City of Providence Complete Streets Resolution

The City of Providence's Complete Streets Resolution, enacted January 5, 2012, encourages the City's Department of Planning and Development and Department of Public Works to "use Complete Streets concepts in planning and redevelopment of transportation related infrastructure" and requests both departments to incorporate Complete Streets principles as it develops plans and ordinances, reviews development projects and funds transportation and other infrastructure.

As written, the 2012 resolution is supportive and encouraging but not as strong as it should be. Formal adoption of the Providence Great Streets Master Plan will dramatically expand integration of Complete Streets principles into planning and implementation processes. Recommendations for changes to policies and procedures within this chapter will address existing gaps in the process.

City of Providence Traffic Calming Guidelines and Program

Providence's Traffic Calming Design Guidelines define traffic calming as 'measures instituted to reduce traffic speeds and cut-through traffic volumes on city streets to improve public safety and neighborhood livability'. Measures are mostly physical (street width, deflecting or vertically altering vehicle paths). Regulatory measures such as stop signs and speed limit signs are not part of the current traffic calming scope.

The Guidelines are meant to assist City departments in implementing traffic calming throughout the city. An interdepartmental committee, the Traffic Calming Advisory Group (TCAG), reviews traffic calming requests and advises DPW, other City departments, and City Council on the appropriateness of traffic calming measures in response to requests. The TCAG consists of the City Traffic Engineer and traffic engineering staff, the Assistant City Engineer, and representatives from DPD, Providence Police, Providence Fire, and the Providence City Council. TCAG recommendations are advisory and the DPW Director is vested with the authority to make decisions on which projects to advance to implementation.

As noted in Section II, Traffic Calming Review Process,

> *A request to the Traffic Calming Advisory Group (TCAG) for installing a traffic calming device can be initiated many ways. Requests can come through any individual, city council resolution or request, through neighborhood groups, City departments or as part of a transportation or streetscape project. At this time the TCAG will be a group that reacts to*

requests instead of taking a proactive role in seeking out areas needing traffic calming. The TCAG will provide recommendations to the Public Works Director on the request with the final decision being that of the Public Works Director.

Providence's program is reactive by design, does not limit how many and from whom requests may be initiated, does not restrict where traffic calming may be implemented, and does not adequately explain the process in a transparent manner to community members. Traffic calming programs have been in place for more than 20 years in a number of U.S. cities with some dating back even longer. Because traffic calming programs are popular, to conserve resources, a number of cities have changed their programs in important ways, including limiting where traffic calming projects may be implemented and establishing requirements for initiating requests. See the Recommendations section of this chapter for a discussion of recommended improvements to the City's traffic calming program.

Other Procedures, Policies, and Programs

Sidewalk Repair Standard Operating Procedure

Implementing Urban Trails and Great Streets presents an opportunity to improve conditions for people walking along and crossing streets. The City of Providence has a draft Sidewalk Repair Policy, which guides how the City plans, executes, and maintains sidewalk repairs. This policy considers factors such as ADA compliance, sidewalk condition, available funding, adjacent and nearby uses, volume of people walking, and existence of legal claims. As described in the Policy, the City of Providence Department of Public Works (DPW) visits each location where there is a request for sidewalk repair or legal claim related to sidewalks and assigns a condition of good, fair, or poor based on the existence and extent of cracks, defects, and trip hazards. Field notes are stored in the City's Sidewalk Repair Database.

In 2017, DPW contracted with a company to conduct a complete inventory and condition evaluation of all sidewalks in the city. This resulted in an overall condition rating for each sidewalk in the city.

As noted in the current Policy:

Prior to each construction season, the DPW will decide which sidewalks are assigned to be repaired based on a balance of these factors, with the goal being to improve overall safety for pedestrians on a macro level, while at the same time decreasing the City's exposure to claims for trips and fall claims attributed to known sidewalk defects. Additionally, directing assets to repair a pedestrian corridor or block rather than spot fixes results in cost efficiencies in construction.

Each Urban Trail or Great Streets project is an opportunity for coordination where a scheduled sidewalk repair could be accomplished in conjunction with an Urban Trail project. Because the Sidewalk Repair Policy already articulates prioritization factors specific to sidewalks, an Urban Trail or Great Street recommendation in the same corridor should not be a sidewalk repair prioritization factor. Rather, an Urban Trail or Great Street project can supplement the list of sidewalk repairs identified by DPW for each construction season. As stated in the current Policy:

Occasionally, a project funded and constructed by the Rhode Island Department of Transportation, the Providence Department of Planning and Development or the City's Capital Improvement Plan will include sidewalk repairs in the project scope.

Capital Improvement Program

The Capital Improvement Program (CIP)—as applied to Great Streets—includes street, sidewalk, traffic calming, Complete Streets, off-road path, parks, and sewer projects. Street and sidewalk projects are typically paving or maintenance. The City's pavement management program is currently part of the CIP. Sewer projects include proactive and reactive repairs and some of these can include associated restoration work of roads and sidewalks.

See discussion of CIP under DPD and Department of Public Properties in the City Departments section of this chapter for more information.

Community Development Block Grant (CDBG)

Through these annual federal formula funds, the City funds projects and programs related to housing affordability, parks and open space, transportation infrastructure, quality of life issues, economic development, and workforce development. This program is an important potential funding source for special Great Streets projects and appropriate coordination is needed to ensure Great Streets principles are considered for all applicable projects.

Draft Speed Camera Location Selection Criteria Memorandum

According to this draft document, prior speed camera placements on low-volume streets throughout Providence did not produce many violations while results on arterial streets were better. The proposed strategy prioritizes schools, arterials or collectors, and vulnerable crash corridors identified in the 2017 Vulnerable Road User Safety Action Plan. The strategy also identifies camera placement on streets with an identified speeding issue confirmed by studies. Speeding is defined as when traffic counts show 1 percent of traffic exceeding 30 mph or when enforcement yields at least two violations in four hours of enforcement. The memo also lays out procedures for formally relocating speed enforcement cameras. The placement of future speed cameras appropriately prioritizes critical locations.

Right-of-Way Encroachment Rules

DPW rules adopted on March 5, 2012, govern excavation and construction of encroachments not for habitation (e.g., awnings, canopies, marquees, signs, architectural embellishments, foundations, wheelchairs, etc.) and encroachments for habitation (balconies, bay windows, arcades, overhangs, basements vaults, subterranean parking garages, etc.). DPW must find the encroachment will not impair public health, safety, or welfare and — if supported by the ground within the public right-of-way — does not have an adverse impact on access for people walking or using wheelchairs.

These rules are consistent with Great Streets. City staff resources are needed to ensure compliance. This includes internally communicating planned and ongoing construction activities.

Overnight Resident Parking Permit Program

This permit program allows vehicle owners/lessees to purchase a permit ($100 for Providence-registered vehicles and $200 for non-Providence vehicles) to park overnight on local streets as designated by the City Traffic Engineer. Other parking restrictions (daytime prohibitions or time limits, snow emergencies, and street sweeping) still apply. If two-thirds of a street's residents sign a petition in opposition, the City may exclude the street from the program and the overnight parking ban continues.

Public Utilities Agreement

This agreement incorporates Standards to be Employed by Public Utility Operators when Restoring any of the Streets, Lanes and Highways in Providence, applicable ordinances, and A Plan for Supervision of Utility Cuts.

As noted in Appendix A, "Under the Standards, [utility companies] are required to obtain permits for work in City streets and guarantee the work for a period of Five (5) years. The Standards impose a permit fee of Seventy Five Dollars ($75) per excavation and include work standards and safety requirements. They include provisions governing excavation, backfill and compaction, and pavement restoration. Finally, the Standards include two provisions that are designed to lead to better coordination between the Utilities and Providence. The first is the Street Paving Program under which the Utilities will receive advance notice of Providence's paving plans. The second is the Utility Coordinating Committee which will be composed of representatives of City departments and the Utilities and will meet regularly to coordinate utility work in City streets."

Utility projects, particularly those that affect sidewalks, present an opportunity to piggyback improvements to the public realm. In general, larger planned projects present the greatest opportunity. Note the current agreement does not explicitly address bicycles. As discussed below, the 2014 Bicycle Master Plan recommended adding provisions to this permit process to prevent roadway patches from creating hazards for people riding bicycles, providing bicycle detours when temporarily closing roads, and pavement marking replacement.

Road and Sidewalk Opening Standards for Contractors

A November 20, 2017, Public Works document outlines rules and regulations to assist contractors on proper standards to be employed for public roadway and sidewalk opening. The City requires contractors excavating or constructing within the public right-of-way to obtain a road opening permit. Unlike the utility agreement, bicycle-related provisions are included. Similar to utility projects, contractor activities present an opportunity to piggyback improvements to the public realm.

Valet Parking Guidelines

The Traffic Engineering Division has established guidance for valet parking licensing and operation that requires among other things, all cars to be parked in an off-street lot that the applicant controls and not on a city street. It also prohibits blocking the public right-of-way. The potential blocking of bike lanes, sidewalks, Urban Trail crossings, or other important facilities requires enforcement.

Public Notice Requirements for Changes to the Public Right-of-Way

- This policy covers requirements for the following:
- Bicycle Pedestrian Advisory Committee (BPAC) review of projects
- Change to or removal of on-street parking
- Parking meter installation
- Change to one-way or two-way traffic pattern (both permanent and temporary)
- Street closure to traffic (both permanent and temporary)
- Traffic calming projects
- Adding bike infrastructure
- Road and sidewalk projects

The policy lays out the format and procedures for public meetings, including format, comment acceptance, and documentation. One of the goals of the Great Streets Initiative is to establish consistent protocols for future projects, including procedures for addressing project-specific concerns.

Vulnerable Road Users Safety Action Plan

The purpose of the January 2017 Vulnerable Road Users Safety Action Plan, is to "identify and utilize available data to evaluate crash patterns involving people walking or riding bicycles and develop a citywide approach that improves safety and

complements ongoing initiatives in the City of Providence. By effectively using data to identify problem areas and risk factors, funding can be focused on areas and approaches with the greatest potential to reduce fatal and serious injuries to vulnerable roadway users." The Action Plan includes strategies aimed at improving young user safety, improving older user safety, improving infrastructure, increasing compliance with traffic laws, and focusing on specific corridors. Corridors with data and identified countermeasures include Broad Street, Chalkstone Avenue, North Main Street, Westminster Street, Smith Street, Washington Street, Cranston Street, Francis Street, Hope Street, Angell Street, Branch Avenue, Elmwood Avenue, Manton Avenue, Allens Avenue, Pine Street, Steeple Street/Memorial Boulevard, Douglas Avenue, Hartford Avenue, Admiral Street, and Dorrance Street.

2014 Bicycle Master Plan

Bike Providence[2] is Providence's 2014 Bicycle Master Plan. The plan's intent was to "provide the framework to identify, prioritize and implement bicycle facilities in the City of Providence." The plan provided an existing bikeways inventory, compiled crash data, listed ongoing and planned bicycle facility projects, and evaluated level of traffic stress, among other tasks. In addition to recommending projects, recommendations applicable to the City's Great Streets Initiative included the following discussion. Items with a check mark (✓) indicate those which have been completed since 2014. Recommendations not yet completed have been incorporated into the recommendations of the Great Streets Master Plan and updated as needed.

