

MILL STREET PAVEMENT PRESERVATION AND COMPLETE STREETS IMPROVEMENTS



Etel Haxhiaj
District 5 Councilor

Department of
Transportation & Mobility

Department of
Public Works & Parks

AGENDA

- **Welcome & Introduction – Councilor Haxhiaj**
- **Project Overview**
- **Pavement Preservation Project**
 - **Pavement Treatment**
 - **Interim Safety Improvements**
- **Complete Streets Redesign Project**
- **Q & A**



DEPARTMENT OF TRANSPORTATION & MOBILITY

- Stephen S. Rolle, PE Commissioner
- Todd M. Kirrane, Assistant Director

“In partnership with other agencies and municipal departments, DTM plans, coordinates, designs and implements transportation programs and projects that promote safe, equitable and sustainable mobility options.”

DEPARTMENT OF PUBLIC WORKS & PARKS

- Jay J. Fink, PE Commissioner
- William A. Coyle, PE Deputy Commissioner

“The Department of Public Works & Parks provides high quality, cost effective, efficient, safe services involving public infrastructure and facilities that enhance the quality of life and support growth in the City of Worcester.”

**DEPARTMENT OF SUSTAINABILITY & RESILIENCE
EXECUTIVE OFFICE OF ECONOMIC DEVELOPMENT
DEPARTMENT OF PUBLIC HEALTH – REACH PROGRAM
POLICE DEPARTMENT – TRAFFIC DIVISION
FIRE DEPARTMENT**



MILL STREET

Project Overview

1. Pavement Preservation project

- Restores driving surface of the roadway.
- Work is limited to the roadway surface itself.

2. Interim Complete Streets improvements.

- Restripe roadway to provide one motor vehicle lane in each direction.
- Provide on-street parking on both sides of the street.
- Provide buffered bicycle lanes.
- Upgrade crosswalks.

3. Complete Streets - Full Redesign

- Full redesign of the corridor to improve sidewalks, add crosswalks at regular intervals, enhance streetscapes, improve streetlighting, provide on-street parking areas and permanent protected bicycle facilities.



MILL STREET

Existing Conditions



MILL STREET

Existing conditions and deficiencies



➤ Poor Pavement Condition

- Edge, Fatigue, Longitudinal & Transverse Cracking
- Patch Deterioration
- Potholes



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Roadway Characteristics

➤ Right of way

- 45 to 55 feet wide (2 lane segments).
- 130 feet wide (multi-lane segment).
- Four 11' to 12' travel lanes.
- Sidewalks on both sides (poor condition in many locations).
- Few crosswalks and not ADA accessible.
- No bike or micro-mobility facilities.
- Parking lane each side.



