

WORCESTER COMPLETE STREETS PRIORITIZATION PLAN

MARCH 2023



The City of
WORCESTER

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PLAN SUMMARY

The **Worcester Complete Streets Prioritization Plan (CSPP)** is the result of a 10-month long planning process directed by the City of Worcester's Department of Transportation & Mobility (DTM), in coordination with other municipal departments and external partners through its Transportation Advisory Group (TAG). Funding for the project was provided by the MassDOT Complete Streets Funding Program. The city selected Toole Design, a leading planning, engineering, and landscape architecture firm specializing in bicycle and pedestrian transportation, to lead the technical analyses and prepare the Prioritization Plan.

The CSPP includes a prioritized list of initial Complete Streets project priorities. Upon MassDOT's approval of the plan, the City will be eligible to apply for grant funding for implementation of projects included in the plan. The plan provides an overview of what Complete Streets are along with an educational toolkit on Complete Streets design measures, a review of existing plans and policies related to Complete Streets, an overview of the planning and prioritization process, a map of project locations, and descriptions for each project.

Creating a CSPP will not only allow the City to seek funding through the MassDOT Complete Streets Program, but also to leverage other state and federal funding sources for the planning and construction of transportation projects in Worcester. The Worcester CSPP includes 21 prioritized projects. Project locations were chosen through a combination of public input, discussions with the TAG and DTM staff, and a review of planned and ongoing projects. The project design ideas contained in this plan serve people using various transportation modes (walking, biking, taking transit, or driving), people that travel through high crash locations, residents of environmental justice neighborhoods, students and older adults, and people with disabilities.

The CSPP is an important step in improving safety and access for all roadway users, especially vulnerable ones like pedestrians and cyclists, but is by no means an exhaustive list of projects or priorities. A Complete Streets Prioritization Plan can be thought of as a snapshot in time of short-term (3-5 years) transportation needs. These plans are intended to be updated regularly to reflect changing needs and priorities as well as current best practices. This is especially the case in Worcester, where transportation planning is essentially a new and developing activity. The establishment of the city's Department of Transportation & Mobility in summer of 2022 and ongoing development of the Worcester Now | Next long-range plan will lead to considerable transportation network planning and project development activities over the next 18 months, which should be reflected in updates to the CSPP.

WHAT IS A COMPLETE STREET?

Complete Streets are streets for everyone. The Complete Streets approach to planning and designing streets enables safe access for all people who use a street regardless of their age, ability or how they choose to get around. Not every street is the same; a residential neighborhood and a commercial district will have different needs. The Complete Streets approach emphasizes designs that are “context-sensitive”, meaning they are appropriate for both their neighborhood surroundings, how a street is currently used, and how the community would like the street to be used in the future. Included in this report is a brief [Complete Streets Toolkit](#) that provides examples of the many ways Complete Streets can be tailored to a community’s needs. Complete Streets are also accessible to all. The [Accessible Complete Streets](#) section provides examples of how accessibility can be enhanced through Complete Streets.

COMPLETE STREETS ARE:



Safe and accessible for all travel modes – walking, biking, or riding in transit or motor vehicles.



Inclusive and provide more equitable access to jobs, school, shopping, parks, and other destinations.



Healthy and allow for more green space, less congestion and more active mobility like walking and biking.

THE NEED FOR A COMPLETE STREETS PLAN IN WORCESTER

Like many communities in Massachusetts and nationwide, Worcester has over time become highly car dependent, with its transportation infrastructure reflecting this. However, much of the city was largely built out before the widespread adoption of the automobile, with compact urban form and streets accommodating a variety of travel modes. Worcester was once a very walkable city, and it can be again.

The MassDOT Bicycle Transportation Plan identified Worcester as one of the locations with the highest potential of everyday walking and biking in Massachusetts. The City's densely built downtown is a particularly attractive location for walking, biking and transit but the neighborhoods and their commercial centers are strong candidates as well.

Unfortunately, in the twentieth century, much of Worcester's transportation network was repurposed for the swift movement of vehicles at the expense of safety, the environment, and equity. Low-income and minority communities suffered and continue to suffer the worst effects of these decisions. Further, this focus on prioritizing vehicles transformed streets from active and appealing places to inhospitable environments, adversely impacting residents and businesses alike.

Between 2016 and 2020, there were 597 crashes in Worcester involving pedestrians. Of those, 77 resulted in serious injuries or fatalities. In that same period, 243 crashes involving bicyclists occurred in Worcester resulting in 14 serious injuries or deaths. Most of those crashes occurred within areas designated as environmental justice areas.

While most Worcester residents are within a half-mile of a bus stop, only 2.5 percent take the bus. This is even though 19 percent of households in Worcester do not own or have access to a private vehicle and are completely dependent on other means for their mobility needs (2019 ACS 5-yr estimates). In fact, most households in Worcester – 63 percent – have one or fewer vehicles, and when considering only renters, more of whom have low to moderate incomes, that number climbs to 79 percent. Thus, it is essential that Worcester develop a transportation system that prioritizes transit and nonmotorized modes as essential components of the transportation system.

Reducing the share of trips accommodated by automobile, particularly single occupant autos, is also central to achieving the City's climate goals. Reliable and efficient transit service makes the City's transportation network both more sustainable and more equitable. While the City does not operate WRTA buses, it can, using Complete Streets principles, create streetscapes that make transit a more attractive mode of travel, as well as create safe and comfortable walking, biking and micro mobility opportunities.

The Complete Streets approach to street design centers safety for everyone on the road, whether they are moving by four wheels, two wheels or two feet, as the most important factor. This plan represents an important early step in an **ongoing process** to identify and mitigate the most dangerous roads in the City.

COMPLETE STREETS PROGRAM

In 2016, the Massachusetts Department of Transportation (MassDOT) launched a first-in-the-nation program dedicating state transportation funds to Complete Streets. The program gives municipalities the tools and funding to advance Complete Streets in their communities. As of this writing, 282 Massachusetts cities and towns have participated in the program in some form. As described in the chart below, the MassDOT Complete Streets Funding Program involves three steps: creating a Complete Streets policy, developing a Complete Streets Prioritization Plan, and Applying for construction funding. Municipalities are encouraged to update their prioritization plans periodically to reflect completed projects and new priorities.

2017-2018	2021-2022	2023-2027
Step 1: Create CS Policy	Step 2: Develop CS Prioritization Plan	Step 3: Apply for CS Project Construction Funding
<p>Step 1 requires developing a Complete Streets Policy that establishes actions the community will take to expand and improve accommodations for all users of the City's network of streets, sidewalks, bike facilities and other transportation network components. Worcester's Complete Streets Policy was endorsed by the City Council in December of 2017 and approved by MassDOT in March of 2018.</p>	<p>Step 2 requires developing a Complete Streets Prioritization Plan. The Complete Streets Prioritization Plan is a snapshot of the City's <i>current and near-term</i> Complete Street needs. The City received a \$50,000 grant from MassDOT for the development of this Prioritization Plan, partnering with Toole Design to assist in this effort.</p>	<p>Step 3 may progress once the Prioritization Plan is approved by MassDOT. The City will be eligible to apply for one full grant or several smaller grants (up to \$500,000) over the period of four fiscal years to construct any of the Complete Streets projects identified in the Prioritization Plan.</p>

CITY OF WORCESTER COMPLETE STREETS POLICY (2017)

In 2017, the City Manager established Worcester’s Complete Streets policy, which has as its purpose the development of an integrated, multimodal transportation system that provides safe, convenient, and efficient accommodation for all modes of transportation, including walking, bicycling, transit, and driving. Application of Complete Street principles to the planning, design, operation and maintenance of transportation infrastructure and services will positively contribute toward the safety, health, social equity, economic vitality, and quality of life in Worcester by facilitating a broad range of safe and convenient travel options, improving access to neighborhoods and commercial areas, establishing attractive streetscapes and vibrant public spaces, and improving universal accessibility for all users.

The CS policy outlines the City’s commitment to incorporating CS principles into the planning, design, construction, maintenance, and operation of its streets, transportation infrastructure, and transportation services, as well as related municipal functions, including land use planning, zoning, development, and public health. The principles include:

- Accommodating all travel modes and providing for the safe and convenient use by people of all ages, economic status, and abilities with an emphasis on the safety and access of vulnerable roadway users.
- Consideration of the physical setting, context, role in the overall transportation network, physical characteristics of the street, and costs in selecting specific designs and treatments.
- Making CS practices a routine part of everyday operations for every transportation project, development project, and public policy, as well as incorporating into all publicly and privately funded projects to the extent practicable.
- Achieving Complete Streets through multidisciplinary design processes and with public participation in policy decisions, making decisions about the design and use of streets inclusive and transparent.

The CS policy called for the establishment of a Transportation Advisory Group (TAG) consisting of representatives from various City departments and other community stakeholders. The multidisciplinary TAG provided guidance and feedback in the development of this plan.

In 2022, the City of Worcester reorganized and expanded its transportation responsibilities by creating the Department of Transportation and Mobility (DTM). In 2023, DTM will update the City’s Complete Streets Policy to reflect this new structure, current best practices and lessons learned since the last policy was written.

Read the full Complete Streets Policy [here](#).

SUPPORTING POLICIES, PLANS, AND STUDIES

WORCESTER NOW|NEXT (ONGOING)

Worcester Now|Next is an ongoing project to prepare a long-range citywide plan, the first citywide plan for Worcester in more than 37 years. Key topics that are being explored by the plan include transportation, land use, and housing, among others. Work to-date has included a robust community outreach process that has yielded very strong support for improving bicycle and pedestrian accommodations, improving the safety of street for all users, and expanded transit service. The final plan is anticipated to be released in late 2023.