General recommendations for the Engineering component should be incorporated into the City's process and procedures for construction and maintenance of public works infrastructure and into development policies and regulations. These recommendations include:

- Modify the current City roadway design standards and regulations to include a Complete Streets approach.
- Modify the City pavement management program to include consideration for City streets that are on the bike network. Evaluations of pavement surface conditions should take into account defects that may impact bicycles such as longitudinal cracks and unsafe drainage grates.
- Include provisions in the City's utility/roadway opening permit process to consider roadways in the bike network. For example, utility patches must not create a hazard for bicycles, and temporary road closures and detours must accommodate bicyclists. Bikeways pavement markings that are covered over or damaged by road/utility repairs must be replaced.
- (✓) Modify the City's current zoning and development regulations to include provisions for a Complete Streets approach and for bicycle parking in new and redevelopment projects.
- Develop a policy and designs to permit commercial establishments to replace on-street parking with on-street bike parking stalls/bike corrals.
- In addition to recommendations on education and evaluation, the plan recommended enhancements to enforcement activities. See discussion of Public Safety.

The Big Jump

The City of Providence is one of several US cities selected to participate in PeopleForBikes' Big Jump project. The Big Jump project, which includes technical assistance and professional development assistance, is helping ten cities radically reimagine their bicycling infrastructure, while at the same time helping propel communities nationwide into a better future for biking. During the coming years, the Big Jump effort will continue to assist the City with additional technical assistance, professional development, and implementation of the Great Streets Initiative.

Bike Share

Launched in 2018, JUMP bikes, in partnership with the City of Providence and private sponsors, is a membership-based dockless bike share program. The 1,100 bikes have a pedal-assist motor. Although the bikes can be locked to any public bike rack, street sign, or parking meter (as long as it does not block accessibility on sidewalks), the system also includes 40 JUMP-branded bike racks. JUMP redistributes bikes throughout the day to balance supply with demand.

The City's Department of Planning and Development currently oversees this partnership. JUMP provides the City with anonymized user data for internal planning and reporting purposes.

E-Scooter Share

Providence's E-Scooter Share Pilot Program launched in October 2018 and runs through August 2019. Two companies, Bird and Lime, received permits to operate 150 e-scooters each during the year of the pilot program. Operators are responsible for meeting requirements specific to safety, distribution, equity, maintenance, operations, parking, and data sharing as outlined in updated regulations DPW issued in December 2018. Unlike the City's bike share program, DPW manages e-scooter share with assistance from DPD and the Director of Operations.

2 Bike Providence: A Bicycling Master Plan for Providence, November 2013

City Commissions Directly or Indirectly Involved with the Public Realm

Bicycle and Pedestrian Advisory Commission

This Providence Bicycle and Pedestrian Advisory Commission (BPAC) is charged with serving as the advisory body to the Mayor, City Plan Commission, Department of Public Works, Department of Planning and Development, and Office of Sustainability on matters pertaining to bicycling and walking in the City. The BPAC is comprised of seven public members appointed by the Mayor. Staff of the Department of Planning and Development, Department of Public Works, and Office of Sustainability serve as non-voting Ex-Officio members. The BPAC may also: examine the need for transportation related to people walking or riding bicycles; promote programs and facilities for people walking and riding bicycles; educate and inform the public and local officials on issues related to people walking or riding bicycles; perform special studies and projects as requested by the City, including reviewing development plans and site plans which may have a significant impact on people walking or riding bicycles; facilitate citizen participation; study changes in laws, regulations, and best practices and advise the City with respect to such changes; promote intergovernmental and public/private cooperation and coordination; and advise the public and City on matters affecting the relationship between public realm improvements and parks, schools, transit stops, and other major facilities.

Enacted in 2012, Executive Order 2012-1 (Creating the Bicycle and Pedestrian Advisory Commission) established the Providence Bicycle and Pedestrian Advisory Commission (BPAC). Enacted in 2016, Executive Order 2016-1 (Creation of a Review Process for Road and Sidewalk Projects and Complying with the City's Complete Streets Resolution) requires DPW and DPD to present all significant street, sidewalk, or trail repair or construction projects to the BPAC for review during both the project's initial scoping phase and preliminary design phase. Significant projects include those identified in Bike Providence, any street categorized as an arterial or collector road, or any project within 300 feet of a school or City recreation center. BPAC also reviews projects under RIDOT jurisdiction. (See RIDOT discussion in External Agencies section of this chapter.)

The establishment of BPAC and subsequent expansion of its role has increased project coordination and implementation of new facilities. The requirement for two BPAC reviews ensures sufficient community input on final plans. However, for non-controversial projects, a second review may be unnecessary. The Department of Planning and Development currently assists and staffs the BPAC.

City Plan Commission

The City Plan Commission (CPC) is a citizen board charged with developing the City's plans for preservation, revitalization and growth. With the assistance of DPD staff and general public, the City Plan Commission develops the City's Comprehensive Plan and ensures that all planning documents are consistent with the goals and policies of the Plan. The commission reviews all land development projects, applications for changes, requests for street abandonment, and the City's Capital Improvement Program. The Department of Planning and Development currently assists and staffs the CPC.

Downtown Design Review Committee

The Downtown Design Review Committee (DDRC) conducts development plan review in the D-1 zoning district. The D-1 zone encourages and directs development in Downtown to ensure that new development complements the existing historic building fabric and character, historic buildings are preserved and maintained in keeping with the historic nature of Downtown, development encourages active street life, and that greenways and open spaces are incorporated into Downtown. The Department of Planning and Development currently assists and staffs the DDRC.

Capital Center Commission

The Capital Center Commission (CCC) is charged with adopting, implementing, and administering a plan of development for the Capital Center Special Development District, a 79-acre redevelopment in the heart of downtown Providence. The CCC reviews public realm improvements within the Capital Center District. The Department of Planning and Development currently assists and staffs the CCC.

Historic District Commission

The Historic District Commission (HDC), established in 1960, is charged with protecting the unique physical character, historic fabric, and visual identity of the city. The HDC reviews and regulates development and exterior renovations in Providence's designated Local Historic Districts. The Department of Planning and Development currently assists and staffs the HDC.

Board of Parks Commissioners

The Board of Parks Commissioners has jurisdiction over all green spaces of the City, all parks including Roger Williams Park Zoo and Roger Williams Park Museum, North Burial Ground, and other city-owned or controlled cemeteries, public recreational areas of all types-- including those on or adjacent to school property--, and all forestry functions including the setting out, care, and removal of trees, shrubs, and other plants on city streets as well as on properties for which it is responsible.

City Departments Directly Involved with the Public Realm

A number of City departments have regulatory and/or permitting roles that directly or indirectly involve the City's right-of-way. Two of these departments -- the Department of Planning and Development (DPD) and Department of Public Works (DPW) -- have the most substantial roles, and as such, this chapter reviews specific charter and ordinance language for these two departments.

Department of Planning and Development (DPD)

DPD develops and administers standards for land use, design, construction, and housing that are consistent with the Providence Tomorrow Comprehensive Plan. The Department provides staff support to the City Plan Commission, Downtown Design Review Committee, Capital Center Commission, Historic District Commission, and Bicycle and Pedestrian Advisory Commission (BPAC). (Some right-of-way improvements require review by one or more of these commissions as discussed in the Commissions Chapter.) Importantly, DPD is leading the Great Streets Initiative. Among other responsibilities, DPD's Special Projects Division plans and develops public realm projects in conjunction with the Department of Public Works (DPW) and other external agencies such as the Rhode Island Department of Environmental Management (RIDEM) and Rhode Island Department of Transportation (RIDOT). See Appendix A for relevant charter and ordinance language.

Based on the City Charter, DPD's role with respect to the public right-of-way is advisory. As discussed in the next section, the Department of Public Works is charged with approving all plans and granting permits. While DPD's responsibilities include developing and periodically reviewing the Capital Improvement Plan (CIP), the Director of the Department of Public Properties currently oversees the CIP.

Department of Public Works (DPW)

DPW is responsible for issuing permits for all work involving modifications to the right-of-way and public utilities. DPW's Engineering Division currently oversees inspection and construction management of streets, sewers, storm drains, traffic signals, traffic signs, pavement markings, construction projects, maintenance projects; planning, design and project management of components of the CIP. The City Traffic Engineer is charged with reviewing all traffic and public right-of-way modifications. See Appendix A for relevant charter and ordinance language.

With the exception of 2006 changes to the charter governing DPW, ordinances covering public works and traffic engineering date to either 1946 or 1948. Importantly, Sec. 2-113 assigns the DPW Director superintendent responsibility for all streets, highways, and sidewalks. Sec. 2-135 assigns the city engineer responsibility for preparing plans for construction projects.

While per Sec. 2-153, the Mayor appoints the traffic engineer, Sec. 2-152 establishes a traffic engineering advisory committee that has "no administrative or regulatory powers." Per Sec. 2-156, "the traffic engineer shall have authority to make all needful rules and regulations for the regulation and control of traffic in the city not inconsistent with the laws of the state..." Per Sec. 2-158, "All design drawings prepared by other departments of the city government for the construction of proposed highways, bridges, parking terminals and other traffic handling facilities, shall be submitted to the traffic engineer for a review and recommendation..." These rules assign all control and review responsibility to the traffic engineer. While the traffic engineer serves at the pleasure of the Mayor, at the same time because the advisory committee has no powers, the traffic engineer has no approval board with which to work.

Parks Department

The Parks Department oversees the selection, planting, and maintenance of all street trees in Providence as well as improvements within the City's public parks. Assets include neighborhood parks, downtown parks, Roger Williams Park, recreational facilities, a community sailing facility, conservation areas, playgrounds, boat launches, and community gardens. See Appendix A for relevant charter language.

School Department

Among other responsibilities, the Providence School Department oversees all school properties within the city. Some properties include playgrounds and other recreational facilities. Safe walking and bicycling access to city schools is a key consideration for Great Streets and many other project prioritization considerations, including traffic calming. City Ordinance Chapter 22 covers City Schools.

Department of Public Properties

Among other responsibilities, the Department of Public Properties is responsible for management, maintenance, upkeep, and expansion of the City's 17,000 street lights. The Director also manages the City's Capital Improvement Program (CIP). Per the City Ordinance, this function is not explicitly assigned to Public Properties but is under the purview of DPD. See Appendix A for relevant charter language.

Department of Public Safety

The Providence Department of Public Safety (DPS) includes the police, fire, communications, and homeland protection departments and an emergency management agency. The police department supports the traffic calming program by conducting speed studies, serving on the Traffic Calming Advisory Group (TCAG), and enforcing traffic and parking regulations. The fire department also serves on the TCAG.

See Appendix A for relevant charter language.

External Agencies

This section outlines the public agencies the City of Providence most often works with, including the Rhode Island Department of Transportation (RIDOT) Rhode Island Public Transportation Authority (RIPTA), and Rhode Island Department of Environmental Management (RIDEM).