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Roadway Characteristics

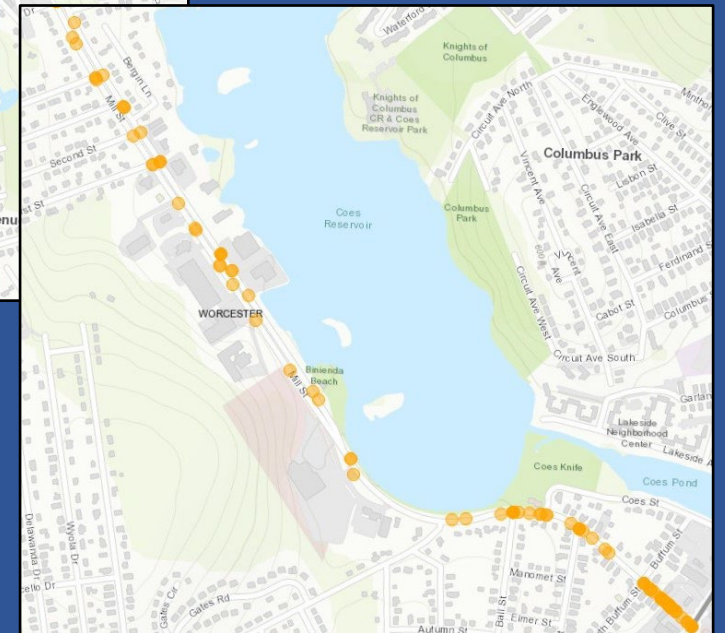
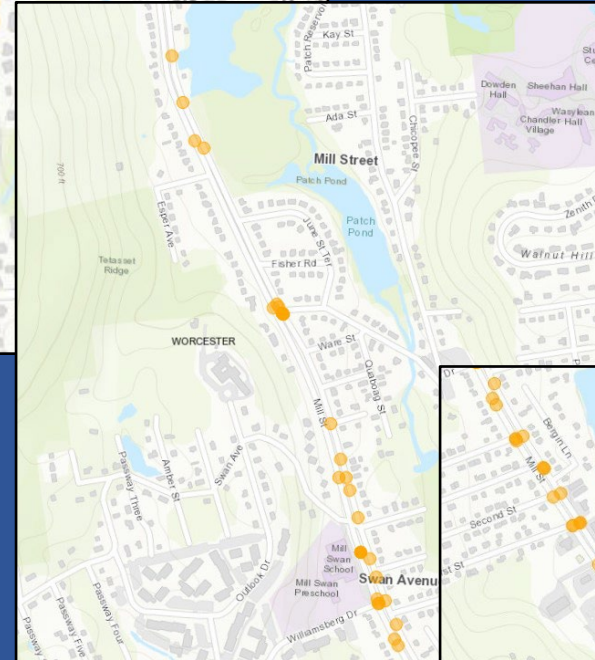
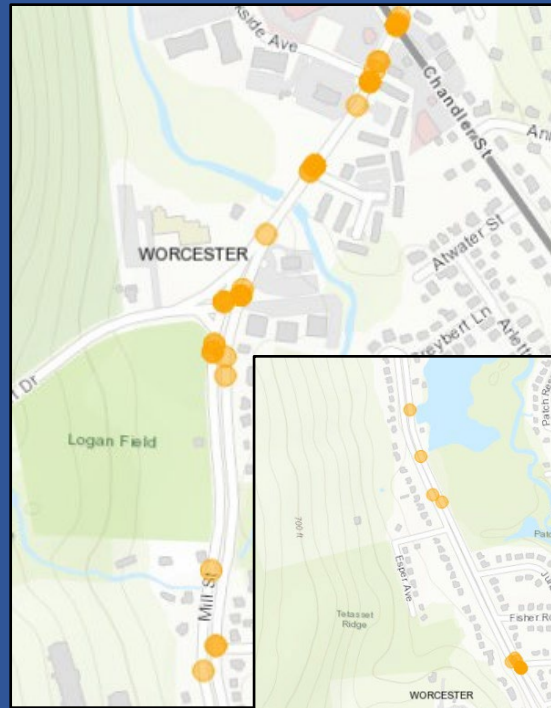
- Minor Urban Arterial (design $\leq 15,000$ AADT)
 - 8,365 (west of June St) to 11,160 (east of June St) AADT.
- WRTA
 - Route 7 Bus (Park to Swan Ave).
- Speed limit 30mph
 - Average speed on multilane segment is 38 to 40 mph.
 - 85th Percentile is 45+ mph.



MILL STREET Crash Locations

➤ 2018-2022 Five-year crash history

- 200 crashes excluding Park Ave and Chandler St intersections; 269 crashes in total.
- 43% higher than statewide average.
- 23% of crashes resulted in injury or possible injury.
- 5 crashes with nonmotorized users.

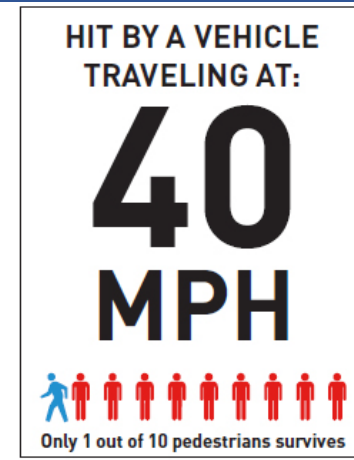
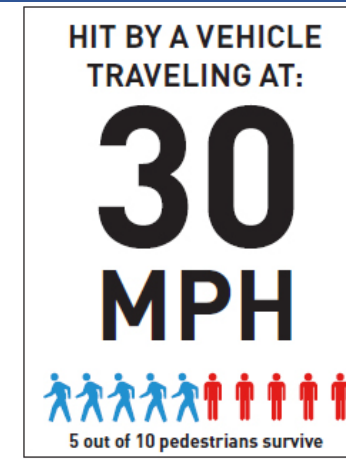