MOBILITY2040 (2020)

Mobility2040 is the Long-Range Transportation Plan (LRTP) for the south/central Massachusetts planning region and developed by the Central Massachusetts Metropolitan Planning Organization (CMMPO). The purpose of the LRTP is to identify the multi-modal transportation needs of the broader region, the funding available to address those needs, and the project investments and initiatives planned for the next 20-year period. The LRTP underscores regional goals established by CMMPO, including reducing congestion and improving mobility for all modes, increasing transportation options, and promoting healthy modes, reducing greenhouse gases and promoting sustainable practices, and equitable transportation for all populations. The CMMPO is currently updating the plan through its ongoing Connections2050 effort.

The LRTP listed the top 10 High Priority Bicycle Crash Clusters in the CMMPO region – and nine out of 10 were in Worcester. The locations included: Main St/King St/May St, Chandler St/Park Ave, Belmont St, Main St/Murray Ave, Maidson St/Francis J., Chandler St/Irving St, Park Ave/Mill St, Madison St/I-290, Chandler St, and Lincoln St/Country Club. The LRTP also listed two trail projects in Worcester, which were a 50-mi greenway that will connect Providence, RI to Worcester along the Blackstone River corridor and improving community access to Green Hill Park and the Worcester East-West Trail.

The LRTP also listed the top 10 High Priority Pedestrian Crash Clusters in the CMMPO region – and all 10 were in Worcester. The locations included: Main St/Foster St, Grafton St/Hamilton St, Pleasant/Merrick/West, Chandler St, I-290/Harding St, Belmont St/I-290, Main/Freeland/Maywood, Main St/Cambridge St, Belmont St, Main St/Murray Ave, and Main St/May St. Additionally, the LRTP provided a list of the top regional roadway segment priorities to improve the region's state of good repair (pavement, sidewalks, and curb ramps). The locations in Worcester included: Andover St from Gosnold St to West Boylston St, Mill St from Airport Dr to June St, Maywood St from Main St to Park Ave, Franklin St from Foster St to Grafton St, College St from Southbridge St to Auburn Town Line, Francis J. Mcgrath Blvd from Southbridge St to Green St, and Southbridge St from I-290 WB Ramp to Auburn Town Line.

The LRTP provides potential actions to help achieve the goal of developing a regional pedestrian and bicycle network: use the MassDOT Complete Streets Funding Program process to create and adopt local Complete Streets policies and prioritization plans to continue to close the gaps in the pedestrian and bicycle network; work with MassDOT to ensure that arterials and collectors with excess shoulder width are closely examined to determine how quickly they can be converted into Complete Streets with bicycle facilities; work with CMRPC and MassDOT to identify potential for shared use paths along right-of-ways; and increased pedestrian planning and application for capital investments through state programs and grant opportunities.

As for transit recommendations, Transit Signal Priority (TSP) was identified as a valuable option for Central Massachusetts' urban core. The benefits include saving energy, reducing bus component wear, and lowering emissions. The greatest benefits would be generated for the WRTA's most densely developed corridors where much of the region's EJ populations live and where the highest concentration of businesses, essential services, and civic activities are located. CMMPO said it would continue to support the City's efforts to upgrade intersection signals and enable TSP and provided a list of roadways where TSP may be implemented: Belmont St, Main St, Park Ave, Pleasant St, Shrewsbury St, and Southbridge St. Additionally, Bus Rapid Transit (BRT) or BRT "Light" was recommended on corridors with at least 3 bus routes.

The LRTP also provided the top 10 congested intersections and roadway segments in the region, many of which were in Worcester: Foster St/Francis J McGrath/Franklin St/Green St, Cambridge St/Southbridge St, and Plantation St/Lincoln St. The roadway segments in Worcester were: Grafton St, Highland St, Park Ave, Main St, Pleasant St, and I-290.

GREEN WORCESTER PLAN (2021)

The Green Worcester Plan is the comprehensive and holistic Green Worcester Sustainability and Resilience Strategic Plan (GWP), which charts a roadmap to bring sustainability values to all aspects of city life. The Plan was co-developed by the City and the Green Worcester Working Group. The Green Worcester Vision laid out in the Plan states that Twenty-first century Worcester will be sustainable, resilient, green, livable, prosperous, and equitable. A key part of that vision is that residents and visitors will have multiple sustainable, safe, convenient, and reliable transportation choices to get around our vibrant city. To meet that vision, one of our Green Worcester Goals is to provide safe, convenient, and comfortable pedestrian, bicycle, and public transportation networks and transition to vehicles powered by renewable electricity. An early action noted in the Plan is to identify priority Complete Streets projects for state funding. Public workshops indicated the importance of more transportation alternatives to personal vehicles and the development of a Complete Streets priority plan.

CITY OF WORCESTER STRATEGIC PLAN (2020)

The City of Worcester Strategic Plan is a key complement to the City's future Master Plan and the Worcester Public Schools' Strategic Plan. The focus of the City's Strategic Plan is on internal performance and service delivery to enhance economic competitiveness. The Plan articulates the City's vision during a three- to five-year period, and how the City is going to get there by aligning government services, operations, strategies, goals, and objectives to help city leaders drive performance and outcome, increase transparency, and enhance communication. Two of the four priority areas included objectives focused on transportation infrastructure: maintaining a safe and appealing infrastructure and maintaining appealing neighborhoods with high-quality infrastructure and green spaces.

WORCESTER FOR EVERYONE: A REGIONAL HOUSING AND ECONOMIC STUDY OUTLINING LOCAL OPPORTUNITY (2019)

Worcester for Everyone is a study addressing the growth witnessed by the Commonwealth between 2012 and 2017 and outlines best practices for post-industrial cities like Worcester regarding the challenges of equitable housing for multiple demographics and socioeconomic groups. Two reports were released after more than a year of research and in partnership with the Worcester Business Development Corp. Smart Growth Economics, and the Worcester Regional Chamber of Commerce – one for best practices and the second providing the results from a housing and community preference survey of Worcester residents. The Phase 1 report described a three-pronged approach to housing and economic development. A key part of the approach is to improve walkable access to work, school, and recreation across the city. The Phase 2 report and demonstrated demand for walkable neighborhoods with amenities like grocery stores. Ninety-two percent of survey respondents said that walkability is important or very important. The majority of respondents found the following neighborhood smart-growth features important or extremely important: ability to walk or bike to visit friends or family (63%), access to public transportation (62%), and being able to walk or bike to work (59%). Additionally, living in a non-walkable neighborhood was the greatest source of dissatisfaction for respondents that were dissatisfied with their current housing situation.

GREATER WORCESTER COMMUNITY HEALTH ASSESSMENT: 2018 CHA

The Greater Worcester Regional Community Health Assessment (CHA) aimed to assess community health need, engage the community and collaborate with community health stakeholders, and identify the leading health issues and population segments most at-risk based on a review of quantitative and qualitative information gathered through the assessment. The CHA should be used as a source of information and guidance to clarify issues related to barriers to care and service gaps, prioritize and promote community health investment, and guide a community health improvement planning process. The CHA was developed by the City of Worcester Division of Public Health, Fallon Health, and UMass Memorial Medical Center, in close association with Central Massachusetts Regional Public Health Alliance (CMRPHA). A dominant theme from key informant interviews and community forums was the tremendous impact that the underlying social determinants, including transportation and food access, had on residents in the CHA service area. The lack of transportation was cited as having a significant impact to health care services. Interview and focus group participants noted issues with frequency and reliability of WRTA bus service. For those living outside of Worcester and without a personal vehicle or access to ride-sharing services, traveling to the city for services or recreation is difficult. Lack of employment was connected to the inability to pay for transportation that would enable people to receive health care. Transportation was identified as one of the leading social issues for older adults. Additionally, homeless and unstably housed participants discussed the challenges faced when they are forced to decide between housing, food, heat, health care services, childcare, transportation, or other essentials.

BECOMING WORCESTER: THE EVOLUTION OF A CREATIVE CITY (2019)

Becoming Worcester is our first-ever 10-year Cultural Plan that is uniquely embedded within the City's Masterplan. The Cultural Plan embeds creativity in the design of our streets and acknowledges Worcester as a city with strong physical and social cohesion that enables ease of movement for people of all ages, abilities, and means. A key goal is to infuse the city with attractive, active, accessible, and connected public spaces that incorporate and support multiple diverse forms of mobility, ways of life, and cultural and creative expression. The top 20 priorities of the Plan include expanding implementation of the Complete Streets Policy, continuing streetscape updates throughout the City, prioritizing areas adjacent to schools and public gathering places, and working collaboratively to deliver improvements to the City's public transportation system to help people efficiently get to all areas of the City. Streetscape updates includes the integration of a healthy mix of trees, public art integrated with street design, attractive lighting to enhance safety, enhancement of railroad underpasses, and pedestrian and bicycle access and safety – especially around schools. A key strategy to ensure equity in mobility and access are to ensure seniors have access to cultural programs and activities.

CITY OF WORCESTER STREETScape POLICY (2012)

The City's Streetscape policy pertains to public streets in the Downtown and Canal District areas. It establishes the design aesthetic reflected in street projects in these areas implemented over the past decade. While desired street and sidewalk layouts are included, these have not always been feasible to implement due to space and/or right-of-way constraints.

ROAD SAFETY AUDITS

A Road Safety Audit (RSA) is a formal safety review of an existing or planned road or intersection. The MassDOT RSA program covers high-crash locations and pedestrian and bicycle crash hot spots. Recent road safety audits in Worcester include Chandler Street (2020), Main Street (2015), Madison Street from Beacon Street to Assonet Street (2019), and Francis J. McGrath Boulevard/Foster Street/Franklin Street/Green Street (2019). The RSAs included recommendations for safety enhancements that included a variety of measures including the installation of curb extensions, pedestrian refuge islands, crossing beacons, crosswalks, pedestrian signals, shared use paths, protected bike lanes, and rightsizing roadways.

