

# WATERTOWN COMMUNITY PATH

Linking Watertown's Past to its Future



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Tufts University Urban + Environmental Policy + Planning





# The Watertown Community Path

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Prepared for:

Watertown Department of Community Development & Planning

Watertown Bicycle & Pedestrian Committee

Watertown Citizens for Environmental Safety





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# ABSTRACT

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For years, bicycle and pedestrian advocates in Watertown have envisioned the creation of a multi-use path that would provide a link in the regional network of paths and facilitate safe and easy access through the community for those traveling on foot or by bike. While some groundwork has been laid and a small portion will soon be constructed, a vital section through the heart of Watertown has yet to be formally planned. This report is the first major step in the development of that section, the Watertown Community Path. This report studies the feasibility of developing the Community Path and recommends preferred and alternative routes. Due to constraints related to private property, the preferred route includes a cycle track and extended sidewalk on the eastern portion of the Path. The preferred route calls for a multi-use path for the majority of the remaining portion, except on the western-most section where on-street bike lanes are recommended. This report also includes an analysis of existing conditions along the Path corridor, design standards, recommended cross sections, conceptual designs, and strategies for implementation. The goal of this report is to provide concrete recommendations that will help the Town of Watertown move forward with the development of the Community Path.

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# EXECUTIVE SUMMARY

Pedestrian and cycling advocates have long pushed for the creation of the Watertown Community Path, a proposed multi-use path through the heart of the town. They have envisioned developing the path along a former railroad right-of-way (ROW) in Watertown, which would make the town into a more livable, attractive and sustainable community. The proposed path would provide a link in the regional network of paths while facilitating safe access between East Watertown, Watertown Square and the Charles River. This report examines the feasibility of developing the Community Path, taking into consideration community input, design standards and site constraints.

Unlike a typical rail-to-trail conversion, a large portion of the former railroad ROW in Watertown has been sold and developed by private parties. Siting the Community Path along this corridor therefore requires extensive cooperation from property and business owners. Recognizing this, the Field Projects research team placed a strong emphasis on community engagement. Outreach to residents and property owners began when the team mailed a survey to abutters of the corridor. A subsequent community meeting was held to solicit input on design ideas and to learn about potential obstacles. The community meeting and more than 250 survey responses were decisively in favor of the Community Path. The surveys, however, highlighted a few concerns about safety, lighting and street crossings. The other major concern centered on the construction timeline, as residents desired a quick completion.

To reach out to businesses along the Community Path corridor, the research team conducted in-person interviews with more than a dozen business owners and managers. Many of those interviewed voiced strong concerns regarding the redistribution of parking spaces. The vast majority, however, thought the Community Path had the potential to bring more customers to their shops and improve the community.

The research team also visited the Path corridor multiple times to assess site conditions and consider preferred and alternative routes based on existing constraints. Major obstacles along the corridor include private

ownership of properties along the former railroad ROW, a bridge that stands in the way of the route, busy and dangerous crossings for pedestrians at several major intersections, and municipal parking lots in Watertown Square.

With these obstacles in mind, the team researched multi-use paths in other communities with similar circumstances and reviewed current best practices in cycling and pedestrian infrastructure design. The team concluded that attempting to develop the Community Path through private property would create unwanted backlash towards the Town of Watertown and potentially derail the project. In cases where private property could not be avoided, the preferred option is to site the Path along perimeters, disturbing the properties as little as possible. The research also showed a preference for separated bike lanes, or cycle tracks, to improve safety, and it recommended widths for paths shared by different transportation modes. The research team did not heavily consider cost as a factor in selecting the Community Path route, though attempts were made to provide potential lower-cost alternatives. The team's research resulted in the following recommendations:

- Create an on-street cycle track along Arsenal Street from School Street to Irving Street;
- Create a graded slope on vacant parcels abutting the Patten Street Bridge, which would allow the Community Path to avoid a congested commercial corridor;
- Install a raised crosswalk with a pedestrian island on Mount Auburn Street between Taylor Street and Baptist Walk.;Reconfigure the municipal parking lot in Watertown Square to accommodate the Path along the northern boundary;
- Reconfigure the municipal parking lot behind the Watertown Free Public Library to accommodate the Path without a net loss of parking in Watertown Square;
- Make improvements to the Linear Park path, such as widening it near Saltonstall Park and beginning the process of creating a mural on the concrete wall; and
- Redevelop the Watertown Department of Public Works staging area to include the Community Path.

A series of maps that show the preferred route for the Community Path and an extensive site analysis are included in Chapter 5 of this report. A complete list of short and long-term actions is provided in Chapter 7.

Developing the Community Path is a critical step toward making Watertown a more livable and sustainable town. It will provide a safe route through much of the community, increase the amount of open space, and support local business development. The Community Path will make Watertown a more attractive and desirable place to live.



## Chapter 1

# INTRODUCTION

The Town of Watertown, like other communities across the Commonwealth of Massachusetts, strives to be an attractive and livable place for all of its residents. This includes providing pedestrians and bicyclists with safe routes through and around town, encouraging local economic growth, and increasing open space throughout the community. Constructing a multi-use path through the heart of Watertown would enhance these amenities and offer these benefits.

For these and other reasons, the Town of Watertown’s Department of Community Development and Planning (DCDP), the Watertown Bicycle and Pedestrian Committee (WBPC) and Watertown Citizens for Environmental Safety (WCES) are spearheading an effort to develop the Watertown Community Path (referred to in this report as the “Community Path” or the “Path”). They commissioned this report.

**Figure 1.1**  
*The Watertown Community Path;*  
*Data source: MassGIS;*  
*Cartographer: Eunice Kim*



Approximately 1.75 miles in length, the Community Path would run from School Street in East Watertown, through Watertown Square and on to Pleasant Street near the Charles River. It would roughly follow a former railroad right-of-way (ROW) that was once used by a passenger and freight railroad in the region. The Path would provide a link between the 18-mile Charles River Reservation Path and the Minuteman Bikeway, which extends 11 miles from Cambridge to Bedford.

This report studies the feasibility of developing this Community Path. It includes preferred and alternative routes for the Path as well as accompanying maps. Also included are an analysis of existing conditions, design standards, recommended cross sections, conceptual designs and strategies for implementation.

## 1.1 Methodology

The Field Projects team used a variety of methods to advance two main goals: designing the Community Path and raising community awareness about its potential development. Methods included performing site visits, developing and administering a survey, conducting a community meeting, carrying out interviews, and researching case studies and other relevant information. The team also produced cross-sections and conceptual designs of the Community Path using Microsoft Publisher and Google SketchUp and created maps using data produced by Geographic Information Systems (GIS) software.

One of the team's main tasks was to determine a preferred route and possible alternatives for the Community Path. To do this, the team needed to become familiar with the physical environment around the Path corridor, so members conducted several site visits in the early stages of the project. The team took extensive notes and photographs of each part of the Path corridor, focusing particularly on potential obstacles such as privately-owned properties, missing curb cuts, developed parcels and dangerous street crossings. This information was used to consolidate notes and visualize these obstacles on a map, allowing the team to begin the process of selecting a preferred route for the Path.

The team divided the Path into two sections: Section A, which stretches from School Street to Mount Auburn Street, and Section B, which stretches from Mount Auburn Street to Pleasant Street. After getting community feedback, the team performed follow-up site visits to help fine-tune the preferred and alternative routes.

Another major part of this Field Project was to conduct community outreach in order to raise local awareness of the Community Path and get input from residents and business owners. To achieve this goal, the team employed three tools and techniques. The team:

- Created and administered a survey to abutters, nearby businesses and key stakeholders;

- Conducted a community meeting on the proposed Community Path; and
- Interviewed stakeholders and abutters.

The Field Projects team created a survey to gauge community awareness and opinions about the proposed Path. This one-page survey was mailed to 172 people, mainly those who live or own property near the Path corridor. Copies of the survey were also left at the Watertown Free Public Library and other public facilities in town. In addition, the team created an online version of the survey on Survey Monkey and widely publicized the link. More than 270 people responded to the survey. The team tabulated, mapped and incorporated the survey results into the final design of the Community Path.