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Existing conditions and deficiencies

➤ Safety Concerns (*'Dangerous by Design'*)

- Roadway width contributes to high motor vehicle speeds and high crash rate.
- No dedicated space for cyclists and micro-mobility users.
- Sidewalks are in poor condition, narrow, and not protected from traffic or parked cars.
- Crosswalks lack ADA compliant ramps.
- Lack of safe crossings at desired connection points throughout, including at public transit stops.



POLICY GUIDELINES

COMPLETE STREETS POLICY (2017)

- Incorporates Complete Streets principles into the planning, design, construction, maintenance, and operation of its streets, transportation infrastructure, and transportation services
- Applies to all street and transportation projects requiring funding or approval by the City, and to the extent allowed by law, those projects funded by state and federal government sources.
- Requires the accommodation of all travel modes, including but not limited to walking, cycling, motor vehicles, etc.
- Provides for the safe and convenient use by people of all ages, economic status and abilities.
- Implemented through a combination of coordinated actions, ranging from incremental changes to major capital improvements.

GREEN WORCESTER PLAN (2021)

- ACTION ITEM 3: Connectivity: Make connected networks an explicit goal of City of Worcester transportation planning. Maximize connectivity to move people – not just vehicles – between destinations.
- ACTION ITEM 12: Complete Streets Policy: Implement the policy by developing a priority plan for designing roadway space for all users.
- ACTION ITEM 13: Micromobility Plan: Develop and Implement a Pedestrian, Bicycle, and Micromobility Plan.
 - Identify and implement bicycle networks to support non-commuter short trips under 3 miles to central and neighborhood commercial areas, parks, and other neighborhood destinations.
 - Use safety data to identify and prioritize for improvements to the most hazardous routes and intersections that discourage routine travel by bicyclists and pedestrians, and include education for motorists.



Traffic Safety

Complete Streets improve safety for ALL roadway users

- ***Current historic roadway design is dangerous for all roadway users***
 - 439 people killed in motor vehicle traffic crashes in 2022 on Massachusetts roads (record year), 42,795 nationwide
 - 101 Pedestrians killed in 2022 on Massachusetts roads (record year), over 7500 nationwide
 - 10 cyclists killed (124 seriously injured) in 2022 on Massachusetts roads, 291 nationwide
 - Worcester had the second highest # of pedestrian fatality crashes in 2022 (7 crashes)
 - All 7 took place in Environmental Justice population census tracts
 - Disproportionally affects communities of color
 - Black Americans had the highest traffic fatality rate per mile traveled and across all modes, followed by Hispanics, Whites, and Asians. These disparities were particularly stark for walking and cycling, and during evening hours. (Boston University School of Public Health (BUSPH) & Harvard T.H. Chan School of Public Health, 2022, *American Journal of Preventive Medicine*)
 - Disproportionally affects older populations
 - People over 65 made up 38.6% of fatal pedestrian crashes on Massachusetts roads in 2022, even though only 17.4% of the Massachusetts population is over 65 according to the US Census population estimate from July 2022 (Walk Massachusetts, 2022 data summary)



3 TYPES OF COMPLETE STREETS PROJECTS

There are three types of projects that are being implemented to create a multi-modal transportation network that prioritizes safety, equity, sustainability, and access for all roadway users.