WALK AUDITS

Three Walk Audits have been conducted in partnership with WalkBike Worcester and WalkBoston, an organization whose mission is to making walking safer and easier in Massachusetts to encourage better health, a cleaner environment, and more vibrant communities. The walk audits include the Green Hill Neighborhood (2019) and Indian Lake (2020), as well as a Bicycle and Pedestrian Infrastructure Assessment for Chandler Street (2016). Chandler Street was identified in the Commercial Corridors Overlay District with the goal of increasing safety and quality of biking and walking environment. The walk audits included the following recommendations: accessible and safer crossings, wider sidewalks, traffic calming strategies, improving connectivity between destinations as well as for bus riders, protected bike lane, right-sizing roadway, and transit prioritization strategies.

COMPLETE STREETS TOOLKIT

This Complete Streets Toolkit provides inspiration for creating streets that are safer, more accessible and inclusive, and healthier for people in Worcester. Complete Streets typically make use of a variety of techniques to improve safety, expand access, and improve accommodations for all users. Many of these designs were included in our Complete Streets Prioritization Plan to create a City that invites people of all ages and abilities to walk, bike, and take transit more.



CURB EXTENSION

Curb extensions, commonly known as “bump outs”, extend a sidewalk at corners or the middle of a block. They increase safety by shortening crossing distances, making pedestrians easier to see at crosswalks, and slowing vehicles at corners and along the road.



PEDESTRIAN REFUGE ISLAND

Pedestrian refuge islands create a protected space in the center of two-way streets to allow people to cross the street in two phases. They shorten the amount of time a pedestrian is exposed to oncoming vehicles, make pedestrians easier to see, and slow vehicles by narrowing the roadway.



RAISED CROSSING AND RAISED INTERSECTION

Raised crossings and raised intersections are raised, flat areas with marked crosswalks at sidewalk level. They slow drivers and increase drivers yielding for pedestrians.



RECTANGULAR RAPID FLASHING BEACONS

RRFBs use signs and flashing lights at both ends of a crosswalk to alert drivers to pedestrians and bicyclists crossing. They improve drivers yielding at locations with high vehicle speeds and poor pedestrian visibility. Commonly paired with complementary crossing improvements.



SPEED HUMP AND SPEED CUSHION

Speed humps and speed cushions are used to slow vehicles. Speed humps run the entire width of a roadway. Speed cushions include gaps to allow buses or emergency vehicles to pass through smoothly.



MINI-ROUNDBABOUT AND NEIGHBORHOOD TRAFFIC CIRCLE

Mini-roundabouts and neighborhood traffic circles are raised islands placed at intersections without signals. They promote slower vehicle speeds when entering and passing through an intersection and increase drivers yielding for pedestrians.



GREEN STORMWATER INFRASTRUCTURE

Green stormwater infrastructure helps to collect and treat rainwater running down the street using organic plantings rather than allowing it to flow directly into the sewer drain. It reduces flooding from storms and contaminants from the rainwater.



SHARED USE PATH

Shared use paths are paved and provide two-way travel for both walking and bicycling together. They can provide connections between places and serve as recreational destinations.

Separated bike lanes



Contraflow bike lane



BIKE LANE

A bike lane is a portion of a street designated for the exclusive use of bicycles and micro-mobility devices. A bike lane includes roadway pavement markings and sometimes signage. The following types of bike lanes provide a lower-stress experience. **Buffered bike lanes** have a marked buffer space separating the bike lane from the motor vehicle travel. **Separated bike lanes** have a marked buffer space as well as a physical element (such as flex posts, curbs, parking or landscaping) separating the bike lane from the motor vehicle travel. **Contraflow bike lanes** allow bicyclists and micro-mobility users to legally ride in the opposite direction of what is allowed for motor vehicles on a one-way street – providing more direct connections and allowing bicyclists to avoid streets that are less safe.

Bus priority lane



TRANSIT SERVICE IMPROVEMENTS

Improvements to transit service could bring more reliable and frequent bus service. These may include:

- **Bus priority lanes** to separate buses from general traffic.
- **Bus bulbs** to allow buses to stop without leaving the travel lane and merging in/out.
- **Transit signal priority** to allow buses through an intersection quicker.

Before roadway rightsizing



After roadway rightsizing



ROADWAY RIGHTSIZING/ROAD DIET

Roadway rightsizing or a road diet reduces the width and/or number of travel lanes. By narrowing the travel lanes, rightsizing slows vehicles and shortens the amount of time a pedestrian is within a conflict zone and exposed to oncoming vehicles. This increases safety for everyone with an emphasis on vulnerable roadway users. Roadway rightsizing also creates more space for people walking, biking, riding micro-mobility devices or taking transit.

Dining parklet



Public parklet



CURBSIDE MANAGEMENT

The curbside can do more than just store cars. It can be a flexible space that serves as an extension of the sidewalk – for more accessible sidewalks accommodating wheelchairs, strollers, and grocery carts, or support local businesses by providing amenities such as outdoor dining or public parklets. It may also be used to provide more travel options, such as separated bike lanes or dedicated bus lanes.

Where parking is needed, the curbside can meet a diverse set of needs – such as priority parking for people with disabilities, commercial deliveries, and short-term parking for pick up/drop off. Additionally, managing parking through appropriate pricing strategies encourages frequent turnover and supports local businesses.

ACCESSIBLE COMPLETE STREETS

Many common Complete Streets projects are for the main purpose of improving accessibility or have accessible components incorporated in the design. Here are a few examples.



SIDEWALKS

- Continuous accessible path with at least minimum required width.
- Level surface that is smooth, stable, slip-resistant.



CURB EXTENSIONS

- Maintain ADA-compliant sidewalk, curb ramp, and signals.



CURB RAMPS

- Considers minimum ramp width and maximum slopes.
- At corners, aligns with direction of perpendicular crosswalk and provides two directional ramps.
- Clear level landing behind ramp
- Detectable warning strips with truncated domes.



RAISED CROSSINGS

- Crossing is sidewalk-level so there is no need for curb ramps.
- Detectable warning strips.
- Aligns with direction of perpendicular crosswalk and provides two directional crossings.



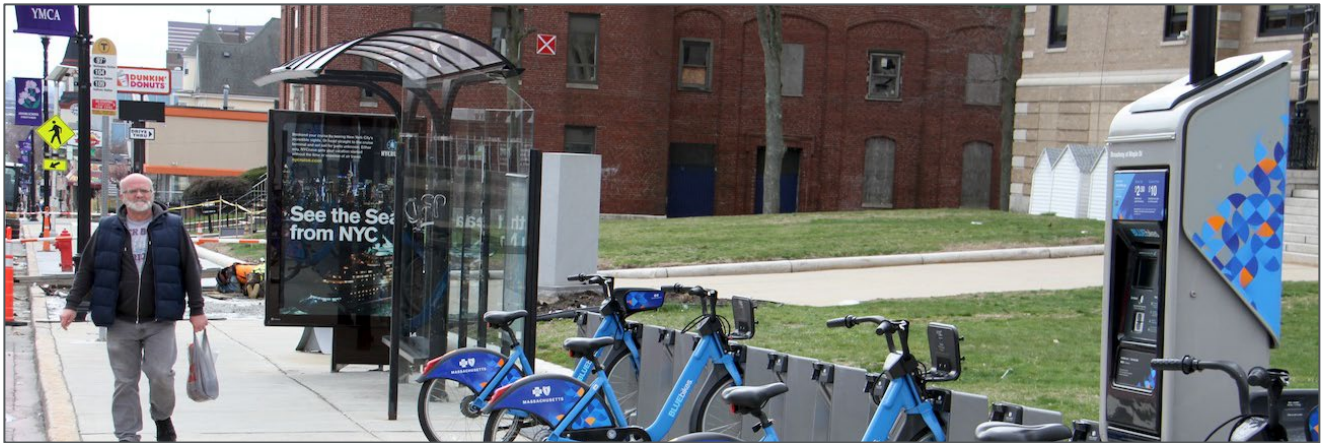
ACCESSIBLE PEDESTRIAN SIGNALS AND RRFBs WITH ACCESSIBLE PEDESTRIAN FEATURES

- Location and height of pushbutton should be accessible.
- Vibrotactile arrows point in same direction as crosswalk.
- Locator tones let pedestrians know where to push the button.
- Speech indicators and countdown timers let pedestrians know when and where to cross.



SHARED USE PATHS

- ADA-compliant crossings.
- In addition to ADA-compliant curb ramps, this example in Malden has a pedestrian refuge island, which provides a flush, accessible path with detectable warning strips and a wide opening.



BUS SHELTERS

- Clear floor space under shelters are maintained.
- Clear accessible pedestrian path around shelter.
- Level landing pads with minimum required dimensions.

PRIORITIZATION PLAN PROCESS

PROJECT TIMELINE

March 2022	TAG meeting (CS Program and Prioritization Plan Project overview, suggestions for engagement, Complete Streets project suggestions)
April 2022	Create materials for public engagement
May – June 2022	Public engagement
June 2022	TAG meeting (engagement recap, discussion on project prioritization criteria, reviewing/confirming TAG project suggestions)
July 2022	Identify project locations based on input
August – October 2022	Determine project prioritization criteria
November 2022	TAG meeting (review of project concepts and project descriptions)
December 2022 – January 2023	Draft Prioritization Plan and Prioritize Projects
February – March 2023	Finalize Prioritization Plan and Submit to MassDOT

COMMUNITY ENGAGEMENT

The project team engaged with the public regarding Complete Streets and the Prioritization Plan from May 5, 2022 to June 17, 2022. Given the ongoing COVID-19 pandemic, engagement generally relied on online tools complemented by in-person engagement hosted outdoors. Our engagement included:

- An interactive map activity to collect transportation barriers and ideas
- A survey on transportation project priorities
- Education on Complete Street designs
- Education on Accessible Complete Street designs

The interactive map activity asked participants to note where they would like to see safer and more comfortable places to travel and asked participants to categorize what their comment was about (e.g., traffic calming, safer crossings, ADA/accessibility improvements). The survey on priorities asked participants to rank types of projects, factors regarding location of projects, and whether they preferred to focus on larger or smaller projects given the available funding.