Rhode Island Department of Transportation (RIDOT)

RIDOT operates and maintains much of Rhode Island's transportation infrastructure. In addition to the freeway network, roads designated as state routes fall under RIDOT jurisdiction. RIDOT reviews and issues permits (generally through the Physical Alteration Permit Process) for work done on these routes or projects that impact RIDOT-owned or maintained traffic signals. Utility companies doing work within RIDOT right-of-way must coordinate with RIDOT for utility permits.

Streets in Providence under RIDOT jurisdiction include:

- Most bridges over state and federal highways
- Broad Street (West Franklin to Elmwood)
- Elmwood Avenue (Broad to Park/City Line)
- Smith Street (North Main to Mount Pleasant/City Line)
- Charles Street (Smith to Randall)
- Randall Street (Charles to North Main)
- North Main Street (Randall to Hillside/City Line)
- Killingly Street (Hartford to Maria/City Line)
- Hartford Avenue (Route 6 to Killingly/City Line)
- Allens Avenue (Eddy to Montgomery/City Line)

Division 9 of RIDOT's Highway Design Manual has basic provisions covering the design of facilities for people walking and riding bicycles. Section 910.01 notes, "Providing for safe and efficient travel for both bicycles and pedestrians should be an integral part of the design process." However, the Highway Design Manual dates to 2008, before many new design concepts for bicycling, walking, and micromobility were well established. New and updated design resources for these modes have since been published. The State is currently producing a Bicycle Mobility Plan (BMP).

Rhode Island Public Transit Authority (RIPTA)

The Rhode Island Public Transit Authority (RIPTA) is a quasi-public,

independent authority. Established in 1966, RIPTA operate public transit services throughout the state. RIPTA's principal bus hub is at Kennedy Plaza in Downtown Providence. RIPTA, in close coordination with the City of Providence, is currently implementing a significant change to bus service and facilities in Downtown. The Downtown Transit Connector will provide high-frequency transit service (every 5 minutes in each direction) between the Providence Amtrak/MBTA Station in Capital Center and Hospital District in Upper South Providence. There will be six paired stops along the corridor, each designed with a unique and highly-visible identity. Stops will include shelters, real-time bus arrival signage, and other passenger amenities. The Downtown Transit Connector (DTC) will be an "enhanced bus corridor" that provides riders with improved service frequency and reliability through the inclusion of Transit Signal Prioritization (TSP) which extends the duration of green traffic signals for buses (and emergency vehicles) along the corridor, special signal phases allowing buses to "jump" the traffic queue and move ahead of regular traffic, and dedicated bus lanes.

A consideration for future Great Streets planning is the need to have accessible, properly-sized, properly-spaced, and welcoming bus stops. The 2017 RIPTA Bus Stop Design Guide establishes design principles applicable to future projects. This includes concepts for potential floating bus stops made necessary by parking-protected bike lanes or curb-adjacent separated bike lanes where buses must load and unload passengers by deploying a ramp. ADA does not permit deployment of bus ramps to the street, as the ramp slope is excessive. The RIPTA system map presents the Rapid Bus route, Key Corridor routes, and local bus routes within Providence.[3] Most of these streets are arterial roadways and a number are also RIDOT-owned.

RIPTA is currently producing a statewide Transit Master Plan.

Rhode Island Department of Environmental Management (RIDEM)

The Rhode Island Department of Environmental Management (RIDEM) is charged with protecting, restoring, promoting, and managing Rhode Island's environment and natural resources to preserve and improve quality of life. Through funding and other assistance and support RIDEM helps communities support the clean up and reuse of contaminated industrial properties, improve stormwater management and water quality, protect open space, sustain and restore sustainable wildlife habitats, promote and increase outdoor recreation, develop a network of recreational facilities (including bicycle paths and trails), reduce greenhouse gas emissions, and improve resiliency.

Projects throughout Providence are currently funded by the Green Economy and Clean Water Bond administered by RIDEM, including several green infrastructure and bicycle infrastructure projects.

Existing Project Development and Delivery Processes

With the goal of developing policy and process recommendations to improve delivery of the Providence Great Streets Initiative, this section describes the existing project development and delivery process for public realm projects in Providence and identifies gaps in the process. The findings derive from staff interviews and discussions, consultant team analysis, and best practices research. Two projects selected by City staff provide examples of challenges and opportunities. This section also references important matters covered elsewhere in the report.

Existing Challenges and Gaps

The National Complete Streets Coalition's "Ideal Complete Streets Policy Framework" suggests applying Complete Streets policies to both new and retrofit projects, including design, planning, maintenance, and operations for the entire right-of-way. Under this policy framework, all transportation improvements are seen as opportunities to create safer, more accessible streets for all users, including people walking, riding bicycles, and using transit, regardless of scale. Other elements of effective Complete Streets project development and delivery programs are:

- Strong collaboration and communication among departments and staff
- Few areas of confusion or lack of clarity, leading to more results with less effort
- Accepted design standards

3 https://www.ripta.com/statewide-system-map

- Established and clear procedures for addressing exceptions and for measuring performance
- Clear and streamlined process with agreed-upon timelines and expected contributions
- Offers workshops and other training opportunities to planners and engineers

Because Providence's planning, design, and construction resources are finite, it is essential that the City create a framework for implementation each time a project opportunity arises, regardless of its source. At present, while efforts are underway to improve efficiencies throughout City government, there are numerous barriers to coordination that may lead to lost opportunities. Some barriers are due to competing interests or lack of resources, which may lead to reactive work and lack of time available to properly plan. Substantial maintenance and repair backlogs require additional staff capacity and funds to properly address. Coordinated projects take longer to develop due to lack of standard procedures. Projects that require interdepartmental or interagency coordination lead to further delays.

Additionally, the existing regulatory framework does not support one agency overseeing micro-mobility initiatives (e.g., DPD oversees JUMP bikes and DPW oversees e-scooters), staff training and professional development resources are inadequate to educate staff on new approaches, and project management and construction management staffing do not exist within DPD or DPW leading to over-reliance on consultants.

Existing Origins and Sources of Potential Public Realm Projects

In a resource-constrained environment, it is critical to capitalize upon every potential project opportunity. This means identifying and tracking all potential projects that alter the public realm, whether planned or unplanned. In Providence, street alteration projects derive from a number of places and sources, including:

Capital Improvement Program

The Capital Improvement Program (CIP) is a five-year program that includes street, sidewalk, sewer, and Complete Streets projects. Street and sidewalk projects are typically paving or maintenance. The City's pavement management program is currently part of the CIP. Sewer projects include proactive and reactive repairs and some of these can include associated restoration work in the road and sidewalk. According to the current CIP (7/24/17),

> *[DPW] requests for fiscal years 2018-22 include roadway repair, maintenance, and reconstruction; bridge and dam repair; Complete Streets work including curb extensions, striping, traffic calming, and bicycle and pedestrian amenities; and sewer and stormwater management system maintenance, repair, and construction, including the installation of green infrastructure.*
>
> *DPP requests for 2018-22 includes upgrades and repairs to City Hall, fire department upgrades and repairs, recreation center repairs and fire alarm upgrades, police training alarm upgrades, and playing field improvements.*

Traffic Calming

The City's current traffic calming program focuses on residential street improvements to slow traffic based on project priorities screened and advanced through an established process. See "Modify the City's traffic calming procedures and guidelines" within the recommendations section of this chapter and "Traffic Calming Guidelines and Program" within the Existing Regulations, Policies, Programs, Plans, and Initiatives section of this chapter for more detailed information on the City's current traffic calming program.

Projects Advanced by State Agencies

Examples include RIPTA's Downtown Transit Connector project, RIDOT repaving or major construction projects that impact or take place on streets within Providence, and RIDEM-funded projects.

Neighborhood Improvement Funds (NIF)

NIF are neighborhood infrastructure dollars available through the City's general fund and allocated by the City Council. These funds can be used for a variety of infrastructure needs in their respective wards, including community centers, playgrounds, schools, road paving, traffic calming, and sidewalk repairs.

CDBG Allocation

Through this federal allocation from the U.S. Department of Housing and Urban Development (HUD), the City funds projects to address housing affordability, parks and open space, transportation infrastructure (particularly sidewalks and traffic calming), quality of life issues, economic development, and workforce development.

311 Requests

In most instances, the city addresses 311 requests by making repairs to streets and sidewalks.

Specific Plans

This includes recommended improvements identified in Bike Providence, the Comprehensive Plan, special area plans such as the Woonasquatucket Vision Plan or 2014 City Walk Study, neighborhood plans, corridor plans, or other infrastructure projects which may have associated restoration work in the street or sidewalk.

Private, Community, and Non-Profit Developments

Projects that others propose and come before the City may identify needed improvements to street and sidewalk infrastructure. These projects sometimes include mitigation funds to pay for these or other improvements.

Utility Work

Utility companies often must open city streets to gain access to infrastructure below ground. The City Ordinance (Sec. 23-35) governs requirements for properly restoring streets and sidewalks.

Competitive Grant Funded Projects

The City often receives competitive grant funds to advance, implement, or maintain projects from state and federal agencies and national or local foundations. Sources of state grants include the State Transportation Improvement Program (STIP), Highway Safety Improvement Program (HSIP), and RIDEM Green Economy Bond. Other grants are funded by USDOT, EPA, local organizations like the Rhode Island Foundation, or national organizations like PeopleForBikes. Grant-funded projects typically require approval from and extensive coordination with the funding organization.

Recommendations

Recommendations included in this section are based on a combination of best practices research from other US cities and a thorough analysis of Providence's existing policies, procedures, and regulations.

Research and findings of best practices are based off of cities within different geographic regions of the country, with characteristics similar to Providence and Complete Streets programs which offer valuable lessons for Providence. The purpose of this research is to identify practices that may assist development and implementation of the City of Providence's Great Streets Initiative. Interviews with the following cities were conducted in the spring of 2019:

- Missoula, Montana: located in the upper Midwest with a population of 73,340
- New Orleans, Louisiana: located in the southeast with a population of 393,292
- Portland, Maine: located in the upper northeast with a population of 66,882
- Seattle, Washington: located in the upper northwest with a population of 724,745
- Worcester, Massachusetts: located in the northeast with a population of 185,677

This report also discusses best practices of several other cities that were not interviewed but were researched for this report.

Although this chapter includes many recommendations related to a variety of needed improvements to policies, processes, and regulations, the recommendations generally align with five key areas of focus:

- Revise Outdated and Enact New City Ordinances Related to Mobility
- Align City Policies and Procedures to Invest in and Preserve Great Streets
- Prioritize Safety and Comfort for People Who Walk, Ride Bicycles, and Use Public Transit
- Advocate for Friendlier State Laws and Policies Related to Mobility
- Expand Opportunities for Engagement, Education, and Encouragement

Revise Outdated and Enact New City Ordinances Related to Mobility

Create a New Great Streets Ordinance that Replaces and Strengthens the Existing Complete Streets Resolution and Formally Integrates the Great Streets Initiative into City Procedures

The City of Providence's existing Complete Streets resolution, adopted in 2012, is supportive and encouraging but not as strong as it should be.