1. **Pilot** – short term demonstration projects using temporary or semi-permanent materials to educate the public, test out new ideas, and gain feedback.
2. **Interim Complete Streets Measures** – intermediate projects using pavement markings, semi-permanent materials, and limited curb alignments to make safety and access improvements pending long term redesign and reconstruction projects. Mostly taking place as part of a City financed pavement preservation project, but also as stand-alone, small-scale projects funded by a variety of means including City, State, Federal, or grant funding.
3. **Permanent Complete Streets Projects** – large scale projects following a project development and design review process using permanent materials. Mostly taking place as part of City financed roadway reconstruction project, TIP or other federal/state aid project, and grant funded project.



This approach is not about choosing 1 mode over the others, it is about taking advantage of every available resource & opportunity to make improvements with every type of project undertaken by the City.

DESIGN GUIDANCE

- **Federal Highway Administration**
 - Manual on Uniform Traffic Control Devices (MUTCD), Safe System Approach Guidance, Guide for the Planning, Design, and Operation of Pedestrian Facilities, other policies and directives
- **United States & Massachusetts Architectural Access Boards**
 - Americans with Disabilities Act (ADA) Accessibility Standards, Public Rights-of-Way Accessibility Guidelines (PROWAG)
- **National Association of City Transportation Officials (NACTO)**
 - Urban Street Design Guide, Urban Bikeway Design Guide
- **American Association of State Highway and Transportation Officials (AASHTO)**
 - Guide for the Planning, Design, and Operation of Pedestrian Facilities, A Policy on Geometric Design of Highways and Streets
- **Massachusetts Department of Transportation (MassDOT)**
 - Procedures for Speed Zoning on State Highways and Municipal Roads, Safe Speeds Technical Toolkit, Separated Bike Lane Planning & Design Guide, other guidance policies and directives
- **Industry Best Practices**
 - Institute of Transportation Engineers (ITE), AARP Livable Communities, Arbor Day Foundation, WHO Age-friendly Cities Framework



MILL STREET 2023 Pavement Preservation Project



Given critical deterioration of the pavement surface, DPW&P initiated a pavement preservation project using Hot in Place Asphalt Recycling.

- Operates within the existing curblines to restore pavement integrity and extend the life of the existing roadway.
- Extends life of the existing roadway to allow completion of a full corridor redesign and assembly of funding necessary to implement comprehensive corridor improvements.



MILL STREET 2023 Pavement Preservation Project



Interim Safety Improvements

The pavement preservation project presents an opportunity to implement lane marking changes that will improve safety and access on an interim basis while comprehensive improvements can be designed and implemented.