The interactive map activity and priorities survey was made available both online and in-person. The online components were advertised through an online announcement by the City of Worcester, the City's social media channels, the networks of the Transportation Advisory Group member, and email listservs reaching various Worcester departments and community organizations. In-person feedback was solicited at pop-up engagement events at three events:

- Regional Environmental Council Farmers Market at Worcester Youth Center (May 17)
- Division of Youth Opportunities' Whole Kids Day (May 21)
- City of Worcester Tercentennial Festival on the Worcester Common (June 11)

Both online and at these events, we raised awareness about various types of Complete Street designs through our educational toolkit.

The project team also presented to the Accessibility Advisory Commission at their May 17, 2022 meeting and provided information about how Complete Streets projects are made accessible. The Commission and members of the public were encouraged to input specific location suggestions for the plan through the online map, phone call, or email. We also asked the Commission what their main priorities for the Prioritization Plan would be.

The map activity was completed by 331 people, who submitted a total of 858 suggestions on the map. Several of the locations identified through the map activity are now included in this plan.

The priorities survey was completed by 598 people. The survey revealed people's preferences for the type of Complete Street treatments, types of project locations, and size of projects. The highest-ranking Complete Streets treatment types were traffic calming measures and treatments for safer crossings for pedestrians (see Figure 1). The highest-ranking project location types were locations with many crashes and near schools/youth centers (see Figure 2).

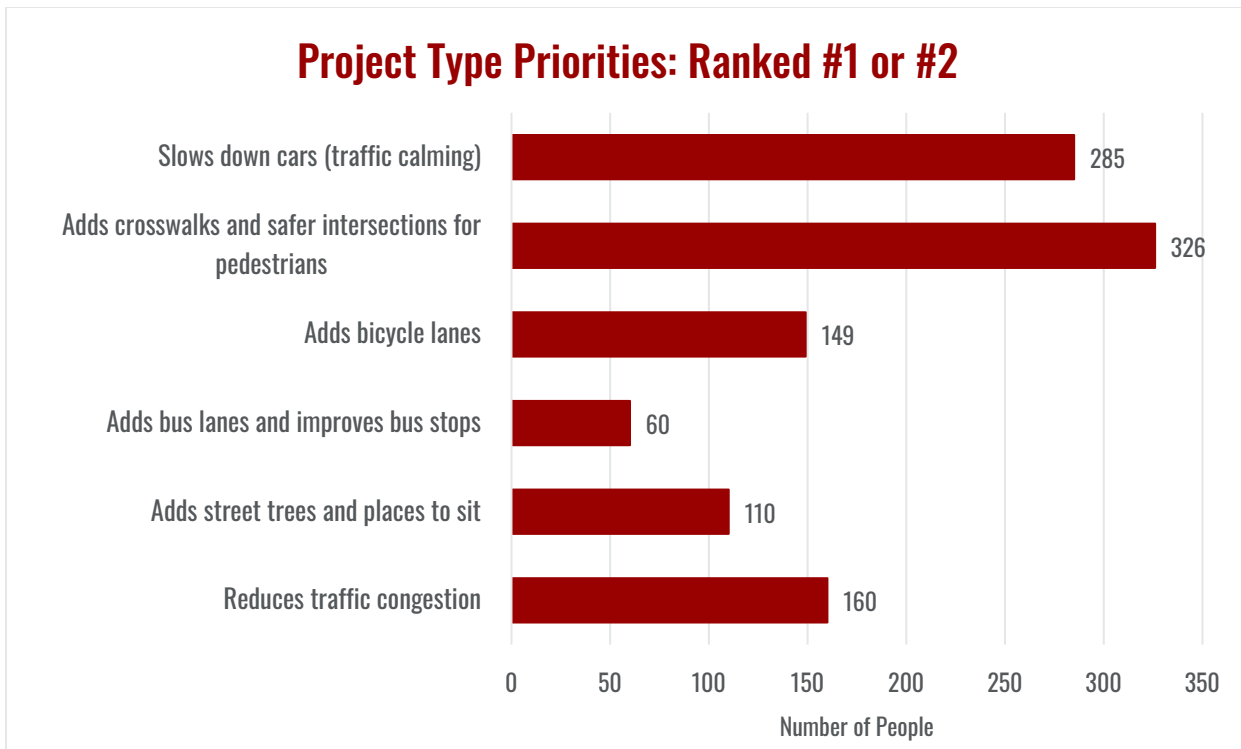


Figure 1. Project type priorities ranked #1 or #2

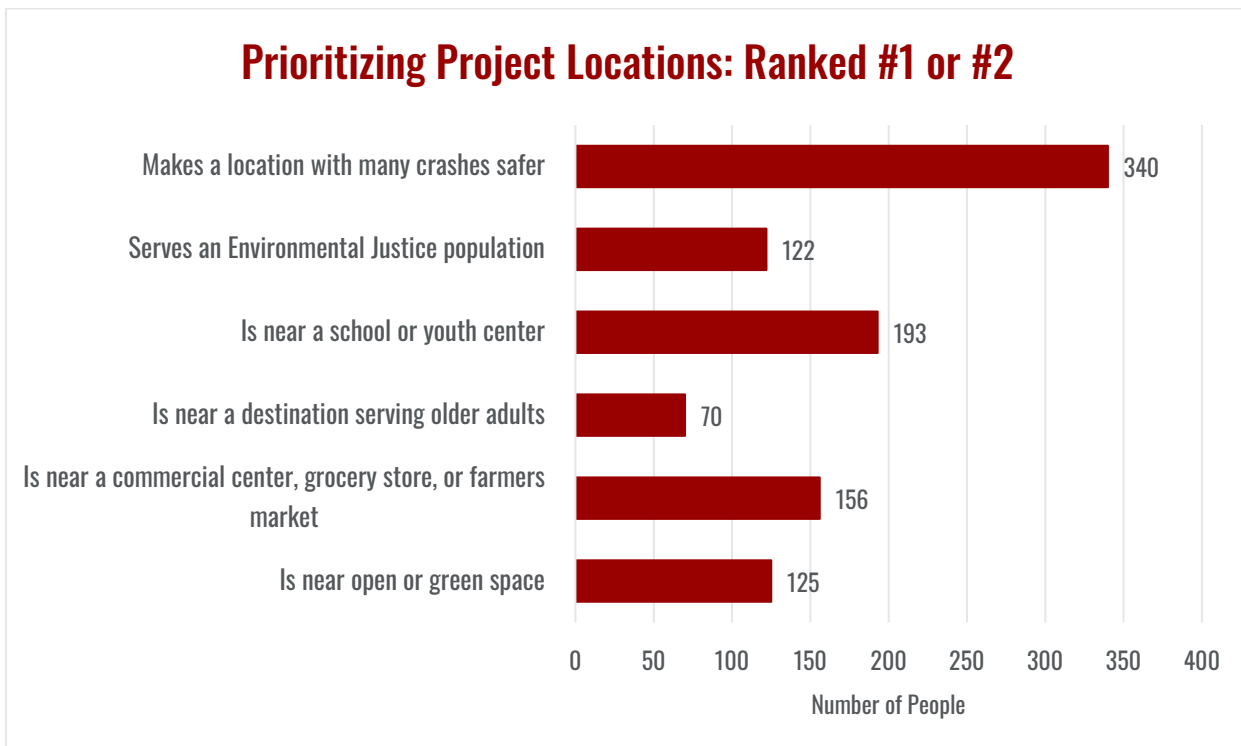


Figure 2. Location type priorities ranked #1 or #2

Sixty-five percent of respondents preferred to focus on neighborhood streets whereas 35% of respondents preferred to focus on major thoroughfares (n = 577). See Figure 3. Additionally, it was recommended during the Accessibility Advisory Commission meeting to focus on commercial areas. Forty-five percent of survey respondents preferred to focus on larger projects resulting in big changes to a street but would require more funds beyond a CSFP grant, whereas 55% of respondents preferred to focus on smaller projects that are less expensive and quicker to implement (n = 558). See Figure 4.