On March 4, 2010, the team held a community meeting about the proposed Path at Watertown Town Hall. Approximately 35 people attended, including clients from DCDP, WCES and the WBPC. During the meeting, the team gave an overview of the Community Path and the work that had been done up to that point, handed out surveys, conducted a mapping exercise, and answered questions from meeting attendees. See Chapter 4.3 for details on the mapping exercise. Two members of the team facilitated the meeting and answered questions, while the three others took notes and photographs of the meeting. The team used the information it collected to make changes to the preferred and alternative routes. See Chapter 4.2 for details on the community meeting.

The Field Projects team conducted phone and in-person interviews with key stakeholders – those who live or work near the proposed Path – to ensure their input was received and their opinions were incorporated into any final recommendations. See Chapter 4.5 for details of the interviews. The team also conducted research on other existing multi-use paths and cycle tracks in the region, which helped guide its design work. This research also provided examples of how other communities successfully implemented paths in the face of challenges. Research on local and federal design standards for multi-use paths and cycle tracks further informed the design of the Community Path. See Chapter 3 for details on the case studies.

All of the information gathered was incorporated into the team's final design of the Community Path and the preferred and alternative routes. The information also helped the team create detailed maps of the route, recommended cross-sections and conceptual designs.

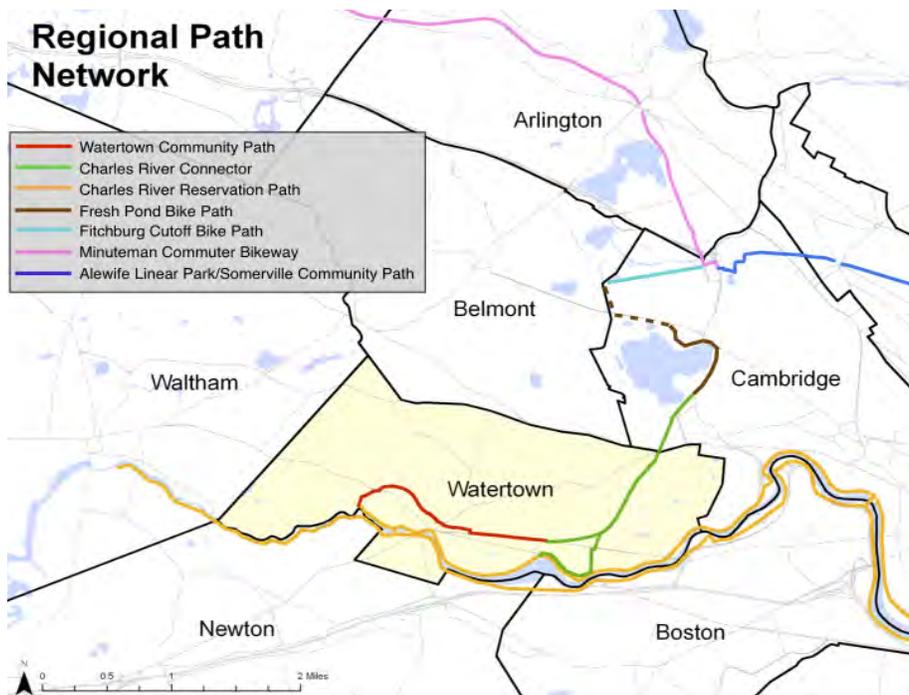
## 1.2 Project Description and Benefits

The Community Path is proposed to run from the intersection of School and Arsenal streets in East Watertown to Watertown Square. From there, the Path would connect to the existing Linear Park path behind Watertown Town Hall and continue to Pleasant Street, where it would connect to the Charles River Reservation Path.

The Path would roughly follow a former railroad ROW, which has long been abandoned, sold to private owners, and developed. In the same way the railroad once brought growth to businesses in and around Watertown, the redevelopment of the former railroad ROW into a multi-use path could have the same effect today.

The WBPC has envisioned the development of this Path for more than a decade. The committee pushed – successfully – to have the project included in the Watertown Open Space and Recreation Plan 2005-2010, which was approved by the Town Council. Goal Six of that plan is to “make Watertown friendlier to pedestrians and bicyclists,” and listed as an objective under that goal is the development of a “multi-use path from School Street to connect with the Charles River in West Watertown.”<sup>1</sup>

The Community Path project is part of a broader effort to augment the multi-use network of paths and trails in the region. This network includes both the Minuteman and Charles River Reservation paths. The map in Figure 1.2 depicts this regional network, with the Community Path being a central link.



**Figure 1.2**  
*Regional network of multi-use paths;*  
*Data source: MassGIS;*  
*Cartographer: Eunice Kim*

In addition to expanding this network, the Community Path provides an important opportunity to link portions of Watertown in a safe and accessible manner, particularly through Watertown Square. The Path will also increase the amount of open space in town and provide pedestrians and cyclists with safe connections to businesses, parks, playgrounds, and other recreational and cultural facilities. Vehicular traffic could also be reduced, which would ease congestion and benefit the environment. Finally, by providing safe alternative routes within town, the Path will encourage residents to remain local when shopping and dining, thereby

encouraging the economic growth of the community.

Other potential benefits of the Community Path include:

- Providing a place for people of all ages to exercise;
- Uniting previously-separated neighborhoods;
- Beautifying the surrounding landscape;
- Attracting more visitors to Watertown; and
- Creating opportunities for community involvement, such as public art displays.

### 1.3 Community Description

Watertown is a suburban community in Middlesex County in eastern Massachusetts just northwest of Boston on the Charles River.<sup>2</sup> Bordered by Belmont, Cambridge, Boston, Newton and Waltham, the city, known as the Town of Watertown, is 4.16 square miles in area. The municipality has a town manager-council form of government and a population of approximately 32,023.<sup>3</sup>

Watertown was incorporated in 1630.<sup>4</sup> Founded as a Puritan colony, it functioned as an industrial and manufacturing center until the mid-1990s.<sup>5</sup> Factories lined the banks of the Charles River, and the Boston and Maine railroad branch was constructed to accommodate the needs of industry in the area. Today, industry has by and large disappeared from the town, with many old factories having been converted into other uses such as offices and residences.<sup>6</sup>

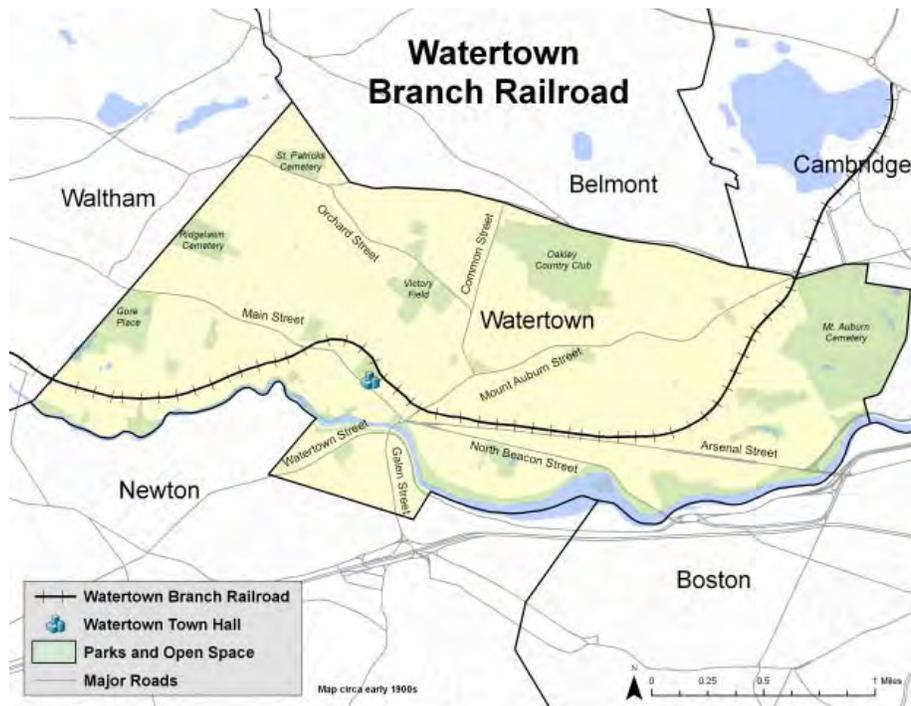
Watertown is an ethnically and culturally-diverse town that includes a large Armenian community. Approximately 89 percent of residents are Caucasian, 6 percent are Asian, and 3 percent are African-American/Black.<sup>7</sup> The median household income is \$70,127.<sup>8</sup> That is nearly \$20,000 more than the median household income in Boston, which is \$51,849.