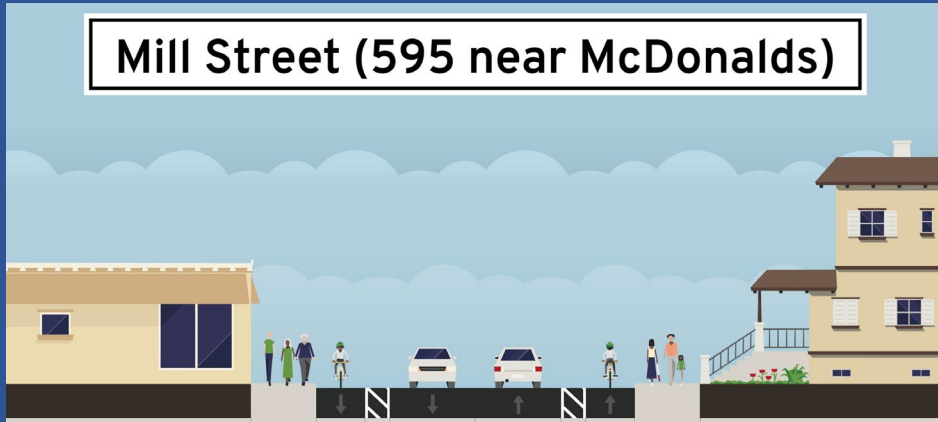


MILL STREET 2023 Pavement Preservation Project

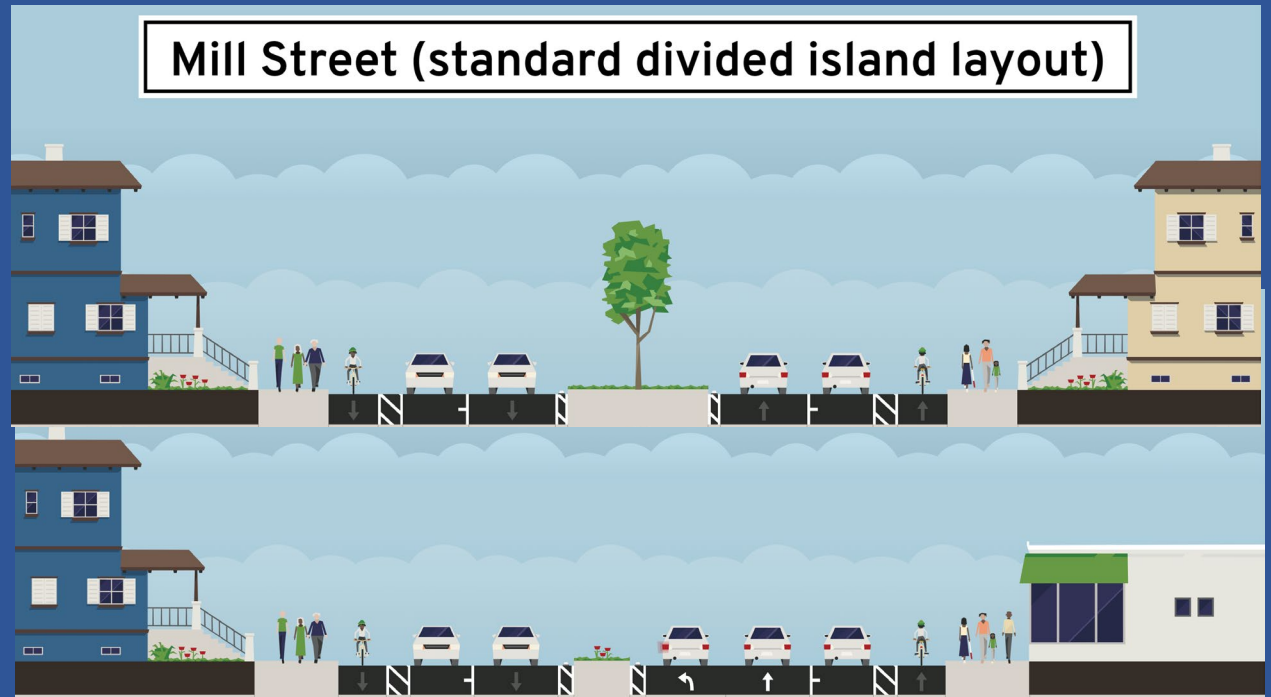
In accordance with City Policy, implement Interim Complete Streets measures to improve the safety and access of Mill Street by reducing motor vehicle speeds and providing dedicated spaces for all modes through a road diet

- Reduce the travel lanes from 4 to 2 lanes (1 in each direction)
- Formalize the Parking Lanes
- Create a Parking Protected Buffered Bike Lane that will also further separate pedestrians from parked or moving motor vehicles
- Make existing crosswalks ADA compliant & construct a new crosswalk at June Street.
- Install a new RRFB system at the Mill Swan Crosswalk

