



Mobility and Circulation

Mobility affects everything and everyone in Wellesley: how people get to town destinations and travel to and from outside locations; the young, the old, the disabled and everyone else. Mobility is not just about traffic congestion and cars and trucks. It is not an issue only for the Board of Selectmen or Public Works. Today, communities of all types are pursuing the development of multimodal transportation networks, which address pedestrian and bicycle networks (known as “active transportation”) as well as transit and automobiles. Multimodalism means having an integrated approach to transportation—providing transportation choice. Wellesley’s transportation and mobility choices can affect town character, public health, air pollution, and greenhouse gas emissions. The majority of participants in the Unified Plan process supported enhancing pedestrian and bicycle networks. As other towns develop their active transportation networks, Wellesley must keep up in order to be competitive.

Supporting town government concepts

The Unified Plan’s emphasis on making town government more customer-focused, data-driven and strategic, and transparent is reflected in several of this chapter’s strategies: adoption of multimodal level of service measures and an interdisciplinary approach to mobility.

A. Mobility and Circulation In the Vision And Values



VISION

In 2040...Wellesley is a town recognized for its welcoming community culture and exemplary town services; a quality of life that enhances the health and social well-being of its residents; respect for the environment and support for sustainability, conservation, and protection of physical and historical assets.



VALUES

Connectivity of People and Places: Provide safe, accessible, and efficient transportation choices including public transportation, pedestrian and bicycle pathways, to connect people to town destinations and the region.

B. Goals And Policies

GOALS	POLICIES FOR DECISION MAKERS
<i>Wellesley has a multimodal transportation system focused around neighborhood access to the commercial villages and town destinations.</i>	<ul style="list-style-type: none"> • Support use of multimodal level of service measures for all traffic and transportation improvement studies and projects. • Support creation of a safe pedestrian and bicycle network that connects town destinations. • Implement a Complete Streets program. • Support a school traffic demand-management program.
<i>Parking to support commercial districts is well-managed.</i>	<ul style="list-style-type: none"> • Support bicycle facilities, parking management, structured parking and shared parking near commercial areas.
<i>Seek improvement of regional transportation connections, including traffic flow on regional routes and commuter rail.</i>	<ul style="list-style-type: none"> • Enhance MWRTA bus service, especially improving first/last mile connections; improve public awareness of the resource. • Work with state and MetroWest subregion partners through the Metropolitan Planning Organization (MPO), the regional transportation planning agency.

C. Findings And Challenges

FINDINGS

- Two-thirds of Wellesley working residents drive to work alone, a relatively low number compared to similar communities.
- Almost 10% take public transportation, 13% walk to work, and fewer than 1% bike to work. Nearly 10% work at home. These data corroborate the economic data that suggest there is a significant number of people in Wellesley who also work in the town.
- There are nearly 2 cars per household.
- Four major roads carry regional traffic through Wellesley and experience the greatest congestion: I-95 at the town's eastern border; Route 9/Worcester Street; Route 16/Washington Street; and, to a lesser extent, Route 135/Central Street. Besides I-95, Route 9 and Washington Street are the busiest corridors in Wellesley. Peak traffic reaches over 50,000 daily trips near the intersection of Route 9 and Washington Street, and near the Wellesley Office Park off I-95.
- Traffic congestion around schools at the beginning and end of the school day accounts for approximately 30% of traffic in Wellesley on school days.
- The majority of reported accidents occur on Routes 9 and 16.
- Traffic signals on Route 16 are optimized to enhance traffic flow.
- Wellesley's alternatives to the car include three commuter rail stations along the Worcester-Framingham Line; MWRTA bus service that connects with the rail stations and the Woodland Green Line MBTA station; and college shuttle services for students.
- Bicycles can use the 26-mile, town-owned system of marked off-road trails, but there is only one on-road marked bicycle route on a segment of Washington Street and "sharrows" to indicate that bicycles can use the full lane when a bike lane is not available. A proposed bicycle network was mapped in 2013 by the Wellesley Bicycle Safety Committee.
- Some parts of Wellesley have ample pedestrian infrastructure like sidewalks and safe crossings, but such infrastructure is not consistent across all neighborhoods. There is also a lack of safe bicycle and pedestrian crossings of Route 9 and the rail line.