The form of enabling legislation used by other cities to enact Complete Streets varies. Seattle's and New Orleans' programs were enacted through ordinance, while Missoula's program was authorized through resolution, Worcester's program by department policy, and Portland's program by council order. By definition, municipal resolutions are generally for temporary actions. Ordinances are for government actions that are intended

to be permanent.[4] Given that the City of Providence's Complete Streets policy was originally enacted by resolution and its Great Streets Initiative is intended to replace the program as a permanent function and service, an ordinance is warranted.

The National Complete Streets Coalition (NCSC) is the leading authority in Complete Streets policy and program implementation. Its Complete Streets template offers substantive policy and program parameters that are often considered when crafting a Complete Streets law or policy. [See Text Box 1.] All but one of the surveyed cities use the NCSC template. The Missoula Complete Streets Resolution 7473, adopted in 2009, is cited as one of the country's best Complete Streets policies by the National Complete Streets Coalition. It was amended in 2016 as Resolution 8098 and begins with a declaration to "increase the usability of all streets for all modes of travel for citizens of all ages and ability in Missoula."

Based on a review of NCSC guidance and Complete Streets ordinances, resolutions, and policies, it is recommended that the City of Providence's Complete Streets Ordinance include the following in order to align the substance and form of the ordinance with NCSC policy parameters (as done in New Orleans, Portland, Missoula, and Worcester):

- A clear description of the **Vision, Users, and Modes** intended to be covered by the ordinance
- **Inclusions and Exceptions**: Inclusions should be listed and representative of all activity in the public realm. Exceptions should also be clearly laid out and may include projects where an accommodation is not necessary because the project is on a corridor where people walking or riding bicycles are prohibited, project costs are excessively disproportionate to need, there is a documented absence of need, transit accommodations are not needed because there is no transit service, or there is an equivalent project within or along the same corridor with the same service. In some cities, exceptions must be approved by City Council.
- **Connectivity**: Missoula's resolution defines connectivity improvements as opportunities through maintenance, addressing railroad crossing deficiencies, filling trail and non-motorized network gaps, repairing sidewalk segments, implementing the 2011 Active Transportation Plan, [https://www.ci.missoula.mt.us/1608/Plans-and-Documents], and enforcing parking policies and winter sidewalk clearing ordinances.
- Context Factors and Prioritization: Establish and include "context factors" that prioritize investments such as certain trail or street corridors (with explanation on why these factors are important in the context of the community's immediate needs, history, and available resources). "Context factors" should be drawn from the Providence Great Streets Master Plan and Implementation Guide. Portland's Complete Streets Council Order requires "context factors" be considered to help prioritize what should be tackled first. An example of this is determining "whether the corridor provides primary access to one or more significant destinations" and prioritizing its value in the context of the community's immediate needs, history, and available resources. Providence should also include an Environmental Justice (EJ) methodology for determining how and where to achieve meaningful investments and services within Providence's EJ communities and how progress will be tracked. EJ is defined as a heightened emphasis area for the National Complete Streets Coalition when assessing best practices. In determining how and where to prioritize infrastructure investments in EJ communities, a common government approach is to identify locations on the network needing improvement and if they are near or within disadvantaged or low-income communities, it is assumed an equity investment will be achieved.

  The City of Providence should develop a clear prioritization methodology for Great Streets and Urban Trail projects to help decide which projects to implement first. Below is suggested language to include in the Ordinance:

  - **Connectivity**: A project's prioritization score shall be elevated if it connects to an existing or funded project. An exception may be made where a project that is a distance away from an existing or funded project can be reasonably connected in the short or mid term, and has its own connectivity benefits (e.g. to destinations such as schools or parks).
  - **Safety**: A project's prioritization score shall be elevated based on the pedestrian and bicycle crash history (number of crashes per linear mile for crashes occurring within a quarter mile of the project).
  - **Demand**: A project's prioritization score shall be elevated based on the anticipated demand of people walking and riding bicycles in accordance with population density, nearby destinations, employment centers, and other related factors.
  - **Environmental Justice and Equity**: A project's prioritization score shall be elevated based on proximity to populations corresponding with Environmental Justice indicators, such as households in poverty and households without access to vehicles.
- **Design Guidance**: Missoula's resolution mandates use of the "best and latest design guidance, standards, and recommendations."

4 An ordinance is a municipal law that prescribes general, uniform and permanent rules of conduct relating to the corporate powers of the municipality. An ordinary ordinance, as opposed to a charter ordinance, is intended to be reasonably permanent. A resolution is generally less permanent and addresses municipal matters of a special or temporary nature.

- **Performance Measures**: Insert measures that will quantify performance of the program, similar to performance measures listed in the City of Missoula Complete Streets resolution, including miles of connected Urban Trails:
  - Total miles of dedicated or identified shared-use bike facilities built or striped
  - Linear feet of new pedestrian accommodation
  - Number and type of ADA accommodations built
  - Number of transit accessible accommodations built
  - Number of new curb ramps installed along city streets
  - Number and type of traffic calming devices installed
  - Number of new street trees planned
  - Crosswalk and intersection improvements
  - Percentage of transit stops accessible via sidewalks and curb ramps
  - Annual average daily traffic (AADT) data
  - Bicycle and pedestrian count data
  - Transit ridership data, including automated passenger counter (APC) data
  - Rate of people riding bicycles, walking, and using transit
  - Rate of children walking or biking to school
  - Citizen input
- **Urban Design Factors**: The ordinance should reference urban design factors such as streetscape improvements, landscaping and street trees, human-scaled lighting, public art, street furniture, wayfinding signage, and active ground floor uses.
- **Implementation**: Missoula's City departments and their responsibilities for program implementation and "everyday program decision making" are listed in their Complete Streets policy. Identification of program funding sources and methods for inter-departmental coordination is mandated. Portland, Maine uses CDBG funds for Complete Streets improvements within Environmental Justice communities.
- **Construction Mitigation**: Cleveland Heights' (Ohio) policy includes a provision requiring safe accommodations for people walking and riding bicycles during construction. According to NCSC, this is often overlooked.
- **Training and Professional Development**: Des Moines' Complete Streets policy emphasis on interdisciplinary coordination and training was noted as a 2018 best practice by the NCSC. As shown in Text Box 3, the policy identifies departments to be engaged in program implementation and training. The City of Missoula's transportation planners and engineers are regularly provided access to training in ADA, mobility and access, and Complete Streets within departmental budgets. Portland's Council Order requires "continued education and training of staff and public officials" to ensure the program stewards keep pace with practices in Complete Streets.
- **Environmental Justice**: Providence should also consider best practice methodology cited by NCSC for achieving meaningful investments within its Environmental Justice communities. The National Complete Streets Coalition advises equity criteria be considered early on to determine what to invest and where. Equity criteria are intended to identify disparities in health, safety, economic benefit, access, and network connectivity. NCSC cites the Cleveland Heights, Ohio, Des Moines, Iowa, Baltimore, Maryland, and Milwaukee, Wisconsin Complete Streets policy approaches that delineate the geographic boundaries, physical condition, and socio-economic characteristics of the areas; establish working relationships with the community stakeholders; create with them investment strategies to address specific needs; and define a reporting mechanism to assess productivity. All of the cities received the NCSC 2018 Best Practice Award.

  Des Moines' policy is notable for its identification of areas of the community most vulnerable and historically underserved. To ensure benefits are shared equitably, the Des Moines policy uses environmental justice areas to analyze disparities, includes implementation language that prioritizes the most vulnerable, and measures success by including counts of how many Complete Streets projects are accomplished within EJ communities. The Des Moines policy is noteworthy for its emphasis on health equity and language that sets a timeline for implementation. This policy was passed with support of a broad range of advocates including the YMCA, AARP, and United Way, NAACP, and disability activists.

  Baltimore's Complete Streets policy requires reporting of program progress by geographic subunits such as census tract and traffic analysis zone and by race, income, population, and vehicle access.

  Milwaukee's Public Works Pedestrian and Bicycle Coordinator and Complete Streets policy manager noted to NCSC that conversations with a wide range of stakeholders were an important opportunity to highlight equity— largely neglected in past discussions about transportation— and created a framework to guide future conversations. He reported "[The policy] acknowledges that there are disparities in communities. There's been disinvestment, and moving forward, street design needs to take [those disparities] into consideration and work with communities and build in better training and engagement so that we know how street design can help in battling some of those disparities. There was an emphasis on health and safety and how often there are disparities, like crashes, happening in predominantly low-income [areas] and communities of color. It is not prescriptive,

but we tried to set up a framework for how we will navigate those conversations in the policy."

New Orleans' Complete Streets policy emphasizes "a data-driven and equity-focused" program "based on community needs and participation." The resolution creates a Complete Streets Committee of elected and appointed government, advocate, and community representatives to oversee the program. While these requirements are reasonable, it should be noted, this last resolution is the culmination of a tumultuous Complete Streets program history.

Update Ordinance Language for Operating a Bicycle

Sections 15-70—15-75 of the Code of Ordinances date from 1946 and are significantly out of date. For example, Section 15-73 prohibits carrying a passenger on a bike. However, cargo bikes and bikes with trailers and child seats often carry passengers.

Repeal Ordinance Prohibiting Skateboarding

Section 23-31 of the City's Code of Ordinances prohibits riding a skateboard on any street, highway, sidewalk or pedestrian mall, passed in 1965, is antiquated and should be repealed.

Consider Zoning Ordinance Revisions that Further Lower Parking Requirements in New Developments

The demand for parking is expected to continue to change as more people avail themselves of new mobility options such as bike share e-scooter share, Transportation Network Companies (TNCs) such as Uber/Lyft, improved public transit, and autonomous vehicles. Parking requirements should reflect these trends. Many cities encourage developers to incorporate features into their projects that encourage travel and lower the need for parking. This includes providing incentives that lower the requirements if certain amenities are included in project proposals.

Amend the Code of Ordinances to Include Fines for Parking in or Blocking Bicycle Facilities and Increase Associated Enforcement

The CIty should study fines and ordinance language used by other cities to establish an appropriate dollar value. In Atlanta, drivers are fined $100 for parking automobiles in bike lanes or on multi-use trails, while fines for tractor trailers are more significant at $1,000. Atlanta's police department also runs an education campaign to discourage parking in bike lanes. Washington, DC recently increased the fine for parking in a bike lane from $65 to $150, and New Orleans fines drivers $300 for parking in bike lanes.

Align City Policies and Procedures to Invest in and Preserve Great Streets

Establish Transportation Impact Study Requirements and Guidelines for Specific Street Types

An important goal of the Providence Great Streets Initiative is to identify and implement ways to more efficiently construct public realm improvements. At present, when projects such as on-street bike lanes are considered, the internal review process can take longer than may be needed, particularly for certain streets. When a proposed project may eliminate or narrow a vehicular travel lane or eliminate parking, concerns about impacts often trigger the need for studies. Such studies are often costly to undertake and time-consuming. Furthermore, to the extent that transportation impact studies focus only on a narrow range of impacts, such as vehicle level of service (LOS or VLOS, see discussion below on LOS), they may not adequately address impacts to other modes or fairly represent the range of benefits a project is likely to bring about.