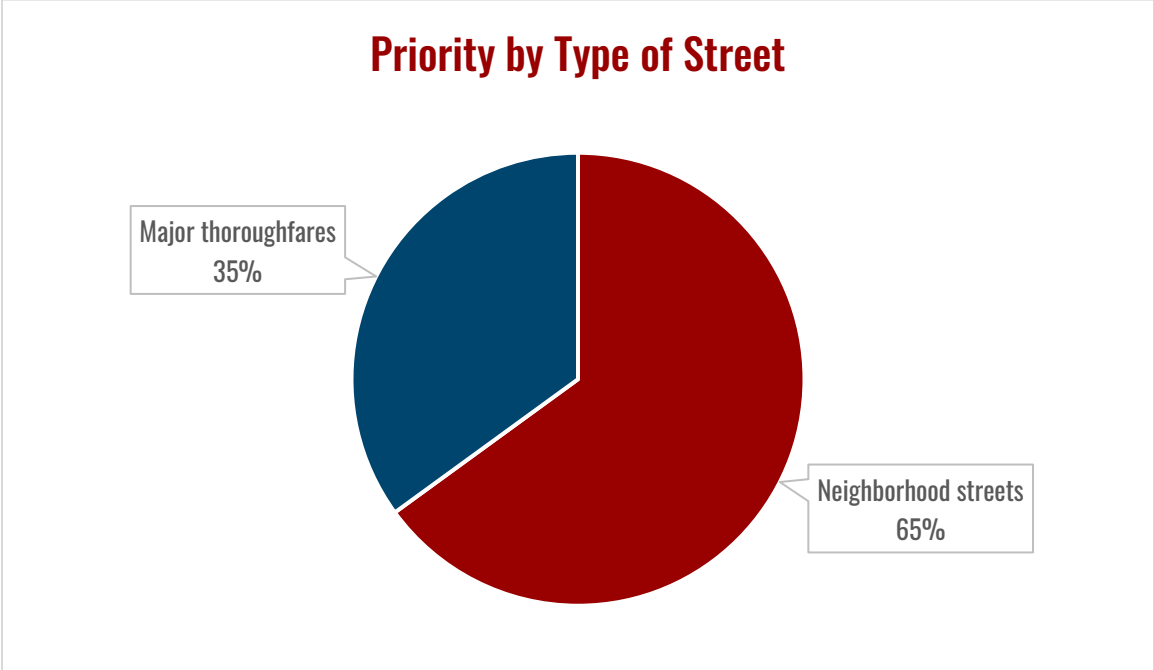


Figure 3. Priority by Type of Street

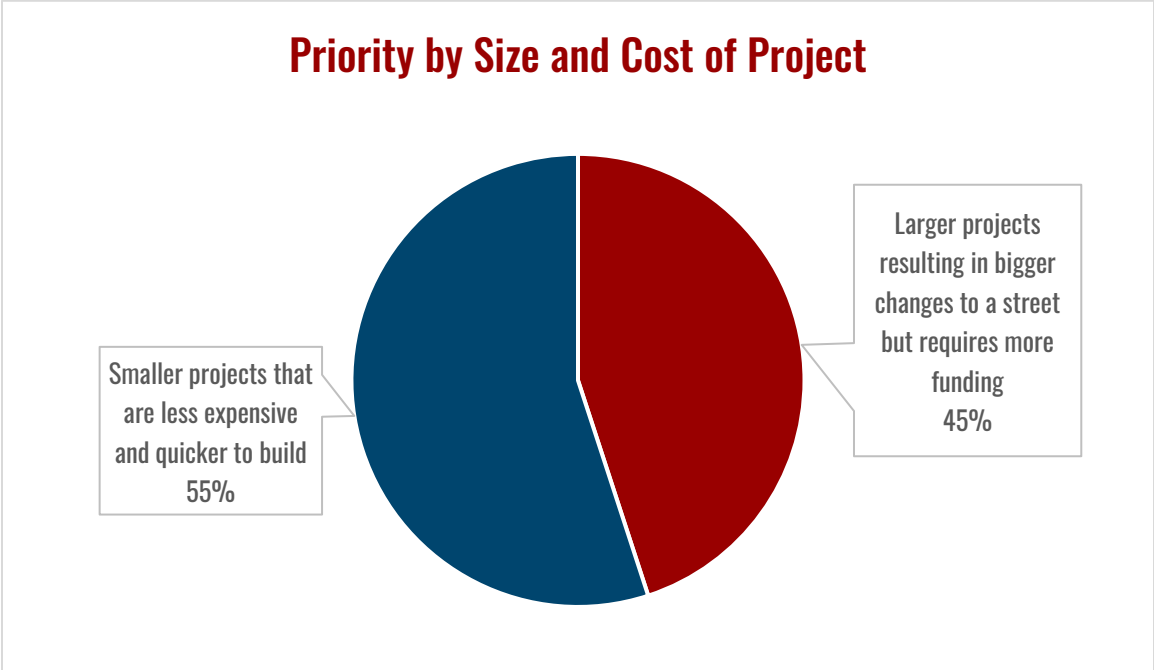


Figure 4. Priority by Size and Cost of Project

PROJECT PRIORITIZATION

The project team identified a short list of Complete Streets project locations and potential safety countermeasures based on community feedback and TAG input. Through several workshops, City staff, TAG, and the consulting team finalized project ideas. The list of projects were then ranked based on prioritization criteria selected in consultation with the TAG. The criteria include all factors that MassDOT uses to award project construction funding (though MassDOT does not make their specific scoring criteria for each factor available.)

Prioritization Factor	Total Pts Possible	Points
Multiple Modes	2 pts	0.5 point for each mode served (according to MassDOT's Modes Served list): Pedestrian, Bicycle, Transit, Vehicle/Freight
No. of Countermeasures	1.5 pts	0.5 points for each countermeasure (according to MassDOT's Project Types list); Max of 3 countermeasures
Network Gap	2 pts	2 points for Y (qualitative measure)
High Crash Location	3 pts	2 points for each HSIP* cluster or high crash intersection 1 point for bike/ped cluster
Serving EJ Population	3 pts	1 point for serving 1 category (minority, income, or language isolation) 2 points for serving 2 categories 3 points for serving all 3 categories
Safety/Accessibility w/in 1 mi of school	1 pts	1 points for Y
Safety/Accessibility w/in 1/4-mi of senior destination	1 pt	1 point for Y
Improving conditions for people with disabilities	1 pt	1 point for Y

*MassDOT's Highway Safety Improvement Program (HSIP) was established by congress to reduce traffic fatalities and serious injuries on public roads. MassDOT uses both crash-based and risk-based network screening to identify the top crash locations.

COMPLETE STREETS PROJECTS

The City of Worcester’s list of Complete Streets project include a range of project types that serve people walking, bicycling, taking transit, as well as driving. There are multiple projects that close existing network gaps with new sidewalks or bike facilities. Several projects aim to increase safety at high crash locations and serve various areas with environmental justice populations. The projects are also located within a close distance to schools and senior destinations. Most of the projects incorporate components to increase the accessibility of our streets.

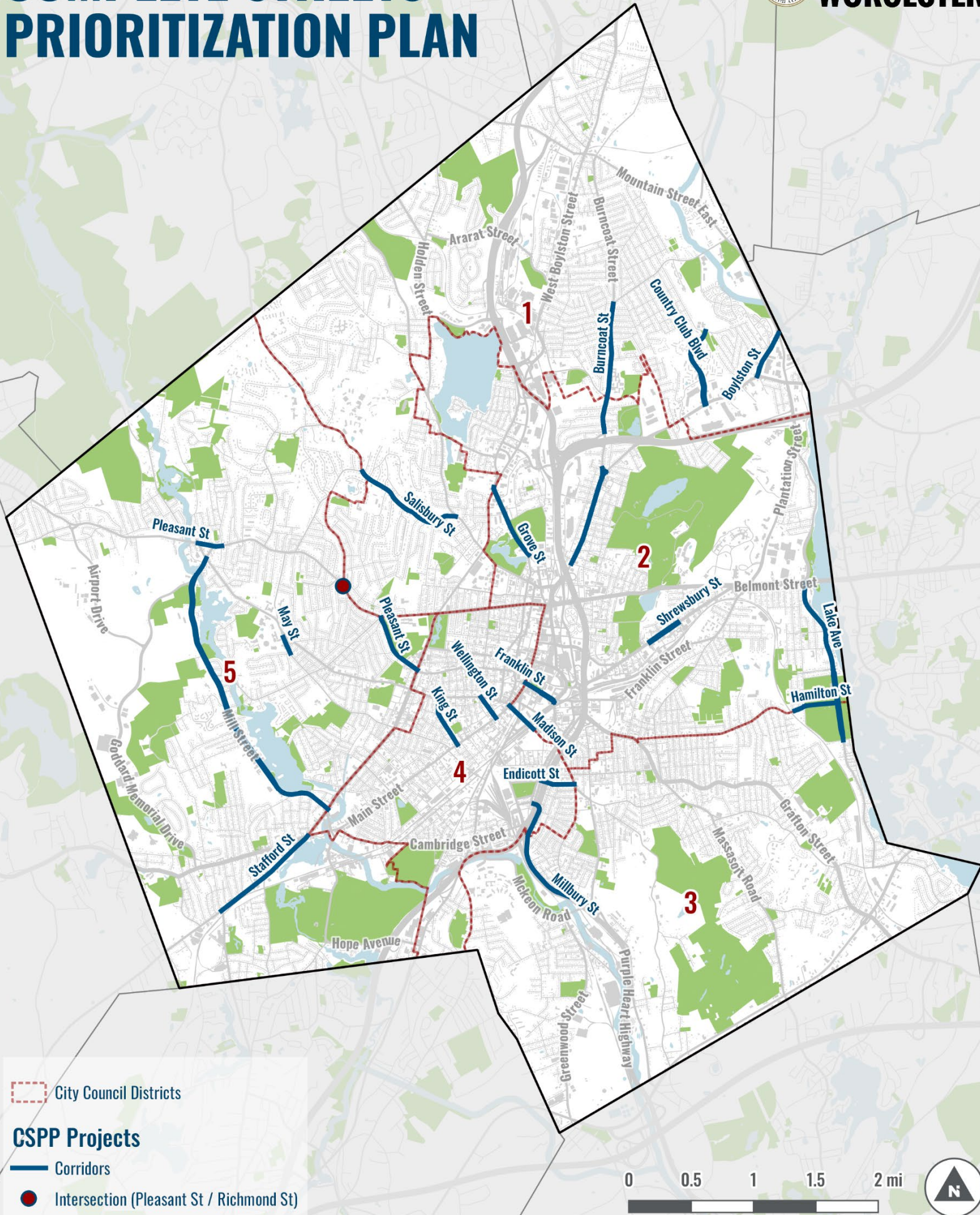
The projects have been developed at a conceptual level. However, any final project may change prior to implementation depending on continued community engagement, field assessments, and additional funding opportunities or changes in available funding.

The list of 22 prioritized Complete Streets projects follows in ranked order. Based on the prioritization criteria, some of the projects were tied and are listed alphabetically by priority number on the following pages. One project was brought to the bottom of the list due to being recently reconstructed in Fall 2022. The projects were submitted to MassDOT using their Prioritization Plan template.