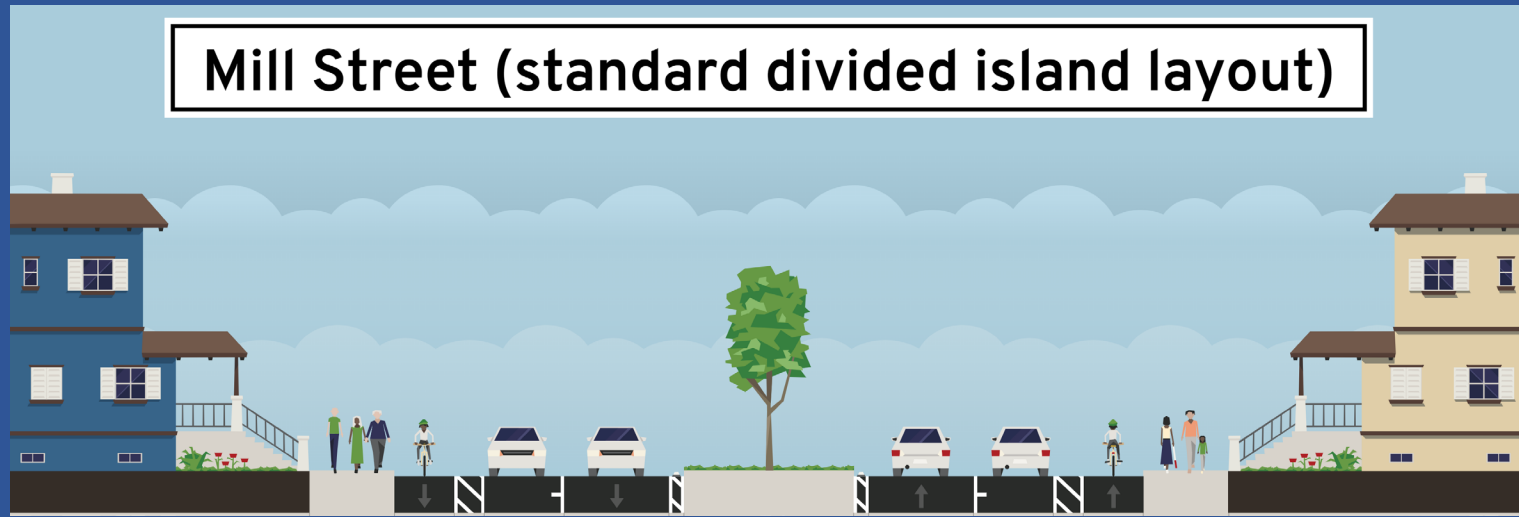
Mill Street (595 near McDonalds)



Mill Street (standard divided island layout)



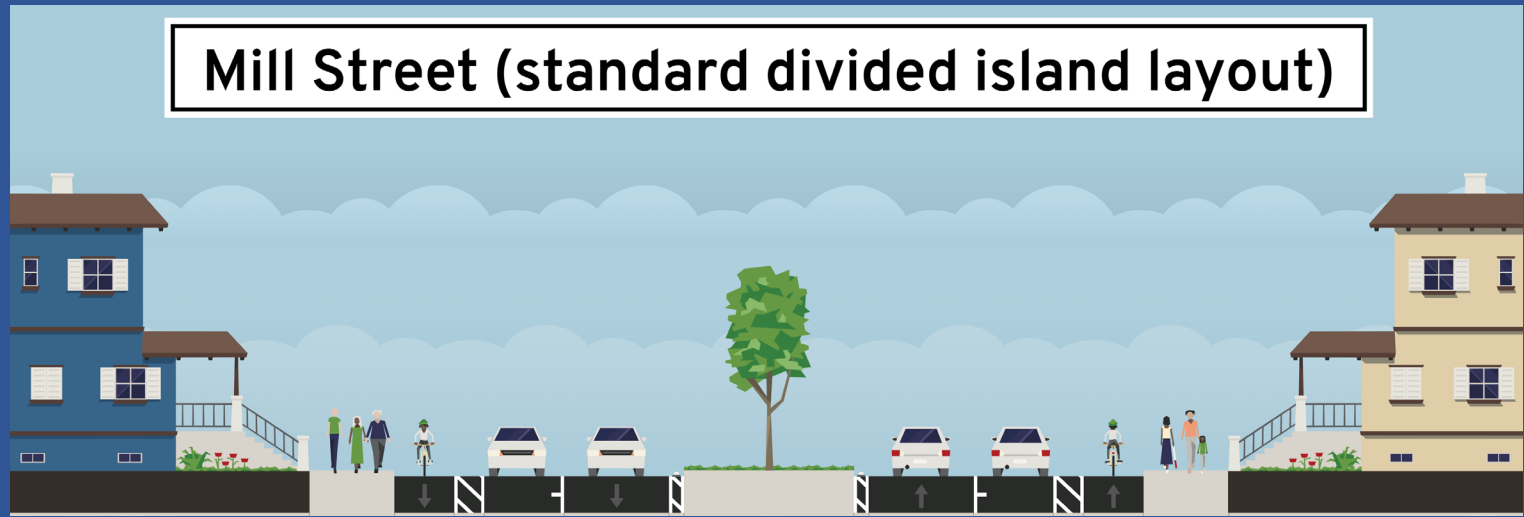
MILL STREET 2023 Pavement Preservation Project