### 1.4 Watertown Branch Railroad History

The proposed Community Path roughly follows the former Watertown Branch Railroad ROW, shown in the map in Figure 1.3. If constructed, the Path will therefore allow people to retrace the steps that led to the development of the Waltham and Watertown communities and their respective industrial areas. Completed in 1949, the Watertown Branch Railroad was originally a branch of the Fitchburg Railroad. Throughout much of its early history, it carried large loads of both freight and large numbers of passengers. Through the western end in the Bemis neighborhood of Waltham, the railroad served thriving manufacturing industries and river mills set up near the Charles River. The railroad branch was also a popular passenger route. It was so heavily traveled that

it was one of the few branch lines at that time to be double-tracked.<sup>9</sup>

Both passenger and freight service declined when the Boston and Maine Railroad took over the Fitchburg in 1900.<sup>10</sup> Passenger service ended in 1938, and freight service on the western portion ended in 1991, with that portion then being abandoned.<sup>11</sup> The middle portion of the line – the section our Field Projects team focused on – was abandoned in 1960 after the grade crossing at Mount Auburn Street was eliminated.<sup>12</sup> The Boston and Maine Railroad petitioned to abandon the eastern portion in May of 2005.<sup>13</sup>



**Figure 1.3**  
*Former Watertown Branch Railroad;*  
*Data source: MassGIS;*  
*Cartographer: Eunice Kim*

## 1.5 Existing Bicycle Infrastructure

Existing bicycle infrastructure in Watertown includes portions of multi-use paths, several bike lanes, and many bike racks. Part of the Charles River Reservation Path, a multi-use path along the Charles River owned by the Massachusetts Department of Conservation and Recreation, runs through the southern portion of Watertown. Additionally, behind Watertown Town Hall is the 0.35-mile Linear Park path, which provides bicyclists and pedestrians with an off-street route between Saltonstall Park and Moxley Playground. There is also a short, off-street bike path on the property of Lexus of Watertown on Arsenal Street.

Additionally, a few major streets in Watertown have on-street bike lanes, including North Beacon Street and portions of Arsenal Street. Figure 1.4 shows the bike lanes on Arsenal Street. The Arsenal Street bike lanes are near, if not adjacent to, the Community Path. They run westbound from School Street, ending near the rear entrance to the Vanasse Hangen Brustlin Inc. (VHB) property on Arsenal Street. The eastern section of

Arsenal Street, from School Street to the Cambridge city border, is a shared roadway marked with a signs that say “Share the Road.”

There have been efforts to improve bicycle infrastructure in Watertown in the last 10 years. In 2003, Greenman-Pedersen, Inc (GPI), working in collaboration with the Town of Watertown Department of Public Works (DPW) and Watertown Bicycle Committee (now the WBPC), completed a Bicycle Transportation Plan for the city.<sup>14</sup> The plan outlined recommendations for bicycle accommodations such as on-street bike lanes, signage, and safety improvements. So far, none of the recommendations has been adopted. There is a plan, however, to study the possible reduction in the number of travel lanes on Mount Auburn Street from four to two, which would leave room for bike lanes on both sides of the street.

In 2007 and 2008, 37 new post and ring bike racks and 10 U-racks were installed in Watertown Square, Coolidge Square and Victory Field.<sup>15</sup> The cost of the new bike racks, \$4,320, was reimbursed to the Town of Watertown (referred to as the “Town” in this report) by the Metropolitan Area Planning Council (MAPC) through its Regional Bike Parking Program. The Town only paid for shipping and labor.

The installation of the new bike racks followed an inventory of bicycle parking that was conducted by WBPC in 2006. Through the inventory, the committee found that the majority of bike racks in Watertown – there were 55 total – were old, damaged and placed in locations that were inconvenient or prone to theft.<sup>16</sup> The inventory also revealed that Watertown Square and Coolidge Square, two major business districts, lacked bicycle parking.

**Figure 1.4**

*Bike lanes on Arsenal Street;*

*Source: Eunice Kim*



## 1.6 Recent Work on Multi-Use Paths in the Watertown Area

Part of the abandoned Boston and Maine Railroad corridor in Watertown is being redeveloped into a multi-use path called the Charles River Connector, which is shown in Figure 1.2. The project is expected to be completed in two phases.<sup>17</sup> Phase 1 is the Watertown Branch Rail Trail, spearheaded by the Massachusetts Department of Conservation and Recreation; it is the section of the path that will run from School Street – the northern end of the Community Path – to Arlington Street. The State fully funded the construction of this phase as part of the Patrick-Murray administration’s Massachusetts Recovery Plan, and work is expected to begin this summer. The other phase will run from Arlington Street to Fresh Pond in Cambridge. Its completion is contingent upon several factors, including pending acquisitions of rights-of-way.

The Watertown DPW and Watertown Town Council’s Committee on Public Works have included part of the proposed Community Path in their concept plan to redevelop properties between Bacon, Main and Howard streets.<sup>18</sup> That plan, which is shown in Figure 1.5, calls for a new parking lot for residents, a DPW staging area and a proposed Path section to be extended from Linear Park at Waverley Avenue. The parking lot would be on Town-owned property (part of the former railroad ROW), but the new multi-use path, which would run north of the lot, would be on land owned by the Cambridge Water Department. The Town of Watertown plans to get an easement from the City of Cambridge to make use of the land. In exchange, the Town would develop the Path and landscape it.

**Figure 1.5**

*Concept plan for Bacon Street property;  
Source: Watertown Bicycle and Pedestrian  
Committee*



## Endnotes

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## Chapter 2

# BICYCLE + PEDESTRIAN PATH RESEARCH

### 2.1 Economic Benefits to Businesses

Investing in bicycle infrastructure can benefit local economies. Since 1991, the State of Maine has made a concerted effort to upgrade and increase its cycling facilities, which has resulted in an estimated \$66 million per year in bicycle tourism.<sup>1</sup> In Portland, Oregon, widely considered to be one of the most bicycle-friendly communities in the country, an upgrade in cycling infrastructure resulted in \$90 million in bicycle activity in 2008 alone. More than half of that activity came from retail shops, repairs, manufacturing and bicycle events.<sup>2</sup> Additionally, residents of Portland have been able to save on transportation costs.<sup>3</sup>

A study conducted in Toronto found that people who biked and walked to the business district of Bloor Street spent more money per month on average than those who drove.<sup>4</sup> Generally, businesses in vibrant pedestrian-friendly communities have found that factors other than parking spaces can have an impact on their customers, including a safer streetscape and the accommodation of alternative modes of transportation.

In some instances, pedestrian paths have anchored the revitalization of entire business districts. Along the Mispillion River Greenway in Milford, Delaware, a shared use path resulted in a net gain of new businesses and supported more than 250 jobs in an area that was vacant 10 years earlier.<sup>5</sup> A trail sited in the old mining town of Leadville, Colorado fostered a reported 19 percent increase in the revenue from local sales tax.<sup>6</sup> The portion of the Watertown Community Path that is proposed to run along Arsenal Street has excellent potential to increase revenues for current businesses and promote economic development.

## 2.2 Crime and Safety Issues

Residents often raise crime and safety-related concerns when a community is considering developing a bike or multi-use path. Studies conducted across the country, however, have found that paths and trails rarely attract crime. For example, a 1998 Rails-To-Trails Conservancy study looked at 372 trails in the United States to document and review the extent of crime on rail-trails.<sup>7</sup> It found that only 11 rail-trails in 1995 and 10 rail-trails in 1996 experienced a major crime such as a mugging or assault.<sup>8</sup> That is only 3 percent of the responding trails.

In addition, only one quarter of rail-trail managers reported any type of minor crime such as littering or graffiti.<sup>9</sup> For example, the national rate of burglary in urban areas is 1,117 incidents per 100,000 inhabitants. None of the urban rail-trails, though, reported burglary to adjacent homes in 1996. In addition, only 5 percent reported incidents of trespassing. Considering these statistics, creating the Community Path in Watertown will not likely result in a significant increase in crime.