- Wellesley is not currently registered with the Massachusetts Complete Streets Funding Program and has not passed a Complete Streets policy, though Public Works staff has taken Complete Streets training and prepared a draft policy. The Bicycle Safety Committee recommended the town pursue Complete Streets initiatives in April 2015 and the Planning Board's Route 9 Enhancement Study and Plan also recommended the same.
- The 2011 report of the Transportation Working Group, *Developing Fixed-Route Bus Service in the Town of Wellesley*, recommended that Wellesley join the MetroWest Regional Transit Authority (MWRTA), which it did, and that a permanent "Transportation Analysis Group" (TAG) be established with membership from the Selectmen's Office, Planning Board, School Committee, Department of Public Works, Council on Aging, Sustainable Energy Committee, Police Department, and community representation. The TAG would provide ongoing assessments of transportation demands, pursue the provision of a fixed-route bus service, and, if such service is established, explore opportunities to expand public transportation modes and routes. The TAG has been on hiatus in recent years.

CHALLENGES

- Additional improvements to traffic flow on arterial streets
- Keeping bridges and streets well-maintained
- Creating a safe and convenient bicycle network linking town destinations
- Enhancing pedestrian networks for safety and convenience
- Creating solutions to school traffic congestion
- Adopting a Complete Streets policy
- Providing sufficient parking where needed
- Improving trails and pedestrian and bicycle connections to abutting communities.

D. What The Community Said

Comments from focus groups and interviews:

- “Teenagers bike a lot...it’s a hassle to get around sometimes.”
- “We need outside the box parking options.”
- “Sharrows [road symbols for sharing the road with bicycle traffic] don’t cut it.”
- “Public transportation...I don’t take it, but I support it.”

Survey Responses

Traffic and transportation issues were the second most-noted issues when respondents were asked about the one thing they would change about Wellesley. Please see a display of survey responses on the next page.

Sustainable Systems public workshop

In the public workshop held on May 17, 2017, participants seated at tables were asked to identify locations on a map of the town and to identify the most important issues for vehicular traffic that the Town can influence:

- What neighborhood or town destinations would you and your family like to reach on foot or by bike?
- Where do we need safer and better connections for pedestrians and bikes?
- Where would you locate bridge or tunnel pedestrian and bike crossings of Route 9?
- What do you think are the most important issues for vehicular traffic that the Town can influence?

There was strong support for a more effective multimodal system of mobility networks. Comments included:

- Active transportation
 - › Side street network pedestrian/bike
 - › Safer infrastructure for bikes in business districts
 - › Side streets for bike routes
 - › Encourage other forms of transportation than vehicular
 - › Reduce single occupancy vehicle trips to schools and transfer station (trash pickup would significantly reduce trips)
- Public transportation
 - › Coordinate public transit with the colleges and with MWRTA
 - › Develop train system

- › Public transportation (e.g., MetroWest bus) should be marked and promoted by Town
- › Public transportation
- › Support with resources and share information re: reliable transit coordinate w/ colleges, MBTA, Metro West
- › Lack of familiarity with #8 bus—no one knows it’s there
- › #8 bus responds to calls off its published route—this makes the bus unusable for most people
- › #8 bus doesn’t stop near Wellesly High School
- › ADA accessible train station
- › Support transit

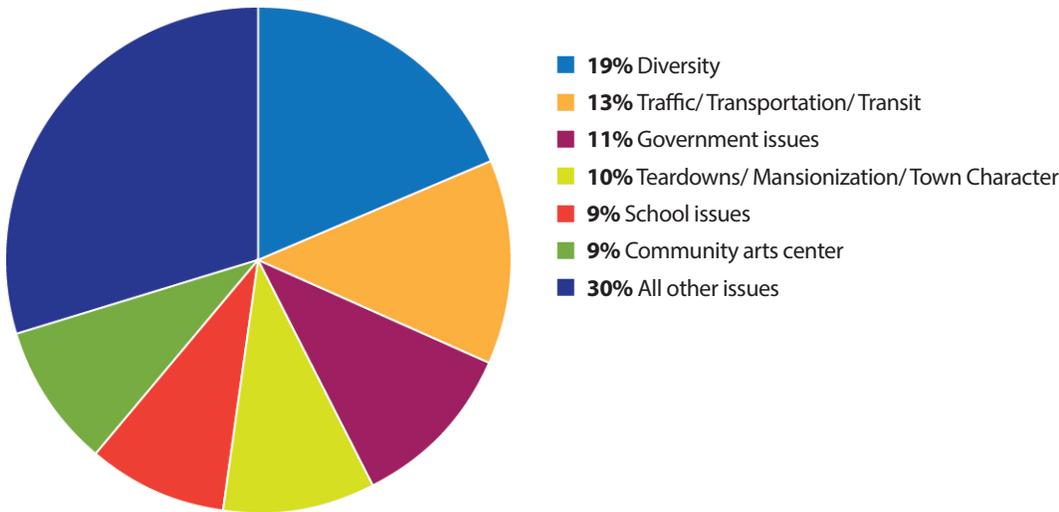
Several participants submitted comments on mitigating school transportation issues:

- Encourage walk/bike/carpool/bus to school to address school drop off/pickup
- Improve school bus participation—decrease price to make it affordable
- Organize walking and biking groups or incentivize for schools
- Kids have to be districted so they can walk to school—neighborhood schools should be preserved to retain walkability
- More involved carpooling from schools
- Increased busing—faster trips to school will increase participation to fund the increased buses (smaller but cheaper)

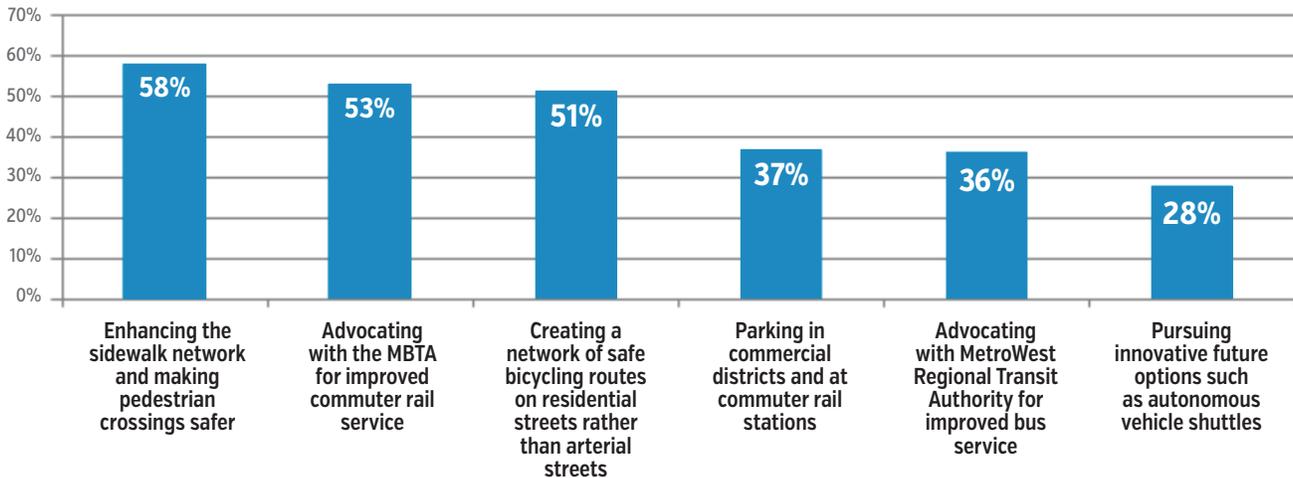
Comments on networks-connectivity-safety

- Pedestrian bridge over Rt. 9 E Kingsbury
- Route 9: safe for all users to travel and cross
- Route 9: safe for all users—drivers, cyclists, pedestrians.
- Route 9 is NOT a limited-access highway
- Traffic speed—reduce to 25 mph to make streets safer for pedestrians and bicyclists
- Excessive speed on all streets, including side streets
- Pros/cons of at-grade/tunnel/bridge crossing for traffic, safety

Q: What one thing would you change about Wellesley?



Q: What kinds of transportation and connectivity improvements should the Town concentrate on?



Vision and Values Survey (N=1,058)

Other

- Landscapers parking along narrow streets and speeding
- Parking enforcement—people park on both sides of street and block side roads
- Block off Central Street for Sundays or other regular times
- Rideshare—study impact of Uber, Lyft
- Buy in from stakeholders/schools, library

E. Strategies And Actions To Achieve The Goals

GOAL 1: WELLESLEY HAS A MULTIMODAL TRANSPORTATION SYSTEM FOCUSED AROUND NEIGHBORHOOD ACCESS TO THE COMMERCIAL VILLAGES AND TOWN DESTINATIONS.

Policies:

- Support use of multimodal level of service measures for all traffic and transportation improvement studies and projects.
- Support creation of a safe pedestrian and bicycle network that connects town destinations.
- Coordinate a Complete Streets program with planning for a safe and convenient multimodal system.
- Support adoption of a 25 MPH speed limit for most streets.