COMPLETE STREETS PRIORITIZATION PLAN



The City of
WORCESTER



City Council Districts

CSPP Projects

Corridors

Intersection (Pleasant St / Richmond St)

0 0.5 1 1.5 2 mi



1. LINCOLN ST FROM CATHERINE ST TO NANCY JOHNSON WAY

Lincoln St from Catherine St to Nancy Johnson Way is a 0.8-mile corridor with excessively wide travel lanes of 14' and crossings that are difficult and unsafe for pedestrians. There is low visibility around crosswalks with parking allowed around them as well as missing crosswalks where bus stops are located. Apex curb ramps are located throughout the corridor at Orne St, Harlow St, Gilman St, and the driveway south of Norton St. Additionally, the intersection at Nancy Johnson Way is complicated with two-direction travel and turn movements permitted around the island along three streets – providing more options than necessary for vehicles. While for pedestrians, to get from Lincoln St to Burncoat St on the east side requires crossing twice, and excess roadway space increases crossing distances and pedestrian exposure time.

Separately but in coordination with this effort, the intersection of Lincoln St and Burncoat St will be reconfigured at Nancy Johnson Way.

The project will include:

- Upgrading/adding twenty-two ADA-compliant curb ramps.
- Removal of parking around crosswalks (daylighting) to increase visibility for drivers.
- Restriping and adding new crosswalks across Lincoln St at six (6) locations.
- Accessibility improvements at bus stops and relocating to correspond to crosswalk locations.
- Addition of RRFBs at Orne St.
- Curb extensions with pavement markings at the crosswalks to shorten crossing distances
- Removal of parking from one side of the street (south of Harlow) to accommodate on-street bicycle lanes; in the central commercial area (north of Harlow), parking may be retained on both sides with 5-ft bicycle lanes.

2. WELLINGTON ST FROM CHANDLER ST TO MAIN ST

Wellington Street is a short (1000 ft) corridor connecting Main St to Chandler St. that experiences considerable cut-through traffic. Bordered by densely developed residential uses and serving environmental justice neighborhoods, speeding and cut-through traffic present dangers to pedestrians and bicyclists.

The project will include:

- Curb extensions at Main St (4), Murry Ave (4), Irving St (2) and Jaques Ave (2).
- Striped crosswalks (4) and ADA-compliant curb ramps (5) added at Irving St and Jaques Ave.
- Two speed humps or similar traffic calming features to make more bike-friendly.

3A. COUNTRY CLUB BLVD FROM LINCOLN ST TO ST NICHOLAS AVE / ERIE AVE

Country Club Blvd from Lincoln St to St Nicholas Ave / Erie Ave is a 0.7-mile corridor located by Lincoln Village, a senior low-income housing complex. The southernmost segment is comprised of a four lane street with a very wide (32 ft) planted median. North of Pleasant Valley Dr, the street transitions to one 20 ft lane in each direction. Parking is prohibited along the entire length of street except on the east side for 700 ft from the northern terminus at Erie Ave.

There are fourteen bus stops serving the corridor, yet most lack shelters and accessible crossings across Country Club Blvd. There are also both missing and faded crosswalks throughout the project area. Additionally, the street is too wide. Four travel lanes encourage speeding near the shopping center. The wide lanes through Lincoln Village encourage speeding as well.

The project will include:

- Two new bus shelters in coordination with WRTA near the commercial area on the southern end of the project.
- Establish a safe crosswalk with median protection and RRFB's connecting these two stops.
- Consolidate and pair bus stops, and provide ADA-compliant access.
- Striping/Restriping six crosswalks across commercial driveways.
- Five new crosswalks and 10 ADA-compliant curb ramps at bus stops with missing sidewalks and at Shenandoah Cir.
- Rightsizing roadway by eliminating one travel lane in each direction from Lincoln St to Pleasant Valley Dr and narrowing roadway north of Pleasant Valley Dr.
- Reallocating roadway space for buffered bike lanes the entire length (3,500 feet).

3B. STAFFORD STREET FROM MAIN ST TO CURTIS PKWY

Stafford Street from Main St to Curtis Pkwy is a 0.5-mile corridor that carries issues related to high vehicular speeds. This is due to a wide curb-to-curb width of 44' for two travel lanes and two parking lanes, as well as underutilized parking given the number of off-street parking lots along the corridor. Exacerbating the issue is a special speed regulation allowing higher speed limits of 35 mph on this corridor. Pedestrian crossing safety and accessibility and bicycle safety are concerns along the corridor. A 2022 pedestrian fatality occurred within this project area. There is significant community interest in implementing treatments at this location. Additionally, curb ramps along the corridor are inaccessible and sometimes missing completely where there is a crosswalk.

The project will include:

- Roadway right-sizing to narrow travel lanes to 11' travel lanes to slow vehicles
- Reallocating travel lane space to 5' bike lanes with 2' buffers and dashed green conflict zone markings at driveways and intersections.
- A traffic calming effect created through a parking chicane by alternating parking from one side to the other. Parking will be maintained on the north side of the street from Main St to 42 Stafford St and on the south side of the street from 42 Stafford St to Curtis Pkwy.

- Removal of parking around crosswalks (daylighting) to increase visibility for drivers. Daylighting will be reinforced through curb extensions or similar treatments.
- Installation of up to two RRFB's at unsignalized crosswalk locations.
- New ADA-compliant curb ramps at Curtis Pkwy (8), Webster Square Plaza entrances (4), Young St (2), and the bus stops outside Ichabod Washburn Hospice Residences (2)
- Removal of the midblock crossing at 97 Stafford St given the close proximity to two adjacent crosswalks near bus stops.

This is anticipated to initially be a quick build project using temporary materials given community interest in implementing treatments as soon as possible. The intention is to construct permanently once funding becomes available. Simultaneous to design improvements, the removal of the speed regulation allowing for speed limits of 35 mph is recommended.

4. KING STREET FROM MAIN ST TO CHANDLER ST

King Street from Main St to Chandler St is a 0.4-mile corridor in the Main South neighborhood. King St connects to Chandler St, which is currently a TIP project expected to be constructed in 2025-2026 and that will include separated bike lanes and updated pedestrian accommodations. On the other end, King St. connects to the Worcester TDI District on [Main South](#), a five-block stretch of Main St that is planned to be mixed-use, compact, and highly walkable. However, King St does not have friendly pedestrian accommodations or any bicycle accommodations to connect to Main St and Chandler St. The intersection of King St at Woodland St and Bluff St has visibility and safety issues due to the diagonal alignment of both Woodland and Bluff meeting together at King St and lack of travel path definition. Additionally, vehicle congestion is a persistent issue in the block leading up to Main St exacerbated by the lack of room for two vehicles to pass with parking occupied on both sides with 30' of ROW. The No Parking Zones leading up to Main St have been ineffective. This congestion makes it difficult for both vehicles and bicycles to travel up the street.

The project will include:

- Raised crosswalks or intersections, curb extensions or similar traffic calming approaches at four locations (Main Street, Shepard Street, Queen Street and Jaques Avenue) that will be level with the sidewalk and ADA-compliant.
- Six ADA-compliant curb extensions installed at the intersection of King St at Woodland St and Bluff St to tighten the intersection and turning radii, as well as realign and square up the intersection to mitigate the impact of the diagonal alignments.
- Signage and pavement markings to mark the corridor as a neighborhood greenway / bicycle boulevard and connect to future Chandler St accommodations.
- Two ADA-compliant curb extensions on King St at Main St to about 75' north to prevent parking and keep traffic flowing. As a quick temporary measure before the curb extensions can be installed, hatched pavement markings and flex posts will be installed.

5. HAMILTON ST FROM DALLAS ST TO LAKE AVE

Hamilton St from Dallas St to Lake Ave is a 0.3-mile corridor that would fill a gap in the bike network by extending the bike lanes on Hamilton St (which currently end at Coburn Ave) further east to City limits. Hamilton St provides one of few east-west connections on the eastern side of the city past I-290. The corridor would connect to the Quinsigamond State Park / Lake Park, as well as an athletic field and arena. Additionally, the street cross section flares to over 100' in width through the intersection at Coburn Ave - encouraging speeding and making for long crossing distances across Hamilton St.

The project will include:

- Rightsizing the roadway to narrow vehicle travel lanes to 10'-11' to slow vehicle speeds.
- Reallocation of roadway space to bike lanes, which will be buffered where space exists (0.3 miles).
- Large curb extensions with new directional ADA-compliant curb ramps on all four corners at Coburn Ave to narrow crossing distance, improve sight lines, and slow vehicle speeds.

6A. BOYLSTON ST FROM LINCOLN ST TO NORTHEAST CUTOFF

Boylston St from Lincoln St to Northeast Cutoff is a 0.4-mile corridor with a roadway that is wider than necessary. While the surrounding segments of Boylston St are two lanes, this segment has four lanes - encouraging speeding makes the street difficult to cross. The corridor provides access to Great Brook Valley and the Curtis Apartments, two large Worcester Housing Authority residential communities that additionally house educational programming for adults and children, a daycare center, youth recreational programming, and a branch of the Worcester Public Library. A 2022 pedestrian fatality with a person in a wheelchair occurred within the project limits and there is significant community interest in complete streets countermeasures at this location. On the northern end, there is a 0.2-mile missing gap on the eastern side of Boylston St, where the sidewalk currently terminates by 36 Boylston (just south of Tacoma St). The Curtis Apartments at connecting Tacoma St will be reconstructed in the future through a public housing site proposal and will have bicycle and pedestrian accommodations (yet to be determined) along the roadway. However, Boylston St lacks facilities to form proper pedestrian and bicycle connections to Tacoma St. On the southern end of the corridor, the roundabout at Lincoln St was reconstructed two years ago with ramps on Boylston St leading up to the rotary. This is for bicyclists to traverse from Boylston on-street to the sidewalk to get through the rotary at Lincoln St. The ramps are narrow with a curb cut that is perpendicular to the direction of travel - making it challenging for bicyclists to smoothly transition onto the sidewalk. Additionally, there are no bicycle facilities along the road.