## 2.3 Effect on Home Values and Sales

Numerous studies have shown that the average value of properties along paths is higher than that of properties further away. One such study in 2006 examined home sales in seven Massachusetts communities through which the Minuteman Bikeway and Nashua River Rail Trail run. It found that “homes near these rail trails sold at 99.3 percent of the list price, as compared to 98.1 percent of the list price for other homes sold in these towns.”<sup>10</sup> The study also showed that home sales near rail trails sold in an average of 29.3 days, as compared to 50.4 days for other homes.

A study of six different multi-use trails conducted in 2001 by the University of Indiana found that 86-95 percent of neighboring property owners saw either positive effects or no effects on their property values as a result of a trail. In the same study, 81-93 percent reported it was easier for them to sell their property.<sup>11</sup> Moreover, a research study conducted by the University of Cincinnati in 2008 concluded that sale prices near a path increased by \$7.05 for every foot closer a property is located to the trail.<sup>12</sup> These studies suggest that the proposed Community Path could have a positive impact on nearby home values and home sales.

## 2.4 Health Benefits

The development of a multi-use path in Watertown is expected to encourage and accommodate residents who choose to travel by foot or bike. These alternative forms of transportation have been found to benefit public health. According to the British United Provident Association, a 15-minute bicycle ride to and from work five days a week can burn 11 pounds of fat in one year.<sup>13</sup> In addition, people who bike

and walk to work feel more relaxed, have a clearer mind at work and are more eager to start tasks, according to the New York City Department of Urban Planning.<sup>14</sup>

Continued physical inactivity, on the other hand, leads to 10 percent of total deaths and 25 percent of chronic disease related to death.<sup>15</sup> The Alliance for Biking and Walking produced a report this year that says states with the lowest amounts of funding for bicycle and pedestrian infrastructure have higher rates of traffic fatalities and chronic disease.<sup>16</sup> It also found that in nearly every state, bicyclists and pedestrians are at a disproportionate risk of being killed.<sup>17</sup> Nationwide, 10 percent of all trips are made by cycling or walking, but bicyclists and pedestrians suffer a 13 percent rate of traffic fatalities.<sup>18</sup>

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## Chapter 3

# CASE STUDIES

The Field Projects team decided to study several multi-use paths and cycle tracks in the region in order to better understand the challenges communities have faced when implementing them. The goal was also to learn how different communities overcame those challenges. The case studies include the Minuteman Bikeway and the Vassar Street cycle track in Cambridge. While neither the bikeway nor cycle track is identical to the Community Path, each is similar to different portions of the Community Path in significant ways. The eastern portion of the Path will include a cycle track along Arsenal Street, while much of the remaining portion will be a multi-use path.

### 3.1 Minuteman Bikeway

The Minuteman Bikeway is an 11-mile, paved multi-use trail that runs from Alewife Station in Cambridge to the Town of Bedford. Shown in Figure 3.1, it is a former Boston and Maine railroad ROW that was converted into a bike trail in 1993.<sup>1</sup> The path runs close to locations where the Minutemen fought with British troops at the outbreak of the Revolutionary War in 1775, hence the name Minuteman Bikeway.

The Minuteman Bikeway is similar to the proposed Community Path in several ways. It is a former railroad ROW, it goes through busy commercial districts in Arlington and Lexington, and it runs close to residences. The major difference is that the Minuteman Bikeway was built exclusively on an existing abandoned railroad ROW, so issues related to private property and the need for easements did not exist. Business owners also thought the Minuteman would increase business, so they did not openly oppose to it.<sup>2</sup> The proposed Community Path, on the other hand, largely runs through property that has already been sold and developed by private entities. While business owners and managers generally express support for the Path, they have concerns about potential changes to parking. (See Chapter 4.4 for more details.)

Despite these differences, proponents of the Minuteman Bikeway faced

and overcame their own challenges in developing the path. It was not easy, for example, to convince the public to build the Minuteman Bikeway because there were people who adamantly opposed the idea from the beginning.<sup>3</sup> Eventually, proponents of the trail enlisted the support of politicians, who helped obtain funding for it.<sup>4</sup> Had this not occurred, the path might not have been built.<sup>5</sup> More than 15 years after it was built, the Minuteman Bikeway is now very popular.<sup>6</sup> There are, however, still outstanding problems, particularly regarding the busy and dangerous crossing at Arlington Center.<sup>7</sup>

## 3.2 Vassar Street Cycle Track

### Background on Cycle Tracks

Multiple studies conclude that safety concerns are the most prominent barrier to cycling.<sup>8</sup> People are generally less comfortable riding a bicycle in traffic on a roadway, and a painted bike lane does not provide an adequate level of comfort or safety for the average cyclist. An alternative to bike lanes are cycle tracks. These are bicycle paths that are separated from pedestrian and vehicular traffic by a physical barrier, such as on-street parking, curbs, planting buffers or bollards. Cycle tracks provide riders with a higher perception of safety, which can result in more people riding bicycles.<sup>9</sup> The construction of cycle tracks in Copenhagen, Denmark resulted in a 20 percent increase in bicycle mileage and a reduction of vehicle miles traveled by 10 percent; there is more than the 5 percent growth in bicycle miles traveled and the 1 percent decrease in vehicle miles traveled associated with painted bicycle lanes.<sup>10</sup>

A cycle track, however, is not recommended for every location. They present their own challenges, most notably safety issues at intersections. A study by the Transport Research Laboratory in the United Kingdom found that cycle tracks reinforce driver's feelings of "road-ownership," leading drivers in some instances to behave more aggressively to indicate

**Figure 3.1**  
*Minuteman Bikeway;*  
*Source: Michelle Moon*



that cyclists should not be using motor vehicle travel lanes.<sup>11</sup> Cycle tracks and bike lanes have also been reported to increase the risk of injuries at intersections because automobile traffic is less likely to notice the cyclists when turning.<sup>12</sup> For these reasons, raised crossings, road markings and signage are particularly important along the Arsenal Street corridor of the proposed Community Path.

Cost is another consideration, though estimates of cycle tracks often include other road construction improvements, so it is difficult to determine their actual cost. Constructed in 2007, the 2.2-mile Claire-Morissette bicycle track in downtown Montreal cost \$3.5 million to complete.<sup>13</sup> This amount included a variety of design options; more cost-efficient alternatives do exist.

### Vassar Street Project

In 2003, the City of Cambridge partnered with the Massachusetts Institute of Technology (MIT) to narrow the travel lanes on Vassar Street – which runs through the university campus – and install the city’s first off-road cycle track. The goal of the project was to transform what had been an industrial area into a “more inviting, campus-like one,” which would include a pedestrian-friendly environment.<sup>14</sup> Although Watertown lacks a major college campus, the industrial nature of the setting coupled with its proximity to Cambridge (both communities face issues related to narrow streets and concerns related to snow removal) makes this an applicable example with many lessons to be learned.

The project, along with new developments in the area, transformed Vassar Street into a more pedestrian-friendly environment. The cycle tracks on Vassar Street, however, are highly flawed. One of the biggest design failures is the placement of the cycle track at the same grade as the pedestrian sidewalk. Markings with signage and colored pavement differentiate the cycle track from the sidewalk, but there is no physical barrier between the two. This lack of clearly delineated travel paths for

**Figure 3.2**  
*Vassar Street lacks separation between pedestrians and cyclists;*  
*Source: John Allen, Truenwheelers.org*



cyclists and pedestrians has led to confusion, with walkers often blocking the cycle track, as shown in Figure 3.2. This forces many cyclists onto the roadway, so they can maintain a consistent speed and avoid accidents.

The Vassar Street cycle track also has a few problematic design features as it approaches intersections. As noted in the signage in the Figure 3.3, motor vehicle traffic is forced to cross the cycle track to make a right turn. A row of parked vehicles often block cyclists from a driver's vision, and the potential for an accident is increased as the cyclists rejoin the roadway. To provide a better line of site for drivers, parking may need to be eliminated and replaced with bollards or bulb outs where the path nears crossings.<sup>15</sup> The cycle track does protect users from driveway traffic in most cases. At driveways, the cycle track remains above the road level on raised crossings, providing a physical indication to drivers that they are to yield to cyclists and pedestrians as they cross over the cycle track.