STRATEGIES

A. *Establish a Mobility Policy Committee to provide ongoing policy guidance for town coordination and investment in transportation.*

The purpose of this committee is to ensure that Wellesley is developing an integrated multimodal transportation system that includes pedestrian, bicycle, and transit transportation modes and networks as well as vehicular traffic. The Mobility Policy Committee will incorporate and replace committees that focus on specific modes of transportation, such as the Transportation Analysis Group and Bicycle Safety Committee, or previous committees that focused on transit access. The Mobility Policy Committee should review and make recommendations about transportation-related projects proposed by town boards. From time to time, ad-hoc subcommittees may be needed, but they should always be responding to the broader committee so that the Town is always evaluating transportation issues within a multimodal framework that supports alternatives to single occupant vehicles and healthy lifestyles.

ACTIONS	WHEN	WHO
<i>i. Establish a permanent Mobility Policy Committee with broad representation.</i> Membership should include representation from Board of Public Works, Planning Board, School Committee, the Board of Selectmen, the Sustainable Energy Committee, the merchants' associations, and representation from advocates for walking, biking, and transit. Senior staff from Planning, Public Works, and Police departments should also be members of the committee. The Committee should meet at least four times a year.	2018-2022	Board/ committee representatives, volunteers, and staff time
<i>ii. Identify coordinated multimodal approaches to mobility in Wellesley, including projects and demand management.</i>	2018-2022	Committee time
<i>iii. Review and evaluate transportation projects and studies proposed for funding by Annual Town Meeting within a multimodal context;</i> requests for such projects and studies should be required to identify how they help advance a multimodal system.	2018-2022	Committee time
<i>iv. Work across departments and with other groups to develop coordinated traffic demand management (TDM) measures to reduce single-occupant vehicle traffic in Wellesley.</i> Strengthen access to other options for travel within Wellesley and to destinations outside Wellesley. Coordinate TDM measures to reduce school traffic should be initiated as a pilot project.	2018-2022	Committee time

ACTIONS	WHEN	WHO
v. <i>Work with the MWRTA to promote use of bus routes, especially the #8 bus, which has stops at commuter rail stations and the MBTA Woodland Green Line Station.</i>	2018-2022 and ongoing	Committee time
vi. <i>Promote more car-sharing opportunities.</i>	2022-2028	Mobility Committee
vii. <i>Monitor the progress of autonomous vehicle shuttles as a means of transportation in the Boston region.</i> When appropriate, study the potential of using autonomous vehicle shuttles for in-town transportation to connect residents to commuter rail stations, bus stops, schools, and village commercial areas.	2022-2028	Mobility Committee

B. Use Multimodal Level of Service (MLOS) measures when making street and road improvements.

Traditional level of service (LOS) measures for streets and roads focus on speed and congestion conditions for vehicles. However, maximizing the mobility of motorized vehicles often worsens conditions for pedestrians, bicyclists, and transit. Multimodal LOS (“MLOS”) measures conditions for pedestrians, bicyclists, and transit, by examining the

presence and quality of pedestrian facilities; the speed, volume, separation distance, and portion of heavy vehicles in adjacent motor vehicle traffic; and the average delay that pedestrians and cyclists experience when they try to cross the road. MLOS examines the full array of transportation experiences, not just in motorized vehicles.¹ MLOS methodology is accepted and supported by transportation agencies, including MassDOT and Federal Highway.

ACTIONS	WHEN	WHO/HOW
i. <i>Use MLOS to evaluate development projects and proposed major mobility improvements.</i>	2018-2022 and ongoing	DPW: Require for design projects
ii. <i>Study the pros and cons of establishing a 25 mph speed limit for all streets except where marked as a strategy to support MLOS.</i>	2022-2028	Mobility Committee; staff or consultant time

C. Develop a bicycle and pedestrian network using “bicycle boulevards” and the “less-stress routes” approach of targeted investments in safe connections between existing low-stress streets and paths.

Bicycle and pedestrian facilities need to be connected networks that link the destinations that users want to access. In addition, they need to provide enough safety and convenience to attract users of varying levels of skill and confidence. The Town’s bike lane map created in 2013 focuses on collector streets. However, many people do not feel safe on streets that have significant vehicle traffic. In addition to relying

on striped bicycle lanes on major streets, the Wellesley network could be more effective by including routes on “bicycle boulevards.”

According to the National Association of City Transportation Officials, “bicycle boulevards are streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Bicycle boulevards use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets.” NACTO has created an urban bikeway design guide that includes information on bicycle boulevards.