- **Road Diet from 4 lanes to 2 lanes**
 - Right sizes the road for the traffic volume & provides dedicated, separate space for each mode.
 - Reduces vehicle-to-vehicle conflicts that contribute to rear-end, left-turn, and sideswipe crashes. Studies indicate a 19 to 47 percent reduction in overall crashes when a Road Diet is installed.
 - Reduction in pedestrian crash risk with fewer motor vehicle traffic lanes to cross.
 - Formalizes the parking lane.



MILL STREET 2023 Pavement Preservation Project



- **Pedestrian Safety & Access**

- Make the existing crosswalks ADA compliant
- Buffered Bike Lane separates pedestrians from moving vehicles
- Buffered Bike Lane prevents motor vehicles from parking on and blocking access to the sidewalk.
- New crosswalk across Mill Street at June Street
- Installation of a solar Rectangular Rapid Flashing Beacon at Mill Swan crossing
 - Studies indicate up to 47% reduction in pedestrian crashes & up to 98% increased yield rate by motor vehicles



MILL STREET 2023 Pavement Preservation Project

Mill Street (standard divided island layout)



- **Bicycle & Micro-mobility Safety & Access**

- Dedicated space that is buffered and parking protected – no more sharing the road or sidewalk with other modes.
- Addition of Bike Lanes to a roadway can reduce crashes by up to 49%.
- Separated, parking protected, buffered bike lane design eliminates many mid-block crashes, the most common cause of cyclist deaths according to the National Transportation Safety Board.
- Separated bike lanes provide a safe alternative for mode share & studies show they increase ridership.
- Provides alternative space for those using motorized mobility devices.



MILL STREET

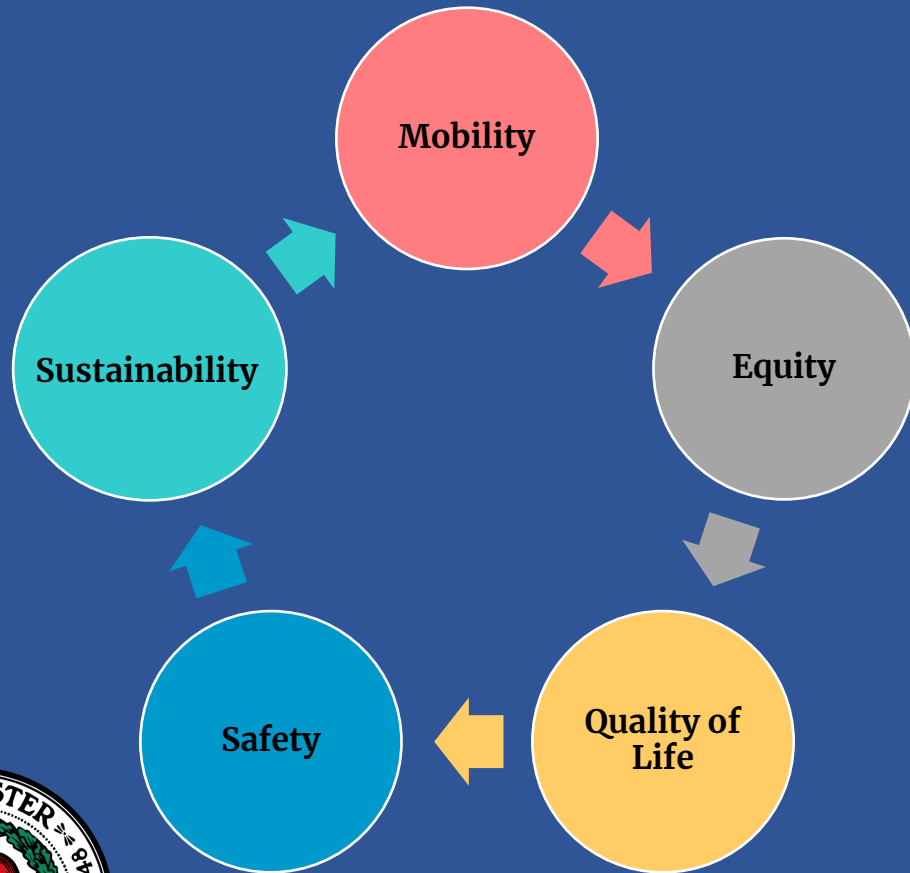
Long-term Complete Streets improvements to unlock Mill Street's full potential