Snow removal and drainage are also potential issues associated with cycle tracks in New England. In the case of Vassar Street, MIT agreed to be responsible for removing snow from the cycle track. The design of the cycle track, however, poses a problem as there are multiple grade changes at driveways and entrance points at the end of blocks. This makes it difficult to plow the cycle track with standard equipment, and as a result, the cycle track is often ignored by maintenance crews as shown in Figure 3.4. In Montreal, this type of problem was solved by placing the cycle track on the same level as the street and providing an unobstructed width of 8 to 10 feet to accommodate a plow truck.

The lessons learned from Vassar Street shed light on how the Arsenal Street section of the Community Path should be designed. Most notably, it is important that a two-way cycle track be placed at street level and raised pedestrian crossings be provided as a physical buffer for vehicles entering and exiting driveways.

**Figure 3.3**

*The row of parked cars block drivers' lines of sight to the path as they approach the intersection;*

*Source: John Allen, Truenwheelers.org*





**Figure 3.4**

*Three days after a snowfall, the path remains unplowed;*

*Source: John Allen, Truwheelers.org*

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## Chapter 4

# COMMUNITY OUTREACH

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A major component of the Field Projects team's work was to raise awareness about the Path project and solicit input from the community. To achieve this, the team was interviewed for an article in the local weekly newspaper, the Watertown Tab. The team also held a community meeting, administered a mapping exercise, conducted a survey, interviewed key stakeholders and property owners and created a Facebook page. The information that was collected through these various methods was incorporated into the team's site analysis and recommendations.

Throughout this effort, residents voiced concerns of several major types. These concerns centered on:

- Safety issues, particularly around street crossings and crime on the Path;
- Proper maintenance of the Path, or lack thereof;
- Project funding; and
- Trespassing on private property along or near the Path.

### 4.1 Community Survey

To determine community knowledge of the project and better understand concerns from specific neighborhoods, the Field Projects team administered an anonymous survey to Watertown residents and property/business owners.

#### Survey Methodology

Using data from the Watertown Assessors' Office, the team selected owners of properties abutting the proposed Path corridor. This resulted in 67 designated parcels. Because much of the corridor is flanked by

commercial and industrial properties, an additional effort was made to identify and poll residents based on the findings of a study examining path usage among residents in close proximity to bike paths in Minnesota. This study found that people who live within a quarter-mile of a path were much more likely to use it than those living beyond that distance.<sup>1</sup> Therefore, the research team decided to reach out to those who live within a quarter-mile of the proposed Path corridor, adding 105 residential addresses to the survey mailing list. Most of the residences were located between Winter and Waverley streets, north of the Path.

To reach the broader community, the Field Projects team created an online version of the survey. A link to the web version of this survey was included in the initial mailing and posted on the Town of Watertown website. The WBPC and local elected officials distributed the link to their mailing lists.

## Questions

The survey was one page long and was intended to take fewer than five minutes to complete. There were a total of 11 multiple-choice questions and three open-ended questions. The Field Projects team also collected information regarding the address, gender and age of respondents. Questions within the survey aimed to gauge feelings about the Community Path project and identify concerns of residents, property owners and potential Path users.

The multiple-choice section included 10 statements that respondents were asked to rate on a scale of 1 (agreement) to 5 (disagreement). The final multiple-choice question asked participants to rate their overall support of the project, again on a 1-5 scale. The three open-ended questions asked participants to explain any concerns they had, describe potential benefits they saw resulting from the proposed Path, and indicate whether they had previous knowledge of the project.

## Results

The response rate for the online survey was much higher than the response rate for the mailed surveys. Thirty hardcopy surveys were returned to the Field Projects team, a response rate of more than 17 percent. Due to a limited project budget, no follow-up mailings were made to non-respondents. An additional 17 surveys were returned to the research team due to invalid addresses. The online survey, on the other hand, produced 243 responses, many of which came from residents targeted by the team's mailing. Because specific addresses were requested but not required – this was done to respect the privacy of respondents – it was not possible to fully cross-reference the mailing address list with the online address field results. Of the 243 online responses, only four people declined to provide an address; similarly, among the hard copy respondents, only two people declined to provide an address. None of the responses from the online survey responses matched those of the

hardcopy responses, although it is possible that the five who did not provide addresses were duplicates. The research team decided this was unlikely due to the different short-answer responses. In total, the team received 273 survey responses, 256 of which were more than 50 percent complete. The geographic distribution can be viewed in Figure 4.1.

It is important to note that while specific addresses were selected to participate in this survey, the dissemination of the survey through the email lists and websites of the team's clients – who support the Community Path project – creates some bias in the results. This is not a stringent scientific survey with a random sample; the team's effort to target residents near the Path resulted in responses from the entire community because of the open distribution of the online survey. It is probable that those interested in cycling, walking and open space would be more likely to complete it than those who are not interested. Approximately 64 percent of respondents were from beyond the team's initial proximity boundary of one-quarter mile away from the Path corridor. However, if this buffer is extended to a half-mile, 54 percent of responses fall within the boundary. Because the research team aimed to gauge the sentiments of not only property owners abutting the Path but of all Watertown residents, the decision was made to include the results from all respondents.

**Figure 4.1**

*Survey response distribution;  
Data source: MassGIS;  
Cartographer: Kris Carter*



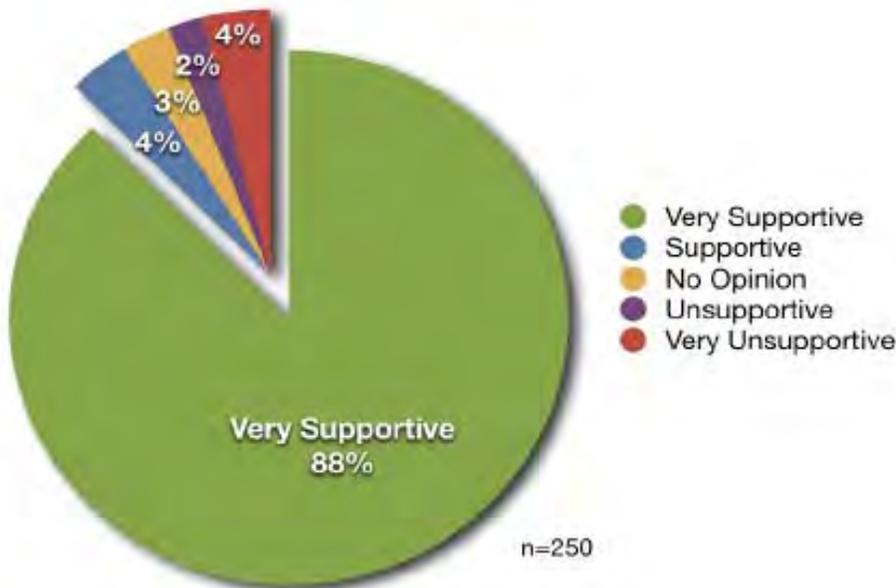
## Major Findings

- Concerns about public safety, maintenance and project timeline were the dominant issues from those surveyed;
- 91 percent of respondents at least somewhat agreed that they would utilize the new Community Path for recreation and exercise;
- 79 percent of respondents at least somewhat agreed that they would use the Path to visit shops, restaurants and businesses in Watertown Square;
- 78 percent of respondents did not think the Path would negatively affect their property; and

- 92 percent of the respondents considered themselves “supportive” or “very supportive” of the Path project, while only 4 percent consider themselves “very unsupportive.”

## Open-Ended Questions and Responses

The research team mapped the survey responses in order to examine respondents’ feelings about the Path. The team used this map to identify



**Figure 4.2**

*Overall support level for the Path;*

*Data source: Feld projects community survey*

*Created by: Kris Carter*

areas where respondents may have concerns that can be addressed by Path advocates. Key concerns and benefits identified in the open-ended section of the survey are summarized below.