¹ National Academies of Sciences, Engineering, and Medicine. 2008. *Multimodal Level of Service Analysis for Urban Streets*. Washington, DC: The National Academies Press. doi: <https://doi.org/10.17226/14175>; <https://www.nap.edu/catalog/14175/multimodal-level-of-service-analysis-for-urban-streets>



Bicycle boulevard. Source: <https://altaplanning.com/projects/palo-alto-bicycle-boulevards-feasibility/>

Local streets with little traffic and off-street paths may not create a full network because of a difficult crossing, a block or two of high traffic or no dedicated lane. A new approach to creating effective bicycle networks (which also works for pedestrian networks) is to focus on developing a “low-stress” network by improving selected high stress links and gaps to provide connections between the existing low-stress segments of the network. In this approach, connectivity is defined as “the ability to get between two points without exceeding a specified stress threshold and without

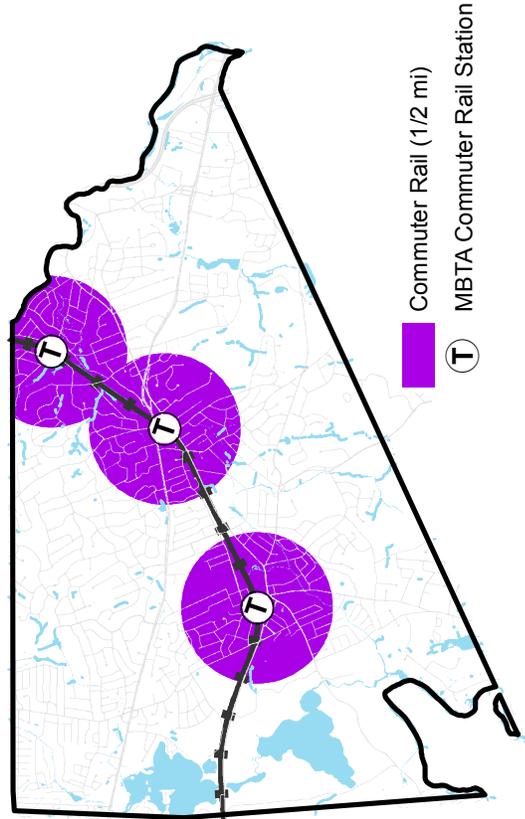
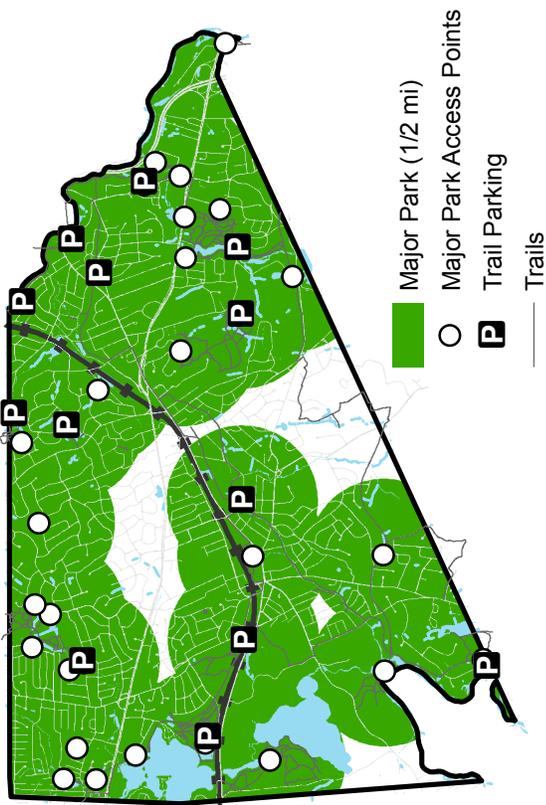
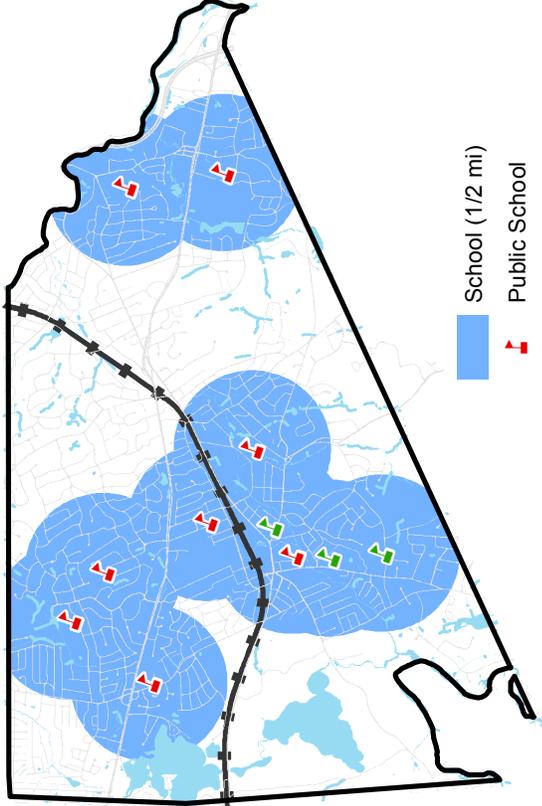
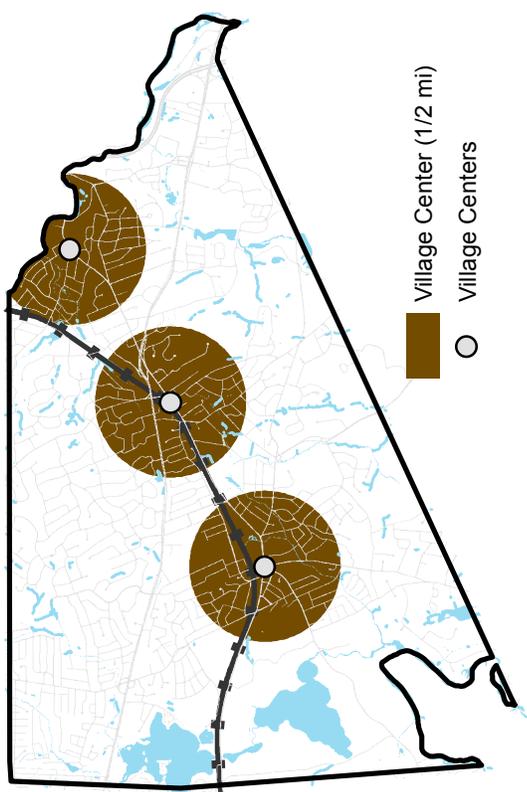
exceeding the specified level of detour.” After mapping of the bicycle network, stress levels are assigned to each segment:

- Level of traffic stress 1 (LTS 1) = tolerable to most children
- LTS 2 = tolerable to mainstream adult population
- LTS 3 = tolerable to “enthused and confident” cyclists who still prefer dedicated space
- LTS 4 = tolerable only by the “strong and fearless.”

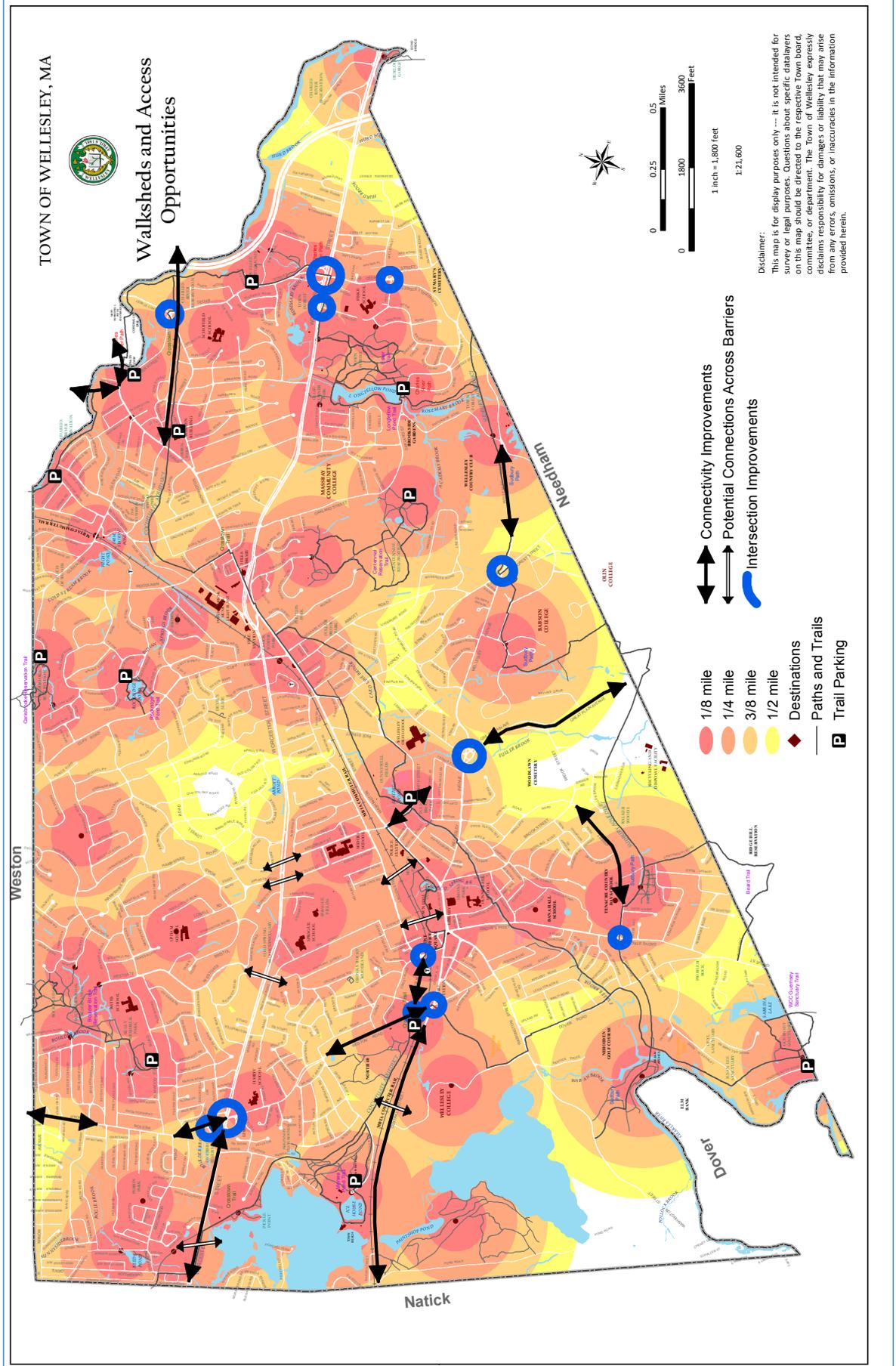
Priority locations for connectivity improvements to strengthen pedestrian and bicycle networks can then be identified.