To address these challenges, the City should consider adopting a policy that:

- Limits requirements to conduct transportation impact studies to certain street types;
- Permits projects to advance without such studies on other street types;
- Requires transportation impact studies to consider a range of impacts and benefits to all modes of transportation, considering the context of the proposed project; and
- Is consistent with the goals and policies of the City's Great Streets Master Plan. For example, the study should give deference to the goals of creating a connected network of Urban Trails and Great Streets, making transportation more affordable, improving quality of life, and becoming carbon neutral. Studies should also be consistent with a measurement or LOS policy if adopted by the City (discussed below). This policy foundation should inform how the study evaluates likely impacts and benefits.

Develop Protocols for Regularly Updating Infrastructure Projects in the Great Streets Master Plan

Regular updates to the projects listed in the Great Streets Master Plan will be important to maintain the Plan's relevance, address new needs and issues as they emerge, and mark projects as complete once they are constructed.

Modify the City's Traffic Calming Procedures and Guidelines

Providence's traffic calming program is reactive by design, does not limit how many and from whom requests may be initiated, does not restrict where traffic calming may be implemented, and does not adequately explain the process or make information about it available to community members. Traffic calming programs have been in place for more than 20 years in a number of U.S. cities with some dating back even longer. Because traffic calming programs are popular, to conserve resources, a number of cities have changed their programs in important ways, including limiting where traffic calming projects may be implemented and establishing requirements for initiating requests.

One pitfall traffic calming programs face relates to their usual focus on individual streets. When one street is traffic-calmed in a neighborhood or small area, there is a potential that adjacent streets that have not received similar treatments may see diverted traffic at speeds similar to those experienced on the traffic-calmed street prior to installation.

The City should modify its traffic calming procedures to be more transparent and predictable, include new thresholds, criteria, and solutions, and be proactive rather than reactive by:

- Codifying where traffic calming projects can and cannot be implemented
- Requiring a minimum number of resident or property owner signatures on a petition in support of a traffic calming request
- Establishing an annual deadline for requests so that staff may consider them together;
- Preparing and publishing user friendly public information to a webpage that describes the policy and process and includes documents for download, digital applications and petition forms, and contact information
- Conducting TCAG meetings at times when and locations where members of the public are able to attend;
- Applying flexibility and context-sensitivity to the review of traffic calming applications. All traffic calming requests made by the community represent a safety need, either real or perceived. Traffic calming features should be applied in accordance with the Providence Great Streets Implementation Guide, which identifies which types of traffic calming are appropriate based on street type.
- Adopting use of new traffic calming solutions or interventions such as chicanes, diverters, neighborhood traffic circles, and raised crosswalks/intersections. Traffic calming projects should lead by considering ways to support multiple goals of the Providence Great Streets Initiative. Specifically, many traffic calming features are well-suited to provide stormwater management, habitat, and aesthetic benefits, in addition to serving a strong traffic calming function. All traffic calming interventions must be weighed against maintenance capabilities to ensure adequate resources are available to maintain new features.
- Developing a zone-based traffic calming program that allows groups of streets within neighborhoods to be comprehensively evaluated for traffic calming. The resulting implementation would strategically occur on several streets, in part to prevent higher-speed traffic diversion to surrounding streets. Residents would be required to submit traffic calming applications the to City, which would evaluate them based on published evaluation metrics and create a traffic calming plan for selected applications. The City of Boston's Neighborhood Slow Streets program operates in a similar manner and is a useful reference.Based on neighborhood comments received during the charrette as well as City input and previous traffic calming requests, while not necessarily an exhaustive list, key traffic calming areas are included in the Neighborhood Visions chapter of this document.

The traffic calming in place in the City of San Francisco incorporates the above approaches is a good model for application in Providence. See https://www.sfmta.com/getting-around/walk/residential-traffic-calming-program.

Improve Internal City Processes to Implement the Great Streets Initiative and Develop a Program Management Plan

A first year Project Management Plan (PMP) should be established and should answer five key questions:

- In what department will the program be located; how will be it managed, staffed, and funded?
- What other City departments and entities will be responsible for elements of the program; what will be their roles, responsibilities and decision making authority; how will program work activities, work products and decisions be coordinated and communicated; and how will professional collaboration, information sharing and training be fostered?
- Will there be a Complete Streets advisory group or oversight committee; what role will it have in shaping the design of the program?
- What will be the public engagement mechanism; how will it work?
- What is anticipated to be accomplished in 6 months, 8 months and 12 months?

After executing the first year PMP and informed by its outcomes, the City of Providence should consider constructing a multi-year PMP as the program evolves and grows over time.

Text Box 2

2019 NCSC Complete Streets Best Practices Policy Text Excerpts – Environmental Justice

Des Moines, Iowa

"In creating Complete Streets/ the City recognizes equity as a motivation and will prioritize vulnerable users and those residing in the environmental justice (EJ) areas identified by the Des Moines Area Metropolitan Planning Organization (MPO)."

Des Moines Area MPO, Environmental Justice Report, August 2016

"To ensure fair treatment, the MPO studies seven Degrees of Disadvantage to identify EJ areas, or those areas with large populations of traditionally underserved individuals…The Degrees of Disadvantage methodology looks at U.S. Census Bureau data at the tract level to determine where EJ areas are located in the region. Data is obtained for seven population groups including nonwhite population, car-less households, persons in poverty, single heads of households with children, persons over 65, limited English proficiency (LEP), and persons with a disability. A Degree of Disadvantage is identified for a population group if the census tract exceeds the regional average for the population group. Census tracts considered EJ are disadvantaged for at least six of the seven population groups"

Baltimore, Maryland

Equity Lens.

A. Separate reporting by geographic subunit. In preparing the annual report, the department must separately report data by geographic subunit (e.g., census tract, traffic analysis zone, or the like).

B. Separate reporting by race, income, and vehicle access. The annual report must separately report data into the following categories:

a. Populations that are above and below the median number of persons of color for Baltimore city.

b. Populations above and below 50 percent no vehicle access.

c. Populations with a median income above and below the median household income for Baltimore city.

Accountability to Communities. The transportation department, in consultation with the complete streets coordinating council advisory committee, shall conduct public meetings and other community engagement and outreach activities to present the complete streets annual report to the public and solicit public input.

Milwaukee, Wisconsin

"5. When considering the various elements of street design, the City shall give priority as follows:

a. Above all, safety is imperative, with pedestrian safety having the highest priority followed by the next most vulnerable types of users.

b. Street design elements that encourage and support walking, biking, and transit trips in a manner that considers the context of the surrounding community as well as the broader urban design needs of the city.

c. The City recognizes that not all modes can receive the same degree of accommodations on every street, but the goal is for users of all ages and abilities to safely, comfortably and conveniently travel across and through the network.

6. The Department of Public Works shall prioritize universal and equitable investment in underserved communities throughout the City which lack existing infrastructure that encourages walking, biking, and transit trips, as well as areas where data indicate crash risk and health disparities."

A key decision point is where the Great Streets program will be located within the City's departmental structure. The City should study potential reorganization of City staff to improve efficiencies, reduce gaps and redundancies in workflows, and position the City to become a leader in mobility and public realm investments. Lessons learned from New Orleans experience (described below) and other cities may be helpful to the City of Providence. In terms of placement, two of the cities' Complete Streets programs are located within departments of public works (New Orleans, Portland). In Missoula, the program is administered mostly within the Department of Development Services Transportation Planning Services Division. It is physically separated from the Department of Public Works where daily public realm design, management, construction, and maintenance decisions occur. In Worcester, the program is in its infancy. An executive-level Transportation Advisory Group has been formed to help shape it. In the City of Seattle, the program is embedded in the Seattle Department of Transportation which has a high concentration of transportation disciplines and resources. A summary of the Missoula, Worcester, and Seattle program management experiences is provided in this section.In Missoula, the planning unit administers the program but its engineering, construction, and maintenance functions are performed by the Department of Public Works and the Department of Parks and Recreation. (See Text Box 2.)

Another key part of Missoula's initiative is an integration of Complete Streets principles into the Missoula Long Range Transportation Plan. The document establishes a goal to triple bicycle and pedestrian modal share percentages and more than triple transit modal share percentages by Year 2045. [Pages 74-76]. Another example of how interdepartmental relations are improving is in Missoula's roadway project planning process. The transportation and parks planners assist the design engineers with Complete Streets design and placement opportunities. During the project design, review and approval phases, the City Engineer inclusively circulates 30 percent, 70 percent, and final design plan sets to Transportation Planning, relevant Public Works divisions, and Parks and Recreation. "We red line them with our comments and recommendations and send back," he says and "if the project is large… or has regional implications, we have a sit down session." In the construction and maintenance phases, collaboration continues on amenities such as protected bike lane striping.

The City of Worcester created a Transportation Advisory Group (TAG) comprised of stakeholders and advocates to help with program start up. According to the Development Officer in the Executive Office of Economic Development (Planning and Regulatory Services Division), "It has only been within the last 4 to 5 months that we've begun discussing ways to implement the policy. While still in the formative stage, the TAG is beginning to identify Complete Streets opportunities above and beyond the conventional roadway upgrades and improvements. We are excited that the next cycle of roadway projects will enable us to begin applying Complete Streets principles, such as better transit stops. I envision the TAG playing a greater role as we move forward. In the first round of recent project reviews, they recommended incorporating street trees for some projects and walk amenities near schools for others." The TAG members, appointed by the City Manager, include representatives from the Central Massachusetts Regional Planning Commission, Walk/Bike Worcester, the Worcester Chamber of Commerce, the Worcester City Manager's Office, the Department of Economic Development, the Department of Health and Human Services, the Department of Public Health, the Department of Public Works, the Worcester Fire Department , the Police Department, Worcester Polytechnic Institute, and the Worcester Tree Initiative. The Worcester City Manager reports, "[The TAG] role is to review, comment and make recommendations to my administration and the departments involved in implementing transportation improvements in the city. The TAG is multidisciplinary in nature, and its members have a diverse range of backgrounds and expertise." [Source: "*Worcester Complete Streets Hits the Ground Running," Telegram and Gazette, April 11, 2018*.]

According to New Orleans' the Department of Public Works Special Projects Lead, who oversees the Complete Streets program, "after it [the ordinance] passed in 2011, we began developing the program. Subsequent advocate discussions with City leadership caused the Council to direct us to develop a Complete Streets Program Management Plan (PMP), which we did in 2012." As the Public Works Department began implementing the PMP, in 2015 the Chief Administrative Officer issued Policy Memorandum #134 which broadened the program scope. New discussions ensued with Council, City Leadership, citizens, advocates, and all department heads. The Projects Lead says these interventions "caused fits and starts. Our fundamental needs, such as a Project Checklist, never materialized. There's been a lot of re-thinking but little implementation."

To avoid the New Orleans experience, the Projects Lead encourages the City of Providence to "get organized." She advises the mechanics of the program– how it will work– should be fully vetted before an ordinance is enacted. The roles and responsibilities of City leadership, department heads, program staff, stakeholders, advocates, and citizens should be agreed to by them before ordinance action. The Projects Lead also advised creation of an 'out years strategy' forecasting how program staffing, resources, and funding will be decided and addressed over time.