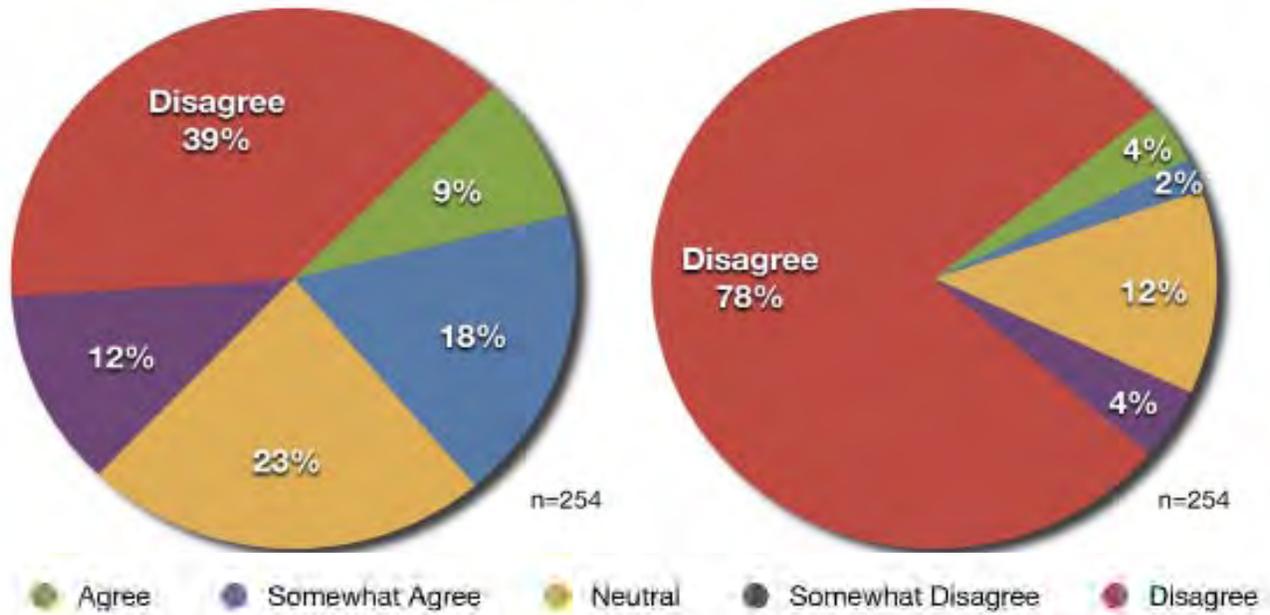
## Project Concerns

Respondents voiced many concerns, but the largest number centered on issues related to the project timeline, user safety and maintenance. Participants repeatedly asked if the Path would ever be completed and voiced skepticism “that it won’t be created in my lifetime.” This echoed the feelings of the WBPC.

Concerns about safety largely fell into two categories: path design and vandalism/crime. Specific design issues centered on the multi-use nature of the Path and on potentially dangerous street crossings, particularly near Watertown Square. In particular, issues related to signaling, safe crosswalks, lane markings and Path width were most commonly noted. Concerns about crime focused on Path lighting and the safety of Path users. One respondent noted that a “police patrol of the path, like in Lexington would be nice,” and another expressed concerns about “teenagers and hooligans loitering on the path at night.” Several respondents requested police call boxes to deal with what one resident called “a very good escape road for thieves, criminals, and sex offenders because police cars cannot follow these people on a path that will serve

I have concerns about safety in the area of the Path

I have concerns that the Path will negatively impact my property



**Figure 4.3:**  
*Concerns about safety and property impacts;*  
*Data source: Field projects community survey;*  
*Created by: Kris Carter*

as a secure haven [for criminals].” It is important to recognize the concern for public safety and clearly address it through design, education, community cooperation and collaboration with law enforcement.

In addition, many respondents stated that public places are poorly maintained, so they feared that a new path would be neglected. Pleas for trash receptacles, snow removal, attractive plantings and graffiti removal were repeated in the survey results.

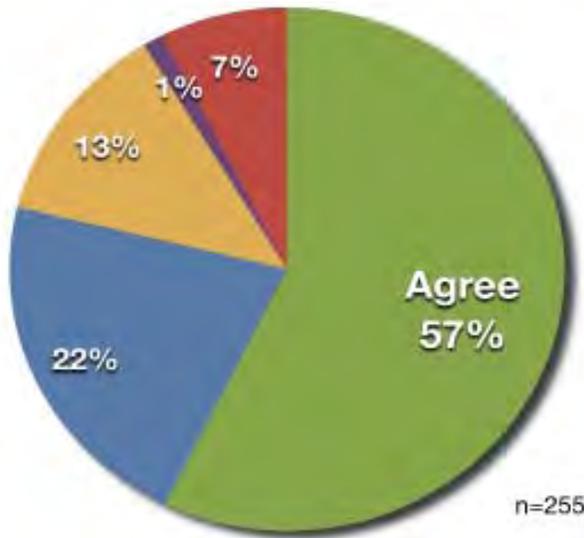
Other concerns focused on cost and who should pay for the Path project. One respondent argued that “potholes on Mount Auburn Street should be fixed before we spend money on any path,” and another asked whether “taxes would be increased to support the project.” A few people questioned the Path’s impact on private property or whether there would be any loss of parking spaces. Still others voiced concerns that the Path, if not completed in full, would lack the connectivity to the regional network of paths that they said make it such an attractive undertaking.

### Project Benefits

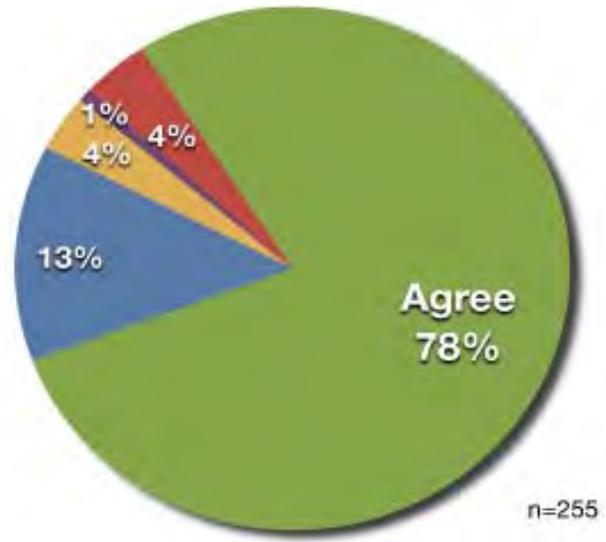
Survey respondents listed many potential benefits of the proposed Community Path. Although specific responses varied, they can be roughly grouped into three categories: commercial opportunities, health benefits and community connectivity.

Many respondents cited other paths, specifically the Minuteman Bikeway, as a positive example of how their development can lead to increased business opportunities. One respondent hoped that “the path [would] help make businesses in Watertown Square more of a destination.” Another stated that it would “encourage more small shops, like ice cream

**I would use the path to access shops and restaurants in Watertown Square**



**I would use the Path for exercise and recreation**



● Agree ● Somewhat Agree ● Neutral ● Somewhat Disagree ● Disagree

stores, bakeries and cycle repair.” Most respondents thought the Path would result in more foot traffic through Watertown Square and along Arsenal Street, which would benefit all businesses in those areas. One respondent noted “I *always* notice more about my surroundings on foot and by bike than in a car. It will support the area economy by creating more awareness of area businesses.”

The most common response focused on creating a healthier community. Nearly all of the survey responses saw the Path as a new alternative for a safe place to exercise. Some went further, seeing the potential for “kids in the community to walk to school” and expecting “cleaner air” due to fewer car trips. Many hoped that the Path would become a park, which would foster a more active community.

Also noted in the survey responses was the Path’s potential effect on quality of life. A frequent walker stated that “when I use the Charles River path, I always meet somebody I know and I like that.” Others saw the Path project as way to re-brand the city as it would “provide more access to the waterfront and help realize that Watertown is a jewel.” Other responses suggested that the Path could attract new residents and better connect the community to the Arsenal Arts Complex, parks and transportation hubs. The connectivity between the Charles River and Watertown Square was important for one resident who dreamed of “safer access to shops from the rear, by-passing the Square of Death.”

**Figure 4.4:**

*Expected uses of the Path;*  
*Data source: Field projects community survey;*

*Created by: Kris Carter*

## 4.2 Community Meeting

The Field Projects team held a community meeting about the Watertown Community Path on March 4, 2010 in the Town Council Chambers in Watertown Town Hall. The purpose of the meeting was to gather input from residents, business owners and the community at large to help guide the preliminary design of the Community Path. The research team mailed meeting fliers and surveys to 170 abutters along the proposed Path route. The meeting was also advertised on the Town's website, in the newspaper and through various list-serves. More than 35 people attended the meeting, many of whom expressed support for the Community Path. Clients and others from the DCDP, WCES, and WBPC also attended.