The project will include:

- Roadway rightsizing to reduce Boylston St from four lanes to two lanes with center two-way left turn lanes into Tacoma St.
- A new ADA-compliant sidewalk to fill in the 0.2-mile missing gap on the eastern side of Boylston St.
- New crosswalks on Boylston St at Chino Ave and Tacoma St.

- An ADA-compliant pedestrian refuge island on Boylston St at Tacoma St.
- Curb extensions on Tacoma Street at the intersection with Boylston St.
- Bike crossings with green conflict pavement markings on Boylston St at Tacoma St, along with an ADA-compliant two-stage crossing across the bike lane and travel lanes with a pedestrian refuge island in-between and two sets of RRFBs.
- On the southbound side leading up to the roundabout, removing the bicycle ramp and moving the signage to precede three long curb cuts for driveways that bicyclists can use to get up onto the sidewalk.
- On the northbound side leading up to the rotary, removing the existing bicycle ramp and constructing a new ramp to allow bicyclists a smoother transition onto the sidewalk.

6B. FRANKLIN ST FROM MAIN ST TO FRANCIS MCGRATH BLVD

Franklin St from Main St to Francis McGrath Blvd is a 0.3-mile commercial corridor with high pedestrian volumes and that is adjacent to City Hall, Worcester Common, as well as Worcester Public Library. There are currently more vehicular travel lanes than necessary (three to five lanes), causing excessive speeds. This causes pedestrian crossings to be dangerous, even while the crosswalks are highly visible with red paint and the curb ramps are directional and accessible. Additionally, the corridor would fulfill a missing bike network gap between Main St and Green St.

The project will include:

- Rightsizing the roadway to remove one westbound travel lane.
- Reallocating roadway space to on-street bicycle lanes (one-way or two-way) or a shared use path on the north side of Franklin Street (0.25 miles).

6C. LAKE AVE FROM BELMONT ST TO COBURN AVE

Lake Ave from Belmont St to Coburn Ave is a 1.3-mile corridor that provides the only north-south connection along the eastern edge of the city and connects to Quinsigamond State Park / Lake Park and Lincoln Park Tower (a low-income, senior-only building). There are wide travel lanes that encourage speeding and more space than necessary for parking. Additionally, the corridor lacks comfortable bike facilities. North of Nonquit St, there are no bike facilities at all, and south of Nonquit St, there are unbuffered bike lanes.

The project will include:

- Landscaped median island from Belmont St to Nonquit St (4,100 ft).
- Rightsizing roadway to 11' travel lanes and 7' parking lanes (where needed) to slow vehicle speeds.
- A separated bicycle path, either on both sides of the roadway or bidirectional on the east (Lake Quinsigamond) side, with reconstructed sidewalks, reallocating travel and parking lane space, and reallocating current on-street bike lanes (1.3 miles).
- Pedestrian crossing improvements, including RRFBS, at Quinsigamond State Park.

6D. MADISON ST FROM MAIN ST TO GOLD ST

Madison St from Main St to Gold St is a 0.3-mile corridor that would fulfill a bike network gap and connect the Canal District and Polar Park with the rest of the City. The street naturally extends from Chandler St on the northwest, which is currently a TIP project expected to be constructed in 2025-2026 and that will include separated bike lanes and updated pedestrian accommodations.

The project will include:

- Rightsizing four-lane roadway and reallocating space to separated bike lanes in a manner to match the Chandler Street TIP project (TBD).

6E. MILL ST FROM PARK AVE TO CHANDLER ST

Mill street extends from Park Avenue in the south to Chandler St in the west, forming a 2.5 mile corridor ringing Worcester's west side. Mill Street links residential neighborhoods with commercial centers at either end and is the access route for visitors to Coes Park and Coes Beach. Much of the corridor is configured as two lanes in each direction with a landscaped center median. This configuration provides significantly more roadway capacity than is necessary and combined with wide travel lanes encourages speeding that, in particular, impacts pedestrian and bicycle access (especially at crossings).

A complete remake of the corridor to repurpose the cross-section to establish improved pedestrian accommodations, a separated bicycle path, recreational amenities, and calm traffic is a long-term goal, but will necessitate considerable corridor planning, design, and funding. However, in the interim strategically placed pedestrian crossing improvements and quick-build projects to improve bicycle accommodations and introduce a degree of traffic calming can quickly improve conditions and accommodations on the corridor.

The project will be divided into three segments:

- Segment 1: Park Avenue to Coes St (0.2 miles)
- Segment 2: Coes St to Airport Rd (2.1 miles)
- Segment 3: Airport Rd to Chandler St (0.2 miles)

The project will include:

- Crossing enhancements at five strategic locations (Coes Park, Coes Beach, Third St (vicinity of), Tewkesbury Rd/Mill Swan Preschool, and at Airport Drive) including new or repainted crosswalks (9), curb extensions (10), pedestrian refuge islands (4), RRFBs (9 sets), and ADA-compliant curb ramps (18).
- Repurposing underutilized shoulder/parking areas as buffered bicycle lanes.
- Established striped bicycle lanes along Segments 1 and 3 at either end of the corridor.

6F. PLEASANT ST FROM PARK AVE TO NEWTON SQ

Pleasant St from Park Ave to Newton Sq is a 0.5-mile corridor with excessive ROW and excessive speeds, particularly when parking is underutilized as the additional roadway space encourages speeding. There is particularly excessive vehicle roadway space starting at Copley Rd and on the northern end of the project, where two travel lanes and two parking lanes take up 60' of space. There are currently no crosswalks between Norman Ave on the southeastern side of the project and the northwestern cap of the project at Newton Sq – even though there are several bus stops in-between. On the Newton Sq end, there is already a design under way which will include bicycle and ADA-compliant pedestrian accommodations for the Newton Square rotary. However, there are currently no bicycle accommodations along Pleasant St. Finally, the roadway is currently undergoing sewer work and will need to be resurfaced so there is an opportunity to take advantage of the need to resurface with a safer design.

The project will include:

- Rightsizing the roadway by narrowing travel lanes to 11' to slow vehicles.
- An ADA-compliant pedestrian refuge island with landscaping at Copley Rd.
- Reallocating roadway space to buffered bike lanes and a median from Copley Rd to the northern end of the project.
- Removal of parking on one side of the street on the southern end of the project where the road narrows and reallocating space to bike lanes. At Park Ave, the eastbound bike lane would continue through the intersection while the westbound bike lane would begin about 80' past the intersection, to allow room for the left turn lane on the eastbound side and parking on the westbound side for the local businesses.

7. MILLBURY STREET FROM ASHMONT ST TO MCKEON RD

Millbury Street from Ashmont St to McKeon Rd is a 1.1-mile corridor that is a critical gap in the bicycle network. The corridor is connected to the buffered bike lanes installed by MassDOT on the McKeon Bridge on the southern end of the project and the Blackstone River Bikeway, a 30-mile trail that runs south of the project from McKeon Rd to N Main St in neighboring Millbury, MA. The roadway is currently too wide, with 12' travel lanes and 5' shoulders that encourages speeding. Additionally, according to MassDOT's Potential for Walkable Trips analysis, this corridor has high potential for walkable trips. However, some of the crossings have safety and accessibility issues. The crossings at Perry Ave and Fifth Ave have apex curb ramps, which have corner ramps located at the center of the corner and aligns to direct people into the middle of an intersection. On the northern cap of the project at Ashmont Ave, the intersection at Millbury St is missing a marked crosswalk on the southern side.

The project will include:

- Roadway right-sizing to narrow travel lanes to 11' to slow vehicles.
- Reallocating 5' to 6' of space to bike lanes with vertical separation through curb stops where space allows. This will effectively extend the Blackstone River Bikeway into downtown Worcester by completing a missing link between the present terminus at the Blackstone River Heritage Center and bicycle lanes on Quinsigamond Avenue.

- Reconstruction of the apex curb ramps at Perry Ave and Fifth Ave to be ADA-compliant with two curb ramps that are parallel to the crosswalks and aligns to direct people into the crosswalks.
- A new crosswalk with ADA-compliant curb ramps with parallel construction to the crosswalks at Ashmont Ave.

8A. BURNCOAT ST FROM BURNCOAT TERR TO DOROTHY AVE / CLARK ST

Burncoat St from Burncoat Terr to Dorothy Ave / Clark St is a 1-mile corridor by Burncoat Middle School, Burncoat High School, and Thorndyke Road Elementary School. Both City Councilors and residents have frequently requested traffic calming measures along this corridor, where 31' - 37' of roadway space are provided for two travel lanes and a parking lane. There is low visibility of pedestrians at crossings, as well as fading and missing crosswalks at seven bus stops. Additionally, most of the curb ramps along the corridor are inaccessible.

The city is currently evaluating the potential to establish bicycle lanes along the length of the corridor. Doing so would require prohibition of on-street parking on both sides of the street (on-street parking utilization has been observed to be very low to non-existent along most of the corridor). If prohibition of on-street parking proves infeasible, the complete streets improvements will instead focus on traffic calming and pedestrian accommodations.

The project will include:

- Rightsizing the roadway to narrow vehicle travel lanes to 11' and slow vehicles.
- Reallocation of street width to establish buffered bike lanes (1 mile).
- Upgrading all fourteen curb ramps to be ADA-compliant.
- Repainting crosswalks and adding new crosswalks across Burncoat St at bus stops (7) and key crossings.
- If parking is providing, curb extensions will be added at key cross streets to reduce crossing distances and calm traffic.
- Four enhanced crosswalks with RRBFs near Burncoat elementary, middle, and high schools.