- Key steps
 - Corridor planning & concept design.
 - Secure construction funding.
 - Completed Plans, Specifications & Engineering.
 - Bid and Construct project.



MILL STREET

Long term redesign project to unlock its full potential



- **Why focus on Mill Street?**

- Local, Citywide, & Regional significance as transportation corridor between Tatnuck Square & communities to west and Webster Square and downtown Worcester as well as the Worcester Regional Airport.
- Economic development potential.
- Provide safe and equitable access for all modes.
- Recreational hub with Coes Pond & Beach, Logan Field, Patch Reservoir.
- Potential to enhance recreation and open space resources and expand the Urban Forest tree canopy.



MILL STREET

Early Concept Design – A starting point for discussion.



Coes Beach and Park

Funding Request for Congressional Directed Funding

submitted with support from
District Councilor Haxhijaj,
State Rep LeBoeuf, State Senator Gobi,
Congressman McGovern,
Senators Markey & Warren

- \$2,000,000 – Federal Funding Request
- \$500,000 – City of Worcester Match
- Full Design of the 2.5-mile Mill Street Corridor
- Public Design Process
- Construction using Federal Funding



MILL STREET

Frequently Asked Questions (FAQs)

- **Why is Mill Street being reduced to two lanes?**

The 4-lane section of Mill Street encourages speeding, results in more frequent and severe crashes, negatively effects the quality of life of residents along the corridor, and creates barriers to walking, biking, recreational use, and economic development. Implementing a “Road Diet” - reducing the number of travel lanes - will help alleviate these issues.

- **Will the road diet cause congestion?**

No, the amount of traffic carried by Mill Street is far lower than the capacity of the roadway. Two-lane arterial roadways routinely accommodate significantly higher traffic volumes that experienced on Mill Street.

- **Why were sidewalks not replaced as part of the Pavement Preservation project?**

The pavement preservation work is an interim maintenance activity intended to restore the surface of the roadway while necessary planning and engineering work can be completed to design permanent improvements.



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Frequently Asked Questions (FAQs)

- **Why are bicycle lanes being added?**

The City of Worcester established its Complete Streets Policy in 2018, joining communities across Massachusetts and nationwide. This policy directs Worcester to add safe and convenient accommodations for all users as there are opportunities to do so. The pavement preservation project creates the opportunity to create separated accommodations for bicyclists and micro-mobility users through lane markings.

- **How will school access be accommodated?**

Motor vehicle access at Mill Swan School will be similar as to today, with both an off-street and on-street curbside drop off area. The crosswalk will be improved with addition of a Rapid Flashing Beacon, ADA compliant ramps, and will further benefit from the reduction from four lanes to two lanes.



MILL STREET

Frequently Asked Questions (FAQs)

- **When will permanent Complete Streets improvements be constructed?**

The schedule for implementation of long-term improvements will be dictated by the mechanisms used to fund the project. The city has already taken steps, along with our governmental and legislative partners, to secure funding to advance transformative complete streets improvements on the corridor. A design process with robust public involvement is anticipated to begin this spring.

- **How can I stay involved?**

We're looking forward to your participation in future design meetings for the Mill Street Complete Streets project.

Follow along at www.worcesterma.gov/mobility/projects-engineering/mill-street



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Q & A?
Comments?
How do you want Mill Street to look/operate in the future?