The meeting, which was broadcast live on local access cable, was broken down into three sections. The first section was a short overview of the Community Path and the work done to date by the Field Projects team. Meeting attendees then participated in an independent mapping exercise whereby they drew or wrote down concerns that they had about the proposed Path. The final section of the meeting was a question-and-answer session intended to give residents an opportunity to ask questions, express concerns and provide suggestions.

Many of the comments made by the participants were in favor of the Community Path, though they expressed concerns and asked questions about specific details. These questions and comments touched on a variety of issues, including funding, design, safety, and maintenance.

Several people raised the issue of funding. Because all levels of government are in tight financial times, some meeting attendees feared that local taxes would have to be raised to pay for the project. One person recommended that the Town get state politicians to support the Path before moving forward to help ensure there is funding for the project. Others suggested that the Town seek private funding for the project instead of relying on state and federal grants. DCDP Director Steve

**Figure 4.5:**

*Community meeting at  
Watertown Town Hall;  
Source: Kris Carter*



Magoon said the Town has not yet looked into funding; that it is expected to occur after a preliminary design of the Path is completed.

Other major concerns centered on the potential impact the Path would have on private property. Specifically, business owners claimed that the Path would drive people away from their businesses as opposed to attracting people. The owner of one abutting business, for example, did not want to give up a portion of the property he has leased from the Town for over four decades. Another person feared the Path would attract vandals who would damage adjacent property. Proponents countered that paths help decrease crime because they increase the presence of people in the area, and crime is less likely to occur when many people are present.

Intersections were another main topic of discussion. One meeting attendee said crossing Main Street is dangerous and suggested that a pedestrian light be installed. An additional light, however, would only increase congestion on the heavily-traveled road. Another person pointed out that traffic on Howard Street tends to move quickly and that drivers often speed down the hill. It was thus suggested that a pedestrian stop light be installed if the Path were to cross that and other similar streets.

Other concerns raised involved the design and maintenance of the proposed Community Path. For example, one meeting attendee mentioned the potential of water pooling in a path due to inward-sloping edges. A solution would be to design the Path with a crowned center, which would help water run off of the Path. Others asked who would maintain the Path, particularly who would be responsible for plowing it in the winter. Steve Magoon responded that staff from the Watertown Department of Recreation is equipped to maintain such sites, and contractors could be brought in if necessary.

At the end of the meeting, attendees asked if Tufts University students would be committed to the project after the Field Projects team finished their work. DCDP Senior Planner Danielle Evans said it is likely that, with support from the university, other students would pick up where the team left off. Steve Magoon and UEP Field Projects instructor Rusty Russell also suggested that the team create a Wikipedia entry, Facebook page, or some other social media to update the community on the research team's work.

## **Mapping Exercise**

As mentioned earlier, the Field Projects team asked those who attended the community meeting to participate in a mapping exercise. Attendees were given a map of Watertown that showed the likely route of the Community Path. They were asked to circle areas of concern on the map and then elaborate on them in the additional space provided. The goal was to give attendees, particularly those who did not feel comfortable speaking in public, an opportunity to express their concerns about specific locations along the Path corridor or to provide detailed suggestions about what they wanted to see in the Path's design.

The comments gathered through the mapping exercise were similar to those verbally expressed at the community meeting, though they tended to go into greater detail. The two major street crossings along the Path's route – those at Mount Auburn and Main streets – were among the most frequently mentioned concerns. Specifically, people stressed that these crossings would be dangerous if improperly designed or implemented. Suggestions to improving safety included installing crosswalks and pedestrian signals at both crossings.

Parking – and the location of the Path through parking lots – was also frequently mentioned as a concern. Some worried that parking spaces would be eliminated, with one person noting that parking is already at a premium on weekends. Another person wanted the Path to only accommodate bicycles, so it could be narrow as it ran through parking lots. Another preferred that the Path run closer to the businesses as opposed to through the rear of the parking lots near Watertown Square.

A few concerns were raised about the portion of the Community Path that is proposed to run along Arsenal Street. A couple of people asserted that it would be impossible for the Path to cut through private property developed in that area. Others did not want to see on-street parking removed from Arsenal Street.

As for the western section of the Path, several people articulated concerns about Howard Street and the crossing of Pleasant Street. It was noted, for example, that many trucks drive down Howard Street, which could pose safety problems for pedestrians and bicyclists in the area. The existing pedestrian crossing across Pleasant Street at Howard Street also does not align with the entrance of the Charles River Reservation Path. Another person was uneasy about losing trees at the DPW site.

Concerns about safety and maintenance of the Path were also conveyed through the mapping exercise. A few people worried that mixing bicycle and pedestrian use in a single path would not be safe. Others were apprehensive that the Path would attract crime and vandalism, with one person specifically referring to the Linear Park section. A couple of people suggested creating two parallel paths along the Arsenal Street section, one for pedestrians and one for cyclists. Others seemed to support the project on the condition that the Town find a way to keep it clean and accessible.

Some specific suggestions for the Community Path included:

- Installing bicycle racks along the Path;
- Using smooth pavement;
- Rebuilding the Linear Park section;
- Paying attention to drainage design to keep stormwater off the Path;
- Conducting research to ensure the Path does not hinder existing vehicular traffic patterns at major crossings.

## 4.3 Town Council and Watertown Bicycle and Pedestrian Committee Meetings

Two members of the Field Projects team attended a meeting of the WBPC on February 1, 2010. Held at the Watertown Town Hall, the meeting gave them the opportunity to learn more about the Committee's activities as well as plans for future phases of the Charles River Connector project.

On May 11, the team will make a final presentation to the Watertown Town Council and explain all of the recommendations for the Path, including reasoning for the preferred and alternative routes.

### Interviews

#### *Section A Interviews: School Street to Mount Auburn Street*

A discussion with business managers along the Arsenal Street corridor revealed cautious approval of the project. Managers at UFood Grill, Bask Tanning and Firestone noted an interest in the increased foot traffic the Path would likely bring to their businesses, but they were skeptical about how parking could be affected during busy hours. United Tile America had minimal concerns about the project as long as on-street parking was not eliminated.

Angelo Paolini, one of the owners of the wooded Patten Street property behind Jiffy Lube, said he supports the idea of the Community Path. He and his partners, Michael and Susan Penta and SMC Trust, are willing to sell their property to the Town as they have no plans to develop it.

Jason Abrahams, manager of Firestone Complete Auto Care at the corner of Taylor and Arsenal streets, said he is not opposed to blocking Taylor Street at the Watertown Square Plaza exit as long as the Arsenal Street side of Taylor Street became a two-way street. The rear parking lot of Firestone is shared with O'Reilly & Son Auto Body and is frequently at capacity. O'Reilly & Son Auto Body also uses the on-street parking on the west side of Taylor Street, which would be eliminated under an alternative route for the Path. The owner of the auto body shop, Bernie O'Reilly, said this would be devastating to his business because he thinks there is not enough parking as is. The Watertown Plaza lot, on the other hand, frequently has vacancies, so eliminating some off-street parking spaces there would have less of an impact on nearby businesses.

The owner of the property at the corner of Taylor and Mount Auburn streets (33 Mount Auburn Street) said plans for the site have not been determined. The property includes a parking lot and former repair garage, which is being used as a staging area for a nearby construction project. The owner is potentially selling the property to another entity, which is considering developing it. This is a good opportunity to have the Community Path incorporated into any plans to redevelop this underutilized property. While the Path would not cross this property, it

would likely run next to it, potentially affecting access to it. The current owner said the Path could “help us as much as hurt us,” raising caution about potentially blocking through-traffic on Taylor Street. Overall, however, the owner supports the creation of the Path, saying, “I’m supportive of anything that is a betterment to the area.”

#### *Section B Interviews: Mount Auburn Street to Pleasant Street*

Business managers and owners on Mount Auburn Street between Main and Summer streets were also cautiously optimistic about the Path. The owners of Watertown Sportswear and Verona Restaurant said the parking spaces in the two parking lots on Baptist Walk are crucial for their customers, as on-street parking is not allowed on Mount Auburn Street. According to these business owners, six businesses on Mount Auburn Street between Baptist Walk and Diamond Nail (26 Mount Auburn Street) are each allotted one spot in the Baptist Walk lot.