Establish a Great Streets Project Screening System and Checklist to Ensure Coordination

Many cities have policies requiring coordination to take advantage of every potential construction project. In other words, if the City or any other entity is going to alter the street for any reason, if the street is identified as needing improvements within the Great Streets Master Plan, the proposed improvement should be implemented as part of the alteration. Whatever the source, each project should be viewed as an opportunity to implement the

Great Streets Master Plan. In order to do so efficiently, staff must know exactly what is planned for streets and there must be a defined a process in place to efficiently advance the plan.

Except for emergencies, no construction activity should occur without prior consultation. The consultation should determine:

- What is the proposed plan for the street?
- Is another project programmed within the same section of street or an adjacent part of the public realm and for when?
- Is there an opportunity to implement the Great Streets Master Plan with the other project?
- If not, why not?

The following language should be considered as part of the City of Providence's screening policy:

> *It is the City of Providence's policy to implement any approved Great Streets Initiative project at the first available opportunity. Any construction activity on the street or sidewalk identified as needing improvement as part of the Great Streets Master Plan, shall be coordinated through [insert position name]. If the Great Streets concept cannot be advanced, the reasons shall be documented and distributed accordingly and included in a record system for Great Streets implementation. Except for emergencies, no construction activity shall occur without prior consultation.*

The City of Seattle created a Complete Streets Project Checklist, which is a data-embedded digital tool available to SDOT project managers responsible for the initial planning and 30 percent design of new transportation improvement projects. It is meant to empower managers with information that broadens their understanding of Complete Streets application possibilities. The five sections of the Project Checklist are (1) purpose statement, (2) GIS mappings (deeply layered), (3) project coordination, (4) project recommendations and sign off, and (5) final decision.

Providence's checklist could initially be a simple version of the Seattle Project Checklist for the first years. In the out years, the functionality and use of the tool should be increased. The ultimate goal should be to have one data source for all City public realm engineering, planning, maintenance and construction specifications and standards; all mode-specific master plans; all relevant regulatory and zoning provisions; and all relevant GIS mappings.

Update Road and Sidewalk Opening Standards to Capitalize on Project Opportunities for Great Streets Implementation

The permit process and standards should be updated to ensure patches do not create hazards for people riding bicycles and that temporary road closures and detours accommodate bicyclists. It should also be mandated that Urban Trail of bicycle-related pavement markings that are covered over or damaged by road work be replaced in a timely manner.

Provide Additional Resources to the Providence Parks Department

The Providence Parks Department needs additional staff and equipment to maintain the City's Urban Trails, roadways and pathways within City parks and green spaces.

Text Box 4

City of Missoula - Complete Streets Program Shared Responsibilities

Department of Development Services – Transportation Planning Services Division (Lead):

- Complete Streets Transportation Planning and Policy
- Bike and Pedestrian Office: bike and walk promotion, traffic calming, pedestrian and ADA compliance strategies; Bicycle Facilities Master Plan.

Department of Public Works

- Street Maintenance Division: street cleaning, snow and ice removal, alley grading, leaf collection, storm water drain maintenance, street construction projects, chip sealing, maintenance of State routes in city, maintenance of bike lanes
- Traffic Services Division: street and traffic sign fabrication, installation, and maintenance; roadway striping application and maintenance; crosswalk, road messages, and curb marking applications and maintenance; sidewalk concrete grinding program; traffic and pedestrian studies; and snow removal on city bridge sidewalks.

Department of Parks and Recreation

- Maintenance and planning of parks, primary commuter network of trails, regional trails, and open space
- Maintenance of medians, sidewalks adjacent to parks and on bridges
- Urban forestry; tree planting and maintenance

The maintenance experiences, challenges, and practices of comparable cities are discussed in this section. The City of Seattle methods warrant best practices consideration but its geographic location, size, weather, transportation footprint, and the magnitude of its resources are not comparable. If interested, visit https://streetsillustrated.seattle.gov/ to view the City's Right-of-Way Improvements Manual - *Seattle Streets Illustrated 2017*.

The cities of Missoula, New Orleans, Portland, and Seattle have fully functional Parks Departments that maintain parks, urban forestry, greenway trails, and public spaces such as boulevard planting strips, medians, and sidewalks adjacent to parks.

In Missoula, sidewalk upkeep and snow clearance are the responsibility of abutting property owners. This is enforced through Code. If property owners are non-responsive, Public Works clears sidewalks and the City bills them. In Missoula's downtown, the Downtown Business Improvement District offers some maintenance and snow removal assistance for protected facilities such as bike lanes and sidewalks. For the rest of the network, the Department of Public Works is responsible for sidewalk and roadway clearance, maintenance, replacement, and repair. It is responsible for street sweeping and keeping bike lanes free of debris. Every fall, it examines infrastructure assets and schedules improvements.The City of Missoula's Snow Plowing Priority Plan, which summarizes snow procedures, may be accessed at https://www.ci.missoula.mt.us/558/Snow-Removal. Their Parks and Recreation Department maintains boulevard planting strips, medians, and sidewalks adjacent to parks and on bridges. The department has its own equipment and schedule for the care of public trails such as the City portion of the Bitterroot Trail, the Milwaukee Trail, and what is known as the "primary commuter network" of trails.

In New Orleans, the Department of Public Works is responsible for maintaining the City streets. Maintenance of the parks and green spaces is split between the New Orleans Recreation Development Commission (NORDC) and the Department of Parks and Parkways. NORDC maintains local parks and playgrounds. Parks and Parkways maintains regional parks, mows medians, and maintains street trees. The Department of Sanitation is responsible for removing trash, sweeping, and garbage collection on City and state routes.

In Portland, Maine, public realm maintenance is divided between Public Works (DPW) and Parks and Recreation. DPW is responsible for areas within the roadway right-of-way such as sidewalk maintenance, roadway paving, and cleaning, signage, snow plowing, and street sweeping. It has an Asset Management Plan and conducts roadway pavement condition ratings every 2 to 3 years. In the downtown, a tax (less than 1 percent) is levied in the Business Improvement District. This funds the cleaning of sidewalks by DPW crews. For the remaining sidewalks, the responsibility is with the commercial and residential abutters.

The City of Missoula Parks and Recreation Department is responsible for the maintenance of street trees, parks, plazas, shared use paths, sidewalks, and snow plowing in areas outside of the roadway right of way.

In Worcester, the DPW is responsible for maintenance. In some areas, , business or community groups sponsor landscaped areas and contribute to their upkeep (e.g. – Shrewsbury Street). Residents are responsible for clearing abutting sidewalks except those adjacent to public property such as parks and conservation lands.

Update Sidewalk Repair Standard Operating Procedures To Incorporate Great Streets and Urban Trail Projects

The development of the Urban Trail Network will provide a boost to the City as it works to address the backlog of sidewalk repair needs given available resources. Therefore, the following framework is recommended for Urban Trail and Great Street implementation in relation to the Sidewalk Repair Policy:

- Where the Sidewalk Priority Heat Map in the Sidewalk Repair Standard Operating Procedure indicates a medium or high priority, on-street Urban Trail or Great Streets projects shall include basic repairs to the adjacent sidewalk or sidewalks along the same street in accordance with Section 5 of the Sidewalk Repair Policy.
- Where the Sidewalk Priority Heat Map in the Sidewalk Repair Standard Operating Procedure indicates a low priority, on-street Urban Trail or Great Streets projects may include basic repairs to the adjacent sidewalk or sidewalks along the same street in accordance with Section 5 of the Sidewalk Repair Policy.
- An on-street Urban Trail project may be implemented without sidewalk repairs if a separate project that includes repair of the sidewalk (to a level of quality consistent with the Sidewalk Repair Standard Operating Procedure) for the same street is already funded, programmed in the Capital Improvement Program, a condition of a private development, or otherwise obligated to be completed through a separate process.
- All projects shall meet regulatory requirements, e.g. ADA compliance.

This framework assumes adoption of the draft Standard Operating Procedure without substantial changes to the referenced sections and graphics.

Adopt Policies Regarding Transportation Impact Assessments

While the City of Providence has no formal Level of Service (LOS) policy, concerns about LOS degradation in the near-term and for longer planning horizons have led to a lack of clarity about what is acceptable in an urban environment, and have potentially

impeded implementation of projects that would greatly benefit Providence residents. Vehicular level of service (LOS or VLOS) is a method of describing traffic delay using a range from A to F. VLOS A represents free flowing traffic and F represents significant congestion. Many agencies, including RIDOT, have long-standing policies to maintain a minimum VLOS on certain roadways and intersections. However, as traffic volumes continue to increase, maintaining VLOS requires agencies to add capacity by widening these roads and intersections. Such an approach is increasingly inappropriate for urban streets and can negatively impact other road users.

In some instances, Great Streets projects that make an area safer for people walking, taking transit, or riding bicycles may lower VLOS. When analyzing the potential impacts of Great Streets projects, the City of Providence should rely on context-sensitive factors such as crash frequency, crash severity, safety, mobility, vehicle speeds, access, land use, and throughput and not on VLOS.

This is consistent with national practice. Recent developments in engineering analysis methods now account for multimodal LOS measures, which address some of the shortcomings of relying solely on VLOS. Further, the use of LOS may not be appropriate altogether. According to a November 30, 2017 Federal Highway Administration (FHWA) webinar on "LOS in the New World of Performance Measurement," LOS's use may limit the range of potential design solutions considered and lead to capacity expansion. In discussing the need for context-sensitive planning, the FHWA representative, Jason Broehm, stated, "LOS can be a useful metric for mobility, but focusing on achieving a particular LOS grade may not supporting meeting agencies goals in these other areas." He reviewed the Federal requirements related to LOS noting:

- The AASHTO Green Book makes clear that designers and engineers should use context and make judgments.
- LOS is an indirect recommendation, not a Federal requirement.
- The requirement for 20-year traffic forecasts applies to changes to the Interstate highway system but not for other roadway classes.
- The FAST Act repealed the provision for specifically improving LOS at intersections.

Florida DOT has undertaken significant research in the area of context-sensitive solutions by emphasizing all modes of travel and flexibility. They have replaced the term "Standards" with "Targets." Targets are responsive to all users for context, roadway function, network design, and safety.

In 2014, the State of California enacted SB 743, which states that when implemented, "traffic congestion shall not be considered a significant impact on the environment" within California Environmental Quality Act (CEQA) transportation analysis.[5] Several California municipalities (e.g. Livermore, Redwood City, San Jose, and San Francisco), have adopted policies that either replaced LOS altogether or limited its application in downtown or transit-oriented districts. Closer to Providence, the City of Cambridge requires developers to analyze LOS for vehicles and pedestrians. City policy allows a project-induced VLOS reduction depending on the existing LOS but prohibits degradation of LOS for people walking.

Moving away from LOS as a critical measure for Great Streets implementation means other measures may be more appropriate to consider. For example, for streets with closely spaced intersections, vehicle queue lengths are important to ensure motor vehicle traffic does not block upstream intersections. Many tools are available for analysts to evaluate and then mitigate such scenarios.