ACTIONS	WHEN	WHO/HOW
<i>i. Make a priority list of town destinations for the network.</i> High-priority destinations should include locations where strengthened pedestrian and bicycle networks can reduce in-town traffic, such as commuter rail stations and schools. Non-motorized access to the new athletic facility at 900 Worcester Street is problematic.	2018-2022	Mobility Committee
<i>ii. Prepare an RFP for a “less-stress routes” study for Wellesley bike and pedestrian routes.</i>	2018-2022	Mobility Committee
<i>iii. Make recommended improvements, including signage, to lower the stress factor at the gaps between low-stress segments of the network.</i>	2018-2022	Department of Public Works
<i>iv. Consider adopting a 25 mph speed limit for most local streets.</i> Adopt appropriate speed limits for streets optimized for biking and walking.	2022-2028	Mobility Committee
<i>v. Create a monthly Sunday morning “ciclovia” or “cycleway” day.</i> This involves shutting down a route to auto traffic from 7 am to noon or 1 pm for use by bicycles. Potential bicycle boulevard routes could be chosen as test routes.	2022-2028	Mobility Committee; Police Department
<i>vi. Participate in the MetroWest Landlerline project to address priority trail gaps across the region and eventually connect trails and bike routes through Ashland, Framingham, Holliston, Natick, Southborough, Wayland, Wellesley, and Weston.</i> The Cochituate Trail’s Route 9 crossing is Wellesley’s priority gap in this system.	2018-2022	Mobility Committee

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Walking Access to Town Destinations



D. Develop concepts and design for safe and convenient pedestrian and bicycle crossings of Route 9 and the railroad tracks.

The railroad tracks and Route 9 constitute barriers that are particularly difficult for

pedestrians and bicyclists to cross. Workshop participants suggested that the town should identify, plan for, and seek funding for improved pedestrian and bike conditions on existing crossings and new bridge or tunnel crossings for pedestrians and bicyclists.

ACTIONS	WHEN	WHO/HOW
i. <i>Identify potential crossing areas for study.</i> Workshop participants identified several potential areas. [See Figure 10.x]	2018-2022	Mobility Committee
ii. <i>Prepare an RFP for a feasibility study for potential pedestrian/bicycle crossings, including funding options.</i> Consider efforts around the MetroWest LandLine project and the Crosstown Aqueduct Trail connection at Route 9.	2022-2028	Mobility Committee

E. Develop a transportation demand management (TDM) program focused specifically on school traffic to reduce school-time traffic by at least 50%.

School traffic accounts for one-third of all traffic in Wellesley. Unlike regional traffic that travels through town on Routes 9 and 16, school traffic is generated within the town, and the town potentially can reduce it.

The Safe Routes to School Program supports walking and biking to school and has been supported by federal funding for several years. According to the Massachusetts Safe Routes to Schools Program website, of Wellesley schools, only Schofield Elementary participates in this program Schofield Elementary (www.massdot.state.ma.us/saferoutestoschool/Home.aspx).