8B. STAFFORD STREET FROM CURTIS PKWY TO JAMES ST

Stafford Street from Curtis Pkwy to James St is a 0.4-mile corridor that would be a natural extension of another complete streets project further north on Stafford St from Main St to Curtis Pkwy. The corridor is within a 1/4-mile to two senior housing destinations - Goddard House (an assisted living facility) and Ichabod Washburn Hospice. However, the corridor carries issues related to high vehicular speeds due to a wide curb-to-curb width of 44' for two travel lanes and two parking lanes, as well as underutilized parking given the number of off-street parking lots along the corridor. Pedestrian crossing safety and accessibility and bicycle safety are concerns along the corridor. Additionally, curb ramps along the corridor are inaccessible and the crosswalks are faded.

The project will include:

- Continue the cross section proposed for the northerly Stafford Street segment for an additional 2,200 ft, with one travel lane in each direction (10.5 to 11 ft), one parking lane, and buffered bike lanes.
- Reconfigure the Stafford St intersection at James St to reduce the radius of the southeastern curbline, relocate the westerly crosswalk closer to the intersection, and update eight (8) curb ramps to be ADA-compliant.
- Repainting the two existing crosswalks and upgrading the four curb ramps to be ADA-compliant at the western and eastern ends.
- Three (3) new crosswalks with ADA-compliant curb ramps and either curb extensions or protected median at Eureka St, Blaine Ave and Varnum St (replacing a nearby midblock) to provide safe crossings and connect WRTA bus stops.
- Upgrading or adding ten (10) ADA compliant curb ramps to facilitate crossing side streets.
- Removal of parking around crosswalks (daylighting) to increase visibility for drivers.
- Installing temporary curb extensions at the crosswalks with paint and flex posts to shorten crossing distances.

9A. GROVE STREET FROM LANCASTER ST TO PARK AVE

Grove Street is a two-lane street connecting the WPI, Salisbury District and Gateway Park areas just north of downtown with commercial and residential areas to the north. The 0.6-mile corridor provides access to newly renovated O'Connell Field (soccer, football) and Salisbury Park. On-street parking is not allowed along most of the corridor, despite a wide cross section of 44 ft (curb to curb). Bicycle lanes were added during routine lane marking renewal within the past five years, but these lanes are narrow, unbuffered, and still leaves excessively wide travel lanes (17 ft). There are no signalized intersections except at either end of the corridor, so improving crosswalks is an important aspect as well.

The project will include:

- Reconfigure the Lancaster St intersection to reduce pedestrian crossing distances and lower travel speeds of right turning vehicles. Replace the slip lane onto Lancaster St with a curb extension, tighten the right corner from Lancaster St onto Grove St, and widen the crossing median on Lancaster St to a pedestrian refuge island.
- Restripe to create a parking lane on one side of the street in the vicinity of O'Connell Field.
- Add left turn pockets at North St, Sagamore St, and Glennie St.
- Enhance crossings with striped crosswalks (13), pedestrian refuge islands (5), ADA-compliant curb ramps (11), and potentially RRFBs (10 sets) at Lancaster St, North St, Sagamore St, Glennie St, and Park Ave. North St is separately being evaluated for a traffic signal; if a full signal is not warranted, RRFBs will be incorporated at North St or a nearby crossing.
- Establish buffered bike lanes throughout the corridor.

9B. SALISBURY ST FROM FLAGG ST TO FOREST ST

Salisbury St from Flagg St to Forest St is a 0.9-mile corridor with approximately 2,400 ft of missing sidewalks on the southern side of the street from Flagg to Jamesbury and Salisbury Lane to Valley Hill Dr. There are also missing crosswalks connecting the side streets. The crossing at Beechmont St is especially challenging given the slip lane provided for vehicles traveling eastbound from Salisbury St onto Beechmont St – allowing vehicles to take the right turn without having to slow down. Furthermore, the corners and curb ramps at Beechmont are not aligned and are at a large offset – making the crossing very long and increasing exposure time for pedestrians. The crossing at Forest St is also unsafe with faded crosswalks and large travel lanes throughout the length of the corridor encouraging high vehicular speeds.

The project will include:

- Rightsizing the roadway to narrow travel lanes to 10' with wide shoulders or 5' bike lanes where width allows
- Construct 2,400 ft of ADA-compliant sidewalks on the southern side of the street where there are gaps from Flagg to Jamesbury and Salisbury Lane to Valley Hill Dr.
- Construct new ADA-compliant curb ramps with the new sidewalks and reconstruct existing APEX curb ramps across side streets and along Salisbury to be ADA-compliant with two curb ramps that are parallel to the crosswalks and aligns to direct people into the crosswalks.
- Paint crosswalks for eight side streets and 16 curb ramps.
- Improve the crossing at Forest St by restriping the pedestrian crossing, upgrading the curb ramps, and installing RRFBs.
- Close the slip lane onto Beechmont Street, extend the curb, and realign the crossing and curb ramps to be parallel.

10. SHREWSBURY STREET PEDESTRIAN CROSSINGS

Shrewsbury St is a heavily traveled primary arterial that bisects one of Worcester's busiest mixed use commercial neighborhoods. The street has two travel lanes in each direction and a landscaped center median, which provide spaces for turn pockets and median pedestrian refuges. Still, safe crossing opportunities are limited along the central and eastern segments of the corridor, which have few signalized intersections. This project will add three additional pedestrian crossings with RRFBs.

The project will include:

- Three new crosswalks in the vicinity of Casco St, Envelope Terrace, and Putnam Lane, with curb extensions, pedestrian refuges in the existing landscaped islands, and two sets of RRFBs for each crossing.

11A. INTERSECTION OF PLEASANT ST AND RICHMOND ST

The intersection of Pleasant St and Richmond St is a unique commercial area with several local restaurants and other businesses surrounded by a residential neighborhood. Outdoor seating on the

east side of the intersection activates the area. However, pedestrian movement is unsafe given the high speeds through the intersection with large widths on both Pleasant St and Richmond St, a long diagonal crossing across Richmond St, and faded crosswalks.

The project will include:

- Curb extensions on both sides of Richmond St and Pleasant St to shorten the crossing distances, formalize on-street parking areas, provide space for ADA compliant curb ramps, and provide more opportunity for placemaking. This will likely include reallocation of two traffic signal poles.
- Repainting three crosswalks and add a new crosswalk on the fourth leg.
- Upgrading curb ramps to be ADA-compliant and directional.
- Upgrade the traffic signal to include APS and pedestrian count down timers.

11B. MAY ST FROM CHANDLER ST TO ZENITH DR

May St from Chandler St to Zenith Dr is a 0.2-mile corridor adjacent to Worcester State University and May Street Elementary School. The corridor currently has more space for travel lanes than needed, ranging from 32 to 50 feet, encouraging speeding by an elementary school. The corridor is also within a ¼-mile to Bet Shalom Apartments, a low-income development for seniors and mobility-impaired individuals. This project provides two unique opportunities. MassDOT is reconstructing the intersection with Chandler St with two roundabouts, and this project will allow the expansion of pedestrian-friendly accommodations from Chandler St through to the southern end of Worcester State. Additionally, the project provides an opportunity for the University to connect their buildings and properties along May St with the rest of the University for a more cohesive feel.

The project will include:

- Two curb extensions at the Hamill Road crosswalk and at Zenith Dr on the northwest corner to serve as gateway treatments
- Raised table in different material between the three crosswalks outside of May Street Elementary School to slow vehicles
- Reconstruction of three curb ramps to be ADA-compliant

11C. PLEASANT ST FROM CHANDLER ST TO COPPERFIELD RD

Pleasant St from Chandler St to Mill St is a 0.1-mile commercial corridor with pedestrian safety concerns and a lack of bicycle accommodations. Additional pedestrian crossing opportunities are needed between the north and side sides of the street west of the signalized intersection at Chandler St. Additionally, the corridor has large turning radii at both Mill St and Mower St, with a slip lane onto Mower St, which enables motorists to make right turns at excessive speeds and creates a longer, two-stage crossing across Mower St.

In a second phase, the city will evaluate the potential to establish buffered bicycle lanes along the length of the corridor as well as removal or modification of the slip lane to Mower St.

The project will include:

- Curb extension and crosswalk at Mill Street on the southeast corner
- Rightsizing the roadway to provide one westbound travel lane east of Tiverton Pkwy.
- A crosswalk at Tiverton Pkwy with an ADA-compliant curb extension on the south side of the street and a RRFB.
- Enact 20mph school zone speed limit with two school zone flashing beacons on approaches to Tatnuck Magnet School (between Mill St and Copperfield Rd).
- Raised speed table covering the two paths in front of Tatnuck Magnet School (may be revised to be at-grade with curb extensions to prevent parking on crosswalk). The RRFB on the eastern crosswalk in front of the school currently will be moved to the middle of the new large crosswalk.
- Striped parking lane and school pick-up/drop-off zones on both sides of the street between Mill St and Copperfield Rd.
- Crosswalk across Copperfield Rd.
- Lane allocation revisions to incorporate two buffered bicycle lanes.
- Removal or modification of the slip lane to Mower St to reduce turning speeds and shorten pedestrian crossing distances

12. ENDICOTT ST FROM MILLBURY ST TO VERNON ST

Endicott St from Millbury St to Vernon St is a 0.3-mile corridor in a low-income, environmental justice neighborhood that provides one of the few connections underneath I-290 between the Vernon Hill and Green Island neighborhoods. The sidewalks are inaccessible, overgrown with weeds, and need replacement. The straight corridor allows for frequent, dangerous speeding through this residential neighborhood that could otherwise be friendly for walkers and cyclists. Additionally, the City is redesigning [Endicott St from Harding St to Quinsigamond Ave](#), so this project provides an opportunity to improve safety on the entire corridor.

The project will include:

- Replacement of all sidewalks to be ADA-compliant (0.4 miles).
- Installing and upgrading eight ADA-compliant curb ramps.
- Six landscaped curb extensions at Perry Ave and Ward St.
- Three speed humps to slow vehicle speeds and make the corridor more bike-friendly.