The following language is adapted from the Chicago DOT Complete Streets Design Guide LOS Policy and should be considered as part of the City of Providence's LOS Policy:

> In a typical project, people walking shall enjoy the highest LOS, while drivers shall have the lowest. All LOS shall be relative by mode.
>
> There shall be no minimum vehicle LOS for any project. Within [insert boundaries] the default maximum VLOS for City-initiated projects shall be E. This is not to say that the MVLOS must purposely be lowered, but efforts should not be made to increase it above E. Developer-initiated projects may not negatively impact the MVLOS, unless corresponding increases are made in level of service for people walking, people riding bicycles, or transit.
>
> LOS evaluations shall consider cross flows (especially people walking) as well as corridor flows.
>
> Delay for people walking at signals shall not exceed 60 seconds.
>
> City staff shall utilize multi-hour evaluations instead of peak-hour only calculations.
>
> LOS evaluation shall only be required for projects [exceeding a certain threshold]. It should be calculated when required by funding sources, but shall always be balanced with other factors.

New Orleans generally does not apply level of service (LOS) standards. Instead, other factors such as crash frequency and severity are considered.

In Missoula, LOS is also "rarely discussed" by the Department of Development Services and the Department of Public Works which share responsibility for responding to traffic calming requests.

5 http://www.dot.ca.gov/hq/tpp/sb743.html

According to the Transportation Planning Services Manager, LOS considerations are applied only on state and federal routes, where the Montana Department of Transportation (MDOT) has jurisdiction.

Portland, Maine's Transportation Planning Manager says LOS is not often used if at all on minor and lower level streets, instead they apply a "holistic and context sensitive approach". Similar to the other cities, LOS standards are "not often" used and "rarely applied" when assessing traffic calming in the City of Worcester. According to the Development Officer, "while potential impacts to congestion are considered in general terms, we rarely apply LOS calculations."

Use and Price Curb Space More Efficiently and Flexibly

Create a working group comprised of various City staff who plan, maintain, use, and enforce curbside space in the City of Providence and other stakeholders such as business improvement districts, residents, business owners, and rideshare companies, to establish a vision and goals for geofencing zones, flexible curb, and dynamic pricing policies. Geofencing uses GPS satellite navigation systems to determine the ground position of cars, curbs, and streets and establishes specific boundaries or zones that delivery drivers and rideshare drivers and users and are routed to through technology in their phones or vehicles. Dynamic use and pricing of curbside spaces allows for rules to change depending on time, demand, and revenue considerations. Dynamic uses, pricing structures, and geofencing reflects anticipated growth in use of ride-hailing and delivery services by Providence residents.

The City should work with stakeholders to identify streets with the most traffic congestion and implement dedicated zones to create safer conditions for rider drop-offs, pick-ups, and deliveries and reduce congestion in key areas. It is important to work with stakeholders to identify the best locations for these activities.

The City should also increase capacity to manage curb space dynamically by building and using a central GIS-based repository of all curbside spaces citywide. Other key issues the City should address include how curb usage will be monitored and enforced, and how potential fees might be collected. New policies should be clearly communicated through signage, paint, and public notices. New regulations and policies must be seen and easily understood by all users in order to be effective.

Coordinate Traffic Signals Citywide

Traffic signal coordination aligns green lights times for adjacent intersections to improve the flow of vehicles along corridors and improve the operation of turning movements for drivers. According to FHWA " Studies have proven the effectiveness of signal coordination in improving safety. The Institute of Transportation Engineers' Traffic Safety Toolbox cites two studies of coordinated signals with intersection crash frequencies that dropped an average of 32 percent... Signal coordination can also contribute to a decrease in red-light running."[6]

Continue to Integrate Art and Cultural Planning into Mobility Investments

Living up to Providence's reputation as the "Creative Capital", the CIty continually finds ways to creatively integrate local arts and cultural organizations into infrastructure investments. During a demonstration event on Broad Street in 2018, the City hired three local artists to create temporary ground murals. Using tempera paint, artists and dozens of community members reclaimed excess pavement to create vibrant curb extensions and public plazas. Based on the overwhelmingly positive feedback received during the demonstration event, the CIty should expand the use of ground murals and other similar art integration into mobility projects.

In 2018, the City of Providence Department of Art, Culture + Tourism also convened local partners to generate a series of site-specific performances and temporary art works along the banks of the Woonasquatucket River in anticipation of the upcoming investment in the Woonasquatucket River Greenway. This project is supported by the National Endowment for the Arts and will culminate in a celebration along the river in summer 2019. Following the demonstration event, partners will convene to refine a vision for permanent art infrastructure as part of the larger Greenway project.

The CIty should find additional additional ways to integrate art and local cultural organizations as additional investments are made and further expand the reach of community members who become engaged in such projects.

Public art and interpretive signage that highlights significant historic or cultural elements will be important parts of the Urban Trail Network, creating interest points along the network that celebrate the diverse cultures of the CIty's neighborhoods.

Develop a Demonstration Project Strategy and Toolkit to Test Projects Before Full Implementation

To avoid costly and time consuming studies and to test effectiveness before deploying expensive permanent solutions, many cities experiment by using demonstration projects (sometimes referred to as tactical urbanism). Providence's City Walk project deployed such an approach in the summer of 2018 with great success. The use of demonstration projects is appropriate in locations where concerns about long-term impacts may be present, but where the proposed solution is seen as highly beneficial and

6 https://safety.fhwa.dot.gov/intersection/other_topics/fhwasa08008/sa4.cfm

effectively, worth trying. In other projects, such as resurfacing, restriping, minor residential street reconstruction, or spot improvements such as intersection signal retiming and curb ramp construction, the basic Great Streets principles of safe, clean, healthy, inclusive, and vibrant should be applied.

Demonstration projects are low-cost, temporary changes to the built environment, that test ideas to improve local neighborhoods and gathering places prior to investing in costlier permanent solutions. For examples of recent projects, see: https://www.street-plans.com/tactical-urbanism-projects/

Develop a Program to Incentivize Business and Property Owners to Install Bicycle Parking

An increasing number of cities incentivize their businesses to install bicycle parking, including:

- Denver, Colorado: The City's Public Works Rules and Regulations describe a streamlined year-round application process. There is no fee for the installation of the standard U Rake and permit fees for other rake types are waived if the request is in a high demand bicycle parking area. The City regulates the type and location of the installation to ensure the highest usability and safety.
- Pittsburgh, Pennsylvania: The City's Bicycle Parking Guidelines enable businesses to install a standard bike rack. After the application is approved, the business itself installs the rack in accordance with location and design specifications. It is maintained by the City. The business pays a $25 permit fee in addition to the cost of purchasing and installing the rack.
- Portland, Oregon: Administrative Rule TRN 10.9 enables the City to install a free bicycle rack on the sidewalk in front of the requesting business as long as the location meets minimum requirements. The business may request up to two free racks. Each additional rack is $150.
- Rockville, Maryland: The new City Bike Rack Grant Program enables businesses to request – through application – bicycle parking on their property or within public right of way at or near their location. There is no cost to the applicant. The City purchases and installs the inverted-U racks which require a parking space of 72" x 24" and if placed along a sidewalk or pedestrian path, a five-foot clear walkway.

For Providence, bicycle parking near employment, retail, and other destinations enables viable non-motorized transportation options. A mechanism for businesses to request bicycle parking at and near their establishments should be considered.

Develop a Policy to Increase Electric Vehicle (EV) Infrastructure

Cities across the nation are planning electric vehicle (EV) infrastructure development, including:

- Denver, Colorado is installing 300 EV charging stations and changing its building code to address the demand for more charging stations. In the State of Colorado, the number of plug-in vehicles increases by more than 40 percent annually. The state is teaming with Utah and Nevada to build a charging station highway corridor; covering more than 2,000 miles and spanning three states.
- Seattle, Washington's Drive Clean Seattle Initiative sets a target of 30 percent electric vehicles citywide by 2030. Its utility company, Seattle City Light, has installed 20 fast-charging stations on 15 curbside sites to reduce barriers to EV conversions by increasing charger availability and distributing charging stations equitably citywide. For its municipal fleet, Seattle has plans for 15,000 EVs by 2025 with a reduction in fleet carbon emissions by 50 percent.
- Boston, Massachusetts requires 25 percent of city parking be equipped with EV chargers and an additional 100 percent be EV-ready in substantially modified or new constructionprojects. A city EV sign – that directs users to charging stations – is now mounted with the standard white-on-blue parking "P."
- Portland, Oregon has an entire street of EV parking spaces known as Electric Avenue. Charging stations are provided in parking garages citywide. Oregon is the only state to appoint an "Electric Car Czar" or Chief EV Officer at its Department of Transportation.
- San Jose, California has over 950 charging stations. Its charging infrastructure is 4 times larger than the national average. The City promotes EV use by permitting access to all HOV lanes, free city-owned charging stations, and free parking. The goal for its municipal fleet is 100 percent alternative fueled vehicles by 2020.
- According to a City and County of San Francisco study, modifying building codes to accommodate plug-in electric vehicle (PEV) charging infrastructure is cost effective. The study found retrofitting for PEV charging infrastructure costs $2,370 - $3,710 per parking space. The same infrastructure cost $860 - $920 per space if installed during new construction.

In Providence, EV charging infrastructure for parking garages and lots, curbside parking, and new development should be considered along with any necessary revisions to the building code. A sample International Building Code (IBC) EV building code may be accessed at http://www.swenergy.org/cracking-the-code-on-ev-ready-building-codes.

Evaluate Overnight Resident Parking Permit Program Fee Structure

The City should study and compare fees associated with overnight parking permits in Providence to other US cities to ensure this resource is properly priced. If fees are raised, a tiered fee structure should be used to reduce burdens on low-income households.

Update the City's Public Utilities Agreement to Incorporate Bicycle-Related Provisions

The Public Utilities Agreement should be updated to ensure utility patches do not create hazards for people riding bicycles and that temporary road closures and detours accommodate bicyclists. It should also be mandated that Urban Trail of bicycle-related pavement markings that are covered over or damaged by utility work be replaced in a timely manner.

Prioritize Safety and Comfort for People Who Walk, Ride Bicycles, and Use Public Transit

Deploy Leading Pedestrian Intervals (LPIs) and Increase Pedestrian Signal Timing

LPIs begin the walk signal before the light turns green for cars. Increased pedestrian signal timing ensures people of all ages and abilities have time to walk across the street safely. Cambridge, Massachusetts combines concurrent pedestrian phasing with LPI operations. This practice is recommended in the Boston MPO 2015 Pedestrian Signal Phasing Study which further advises the best concurrent phasing conditions are when the pedestrian flow is less than 1,200 persons/daily; there are conflicting turning vehicles of less than 250 vehicle/hour; there are low concentrations of older and very young pedestrians and students; the intersections have good sight distances; and the length of crosswalks is less than 55 feet.