Another organization that has worked with

schools throughout the state is WalkBoston (www.walkboston.org/what-we-do/initiatives/safe-routes-school).

Through the Mobility Policy Committee, the town could develop a School TDM program to reduce school traffic, including identifying a coordination mechanism—a School Traffic Management Association (STMA). TMAs are membership-based, public-private partnerships of businesses, institutions and municipalities with a legal agreement to promote and provide options for commuters that reduce traffic congestion and improve air quality (www.masscommute.com). They are generally supported by and organized around employers. A Wellesley School TMA would have different characteristics, but the overall purpose would be similar.

ACTIONS	WHEN	WHO/HOW
i. <i>Organize a School Traffic Management Association (STMA) to include the School Committee, the Board of Selectmen, PTOs, private schools, and nonprofit groups (such as health and recreation organizations and faith-based communities that might be interested in promoting or sponsoring aspects of the program).</i>	2018-2022	Mobility Committee; possible contract staff coordinator
ii. <i>Establish a Web presence for the School TMA, where parents and students can identify ways to participate.</i>	2018-2022	Mobility Committee; IT

ACTIONS	WHEN	WHO/HOW
<p><i>iii. Develop a variety of options and measure participation and impact on school traffic.</i> Coordinate school bus transportation, carpool programs, and safe walking, biking and crossing to reduce traffic at school opening and closing times. Options can include:</p> <ul style="list-style-type: none"> Review of the public school bus program, with potential changes to make using school buses attractive to more families and students. Walking school bus programs: a walking school bus is a group of children that walks to school with one or more adults. It can be informal, with families taking turns walking their children to school, or be organized with a regular route, meeting points, timetable, and schedule of trained volunteers. Similarly, in a bicycle train, adults supervise children biking to school. A walking school bus kit is available at https://commute.com/downloads/WalkingSchoolBusKit.pdf Carpool ride-matching program: Online applications are available to match people who wish to carpool. Wellesley could sponsor a competition for high school students to create a simple app for school carpooling. 	2018-2022	STMA

GOAL 2: ACCESS AND PARKING TO SUPPORT COMMERCIAL DISTRICTS IS WELL-MANAGED.

Policy

- Support bicycle facilities, parking management, structured parking and shared parking near commercial areas.

STRATEGIES

A. Ensure bicycle access and parking in commercial villages.

Safe routes to commercial villages coupled with bicycle parking can alleviate parking difficulties and reduce the town’s carbon footprint.

ACTIONS	WHEN	WHO/HOW
i. Provide safe and convenient access to commercial villages, with signage, from existing and future bicycle routes.	2018-2022	Mobility Committee; DPW
ii. Provide bicycle parking in commercial villages.	2018-2022	Mobility Committee; DPW

B. Pursue additional parking options for commercial villages, including management and structured parking.

Safe routes to commercial villages coupled with bicycle parking can alleviate parking difficulties and reduce the town’s carbon footprint

ACTIONS	WHEN	WHO/HOW
i. Work with merchants and building owners to identify options for shared parking, employee parking lots, employee shuttles from remote parking, and so on. For example, it may be possible to arrange for parking for Wellesley Square employees at Linden Square.	2018-2022	Mobility Committee; Planning Department; Board of Selectmen
ii. Include village parking opportunities in development of mixed-use projects with underground parking. Development of the Tailby Lot could include parking for visitors to Wellesley Square businesses.	2018-2022 and ongoing	Mobility Committee; Planning Department; Board of Selectmen

GOAL 3: SEEK IMPROVEMENT OF TRANSPORTATION FLOW ON REGIONAL ROUTES.

STRATEGIES

A. Create a campaign to publicize MWRTA bus access to the MBTA.

Policies

- Publicize MWRTA bus access to the MBTA.
- Work with state and neighboring towns through the MPO.

ACTIONS	WHEN	WHO/HOW
<p><i>i. As part of the Town's transportation demand management program, to be organized by the Mobility Committee, publicize bus access to commuter rail stations and the Woodland Green Line station. Collaborate with a variety of town groups, from the MLP to PTOs, village merchants, community television, and other groups.</i></p>	<p>2018-2022</p>	<p>Mobility Committee;</p>
<p><i>ii. Work with the MPO and neighboring towns to identify truck routes, locate commuter traffic routes away from congested areas, and establish corridor alliances with contiguous communities/subregions.</i></p>	<p>2022-2028</p>	<p>Mobility Committee</p>
<p><i>iii. Advocate for improvements in MBTA commuter rail service.</i></p>	<p>2022-2028</p>	<p>Mobility Committee</p>