LPIs help address concerns about whether there is sufficient time for people to safely walk across streets. The current City of Providence practice is to follow guidance in Section 4E.06 (Pedestrian Intervals and Signal Phases) in the Manual on Uniform Traffic Control Devices (MUTCD).[7] The guidance provides the City with some flexibility and establishes parameters for deploying LPIs, which give people walking a 3 to 7 second head start when entering an intersection with a corresponding green signal in the same direction of travel. Studies show that LPIs reduce pedestrian-vehicle collisions as much as 60 percent. According to FHWA, LPIs increase the visibility of crossing pedestrians; reduce conflicts between pedestrians and vehicles; increase the likelihood of motorists yielding to pedestrians; and enhance safety for pedestrians who may be slower to start into the intersection. Applications have been successful in Stamford, Connecticut which operates the state's first LPI. The City plans to expand its use. In New York City, pedestrian fatalities have fallen 45 percent since 2013. This is partly attributed to the recent installation of 832 LPIs bringing the total number citywide to 2,334; a seven-fold increase since 2013. LPIs are recommended in the NACTO Urban Design Guide. Moreover, according to national research [Transportation Research Record 2198, 2010], a before-and-after comparison to evaluate the safety effectiveness of LPIs found a 58.7 percent reduction in pedestrian–vehicle crashes at the tested intersections. Because of the low cost for implementation, use of LPI is further justified.

Simultaneously, the City should study increases to pedestrian signal timing at intersections citywide to ensure adequate time is provided, especially at intersections that require people to cross multiple lanes of vehicular traffic.

Implement Automatic Recall of WALK signals

Automatic recall of WALK signals provides a WALK indication as part of each signal cycle without a push button. This should be implemented at signalized intersections but not at mid-block locations. Most intersections in Providence use concurrent pedestrian phasing, where people walking cross with the parallel vehicle phase and vehicles turn left or right across crosswalks after yielding to people walking in them. Automatic recall would not impact the City's use of concurrent phasing.

Implement No Right Turn on Red (NTOR) Signage Where Pedestrians Regularly Cross

According to America Walks, "A no-right-turn-on-red (NRTOR) policy [prohibits] RTOR unless otherwise permitted at specific locations by posted signs. NRTOR policies could ban right turns in urban or high-pedestrian-density areas at all times or only during daytime hours, which is the time most pedestrian crashes occur."[8] The City of New York, where pedestrian activity is very high has such a policy.

The main benefit of a citywide policy is it eliminates the need to install and maintain NTOR signs at each signalized intersection. However, applying NTOR in less dense locations where pedestrian activity is low leads to inconsistent driver behavior and enforcement challenges.

Section 2B.54[9] of the MUTCD provides NTOR sign guidance:

A No Turn on Red sign should be considered when an engineering study finds that one or more of the following conditions exists:

a. Inadequate sight distance to vehicles approaching from the left (or right, if applicable);

b. Geometrics or operational characteristics of the intersection that might result in unexpected conflicts;

7 https://mutcd.fhwa.dot.gov/htm/2009/part4/part4e.htm

8 https://americawalks.org/ban-right-turns-on-red/

9 https://mutcd.fhwa.dot.gov/htm/2009/part2/part2b.htm

c. An exclusive pedestrian phase;

d. An unacceptable number of conflicts between people walking and driving with right-turn-on-red maneuvers, especially involving children, older people, or persons with disabilities;

e. More than three right-turn-on-red accidents reported in a 12-month period for the particular approach; or

f. The skew angle of the intersecting roadways creates difficulty for drivers to see traffic approaching from their left.

America Walks guidance adds the following to this list (excludes overlaps with MUTCD):

- Central business districts and dense urban areas where there are significant variation in traffic volumes and people walking
- Intersections:
  - » With high traffic speeds on the intersecting street
  - » Where there are heavy volumes of people walking
  - » Where disabled persons request it
  - » Adjacent to parks and hospitals
  - » At school crossings
  - » At railroad crossings
  - » At traffic signals with three or more phases

Increase Enforcement Prevent Blocking of Intersections, Crosswalks, Bike Lanes, Bus Stops, and Sidewalks

Both police officers and parking enforcement personnel should be directed to patrol for and issue citations when encountering vehicles or other obstructions impeding people walking or riding bicycles or blocking bus stops. Special attention should be paid to valet locations.

Increase Enforcement of Sidewalk Snow Removal

Due to existing capacity issues, additional funding is needed to dedicate staff members to inspection and enforcement of the City's snow shoveling regulations.

Expand the City's Use of New Technologies

Technologies to consider include:

- A network of strategically mounted traffic and security cameras that feed into and are monitored real-time within a Public Safety information center;
- A remotely controlled LED lighting system that safely illuminates the Urban Trail Network;
- Bicycle and pedestrian detection systems tied to traffic signal operations;
- Transit signal priorities; and
- Dynamic message signing.

New Orleans, Louisiana has a Traffic Camera Safety Program to deter red light violations, reduce speed violations, increase driver awareness, and reduce collision severity. The City has found the program deters repeat offenders. Over 80 percent of those receiving a traffic camera citation and pay it, do not repeat the offense. The City also has *Pay by Phone* parking meters.

Similar to the City of New Orleans, the City of Portland has parking technology called the Passport Parking App [https://www.portlandmaine.gov/2329/Passport-Parking-App]. It enables the use of a mobile phone to remotely pay, increase park time, and know parking status. The City has an LED Lighting Program with state of the art soft color temperature light fixtures directed down to the street. The benefits are better light distribution and quality and safer streets. According to the City, it is estimated that buying the streetlights and converting them to LED saves more than $1 million annually.

In Worcester, information generated by security cameras on traffic signals is fed into the Worcester Police Department real-time crime center.

Transportation technologies in Seattle include traffic cameras and signal and roadway detection systems for pedestrians, bicycles, and the visually impaired. The citywide traffic camera network enables the public online access to real-time congestion information and images, and traffic advisories. There is transit signal priority (TSP) for Sound Transit buses, streetcars, and light rail trains. The City also uses dynamic message signs for en-route drivers.

Signal Detection and Actuation - Detection in Bike Lane and Bike Box. Souce: NACTO.

Work with RIPTA to Evaluate All Bus Routes and Stops to Ensure they are Accessible, Properly-sized, Properly-spaced, and Welcoming

As noted previously, the 2017 RIPTA Bus Stop Design Guide establishes design principles applicable to future projects. Because many stops are old, it will take some time to implement improvements to the bus stop network. As the Great Streets Initiative advances, it will be important to include bus stop redesign as part of the planning process.

Advocate for Friendlier State Laws and Policies Related to Mobility

Work with the State Legislature to Require RIDOT to Update Highway Design Manual

The current RIDOT Design Manual, which dates to 2008, needs updating to reflect new design concepts for bicycling, walking, and micromobility. Many state departments of transportation have revised their design manuals to incorporate context sensitive solutions that better accommodate people who walk, ride bicycles, and use other micromobility options. The Massachusetts Department of Transportation published its Project Development and Design Guide in 2006 and a Separated Bike Lane Planning & Design Guide in 2015.[10] Tennessee DOT's (TDOT's) 2019 updates[11] to its design guide includes a section on multimodal design, which states:

> It is TDOT's policy to create and implement access and mobility for users of all ages and abilities through the planning, design, construction, maintenance and operation of new construction, reconstruction and retrofit transportation facilities that are federally or state funded.
>
> Users include, but are not limited to, motorists, bicyclists, pedestrians, transit-riders, and freight carriers. The intent of TDOT's policy is to promote the inclusion of multimodal accommodations in all transportation planning and project development activities at the local, regional and statewide levels, and to develop a comprehensive, integrated, and connected multimodal transportation network. These guidelines have been developed to assist TDOT, local agencies, consultants and others in providing multimodal facility design that fulfills the intent of this policy. TDOT's Multimodal Project Scoping Manual is an additional multimodal design resource.

10 See https://www.mass.gov/lists/design-guides-and-manuals

11 See https://www.tn.gov/content/dam/tn/tdot/roadway-design/documents/design_guidelines/DG-S9.pdf

Work with the State Legislature to Adopt the "Idaho Stop Law" to Improve Safety

The "Idaho Stop" law, which has been in effect in Idaho since 1982, allows a person riding a bicycle to treat a stop sign as a yield sign. Rather than stop, the person riding a bicycle is permitted to slow down, stop if required for safety, and yield the right of way to any approaching person driving or walking before proceeding through an intersection controlled by a stop sign. Until recently, Idaho was the only state that had both a stop as yield rule and a red light exception that allows people riding bicycles to proceed through red lights after yielding. In 2019, Arkansas became the second state to enact Idaho Stop. In 2017, Delaware approved a variation, Delaware Yield, which applies only to stop signs.

Idaho Stop is reported to have reduced bicycle injuries by 14 percent in the state the year after passage. Moreover, a 2010 Berkeley study found bike safety to be 30 percent better in Idaho cities than comparable peers. The law is supported by the League of American Bicyclists. Changes to state laws would be necessary to implement this measure in Rhode Island.

Expand Opportunities for Engagement, Education, and Encouragement

Expand Youth Bicycle Education Programming to Citywide

Bicycle education programming helps encourage youth to ride bicycles, teaches safe riding skills, and increases their long-term comfort with accessing new bicycle infrastructure.

From 2015 to 2017, Providence piloted Pedal Power bike education classes at two elementary schools and several recreation centers in partnership with local non-profit, Recycle-A-Bike. The six-week classes teach youth safe bicycle riding skills and include group on-road field trips so youth can become familiar with local bicycle infrastructure and safe routes from their neighborhoods to schools, regional trails, local parks, and other civic institutions. By providing this programming at all 11 recreation centers for just two years, the CIty could engage 260 youth ranging in age from 11 to 14 (and their families).

Expand the City's Street Team Approach to Public Engagement

New and innovative community engagement techniques, such as the City's existing Street Team approach, further advocacy, coordination, and involvement from community members, especially those typically marginalised from traditional planning processes. Expanding upon the City's successful launch of a Street Team as part of the City Walk project in 2018, the City should continue to support the Street Team program to hire, train, and deploy community members at community events and in everyday environments to inform community members of upcoming public realm improvements, collect input on projects being planned or considered, and spread awareness of opportunities for further engagement. In particular, this team should focus on additional areas to increase equity in the City's mobility work. Street Team approaches allows cities to engage thousands of community members who otherwise would likely not be engaged in traditional planning processes. Street teams should also be used to publicize low-income memberships for the City's bike share and scooter share programs.

Establish a "Friends of the Urban Trail Network"

A "Friends of" group would build on and strengthen existing relationships to ensure vocal, sustained community support for this work, while uniting various organizations around a common purpose, shepherding our urban trails to completion, and developing a stable maintenance plan. This group should be a coalition of existing neighborhood organizations and other groups already engaged in the Urban Trail Network and projects included in it like City Walk, the Downtown Providence Parks Network, and the Woonasquatucket River Greenway.

Re-launch Safe Walking, Driving and Biking Public Safety Campaign

In 2018, the City launched a #PVDTrafficSafety campaign to provide information on new changes to street markings and traffic signals (such as bike signals, bus signals, bus only lanes, two-stage turn boxes, green ladder crossings) coming to Providence. The campaign was created to teach community members to navigate these new markings and signals and why such improvements are important for keeping all road users safe.

Expand and Enhance "Bike the Night" Community Rides

On the first Thursday of every quarter, Mayor Elorza leads Bike the Night, an inclusive community ride that brings community members together for a eight- to ten-mile slow ride through different neighborhoods. The CIty should work with community partners, neighborhood groups, institutions, and businesses to expand and further enhance these rides to reach more residents and community members.

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MAYOR JORGE O. ELORZA
CITY OF PROVIDENCE

PVD GREAT STREETS