Managers and owners of Dyer Discount Liquors, Watertown Sportswear, Meat Spot, Verona Restaurant and Fine European Furniture said they would be supportive of the Path running through the Baptist Walk lots as long as no parking is lost. If parking were removed, they said they would be supportive if they were each given a free parking permit to use in the municipal lots.

There are several other businesses in this section west of Mount Auburn Street. D’Amico Dental Associates, for example, is located on Main Street near Moxley Playground. The proprietor of this business said he has neither good nor bad feelings about the Path. He does not think his business will be significantly affected by it, nor does he foresee increased or decreased traffic at his business as a result of its creation. He did, however, mention that Main Street is a very busy thoroughfare and that an additional pedestrian light at the proposed crossing of the Path would aggravate traffic.

On Howard Street near the DPW Corridor is an upholstery company, Bloom & Company. An associate there did not object to the Path’s potential development, stating that the nearby Charles River Reservation Path currently helps business. The associate was concerned, though, that people would trespass on the company’s property and if they were injured, the company would be liable. The associate also said that people already walk on the DPW Corridor even though they are not supposed to, and they are therefore trespassing.

## **4.4 Media and Internet Outreach**

The Field Projects team aimed to raise awareness about the Community Path through the use of the internet and media. The goal was to not only spread word about the proposed Path, but also to encourage residents to give input and stay abreast of the project as it moves forward.

Toward this end, the team created a Facebook page for the Community Path, where updates on the project can be posted and residents can ask questions and provide feedback. While all three clients already have websites that include information about the Community Path, a Facebook page will reach an even wider audience, especially residents who do not keep up with Town affairs, younger residents who may not read the newspaper or regularly check the Town websites, or those who are temporarily out of the area.

The Watertown Tab, the weekly newspaper in Watertown, also ran an article about the Community Path on February 25, 2010. Written by staff reporter Jenn Thomas, the story appeared online at [www.wickedlocal.com/watertown](http://www.wickedlocal.com/watertown). It gave a general overview of the project and highlighted the Tufts research team's work. A member of the team was quoted in the story, as was Janet Jameson, a member of the WBPC. The story also provided information about the research team's community meeting and included a link to the team's public survey.

The Tab story is attached in Appendix B.

## Endnotes

1 Krizek, Kevin J., and Pamela J. Johnson. "Proximity to Trails and Retail: Effects on Urban Cycling and Walking." *Journal of the American Planning Association* 72, no. 1 (2006): 33-40.



## Chapter 5

# SITE ANALYSIS + ROUTE OPTIONS

For the purposes of the site analysis, the Field Projects team divided the proposed Path into two sections – Section A: School Street to Mount Auburn Street, and Section B: Mount Auburn Street to Pleasant Street. These sections - and the associated subsections - are shown in Figure 5.1. The team conducted multiple site visits during which they measured street and sidewalk widths, noted obstacles to potential Path routes and took photographs. The site visits also helped the team identify key properties along the Path that would likely be directly impacted by the Path’s development. The team subsequently sought to interview the owners of these select properties. All maps in this chapter were created using data from MassGIS by Kris Carter and Eunice Kim.

**Figure 5.1**  
*The Watertown Community Path  
and numbered sections*



## Section A - School Street to Mount Auburn Street

Section A of the Community Path extends from the end of the Charles River Connector at School Street to Mount Auburn Street in Watertown. For the majority of this section, the Path will run along Arsenal Street.

### Section A.1 - Arsenal Street from School Street to Irving Street

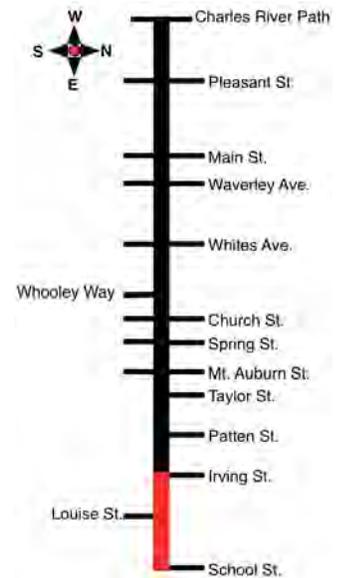
#### Existing Conditions and Land Use

This section includes the major thoroughfare Arsenal Street and the properties on the north side of the street. The area is zoned industrial and is largely industrial in nature. The properties include several car dealerships such as Lexus of Watertown, a large building materials company, and a strip plaza of food and retail businesses.

Arsenal Street, a principal artery, varies in width, typically being 52 to 53 feet wide. For most of this section, there are two lanes of traffic, one in each direction. There are four travel lanes near School Street, but proceeding west toward Wooley Avenue, they reduce to two lanes. West of School Street, there are also 4-foot-wide bike lanes on both sides of the street that terminate just after Louise Street. This portion of Arsenal Street between School and Louise streets is approximately 50 feet wide.

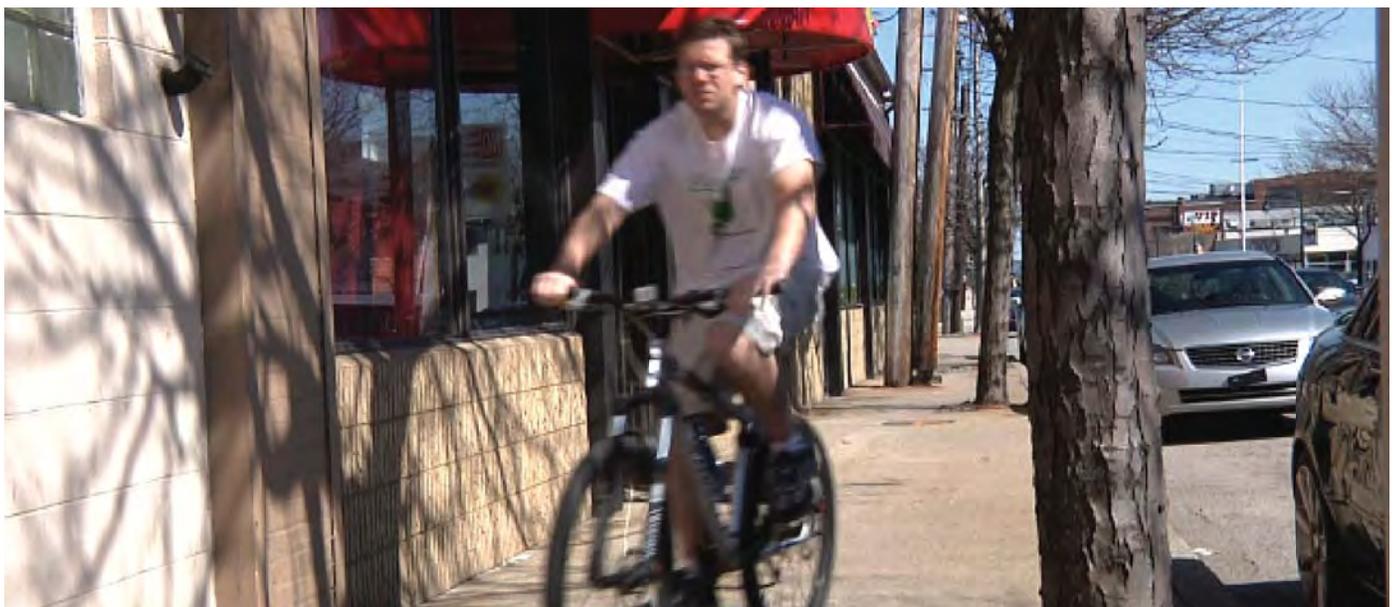
On-street parking is allowed on both sides of the street for nearly the entire length of Arsenal Street in this section. The exceptions are a short section closest to Irving Street as well as the stretch between Beacon Park and Beechwood Avenue. Like the street, the sidewalks vary in width, with the narrowest section being 4 to 5 feet wide. There are also many obstacles on the sidewalk, including utility poles, hydrants and trees.

There are four MBTA bus stops in this area, including those at Beacon Park, Beechwood Avenue and Louse Street. An additional bus stop is located at the intersection of School and Arsenal streets.



**Figure 5.2**

*Narrow sidewalks along Arsenal Street;  
Source: Kris Carter*



## Ownership

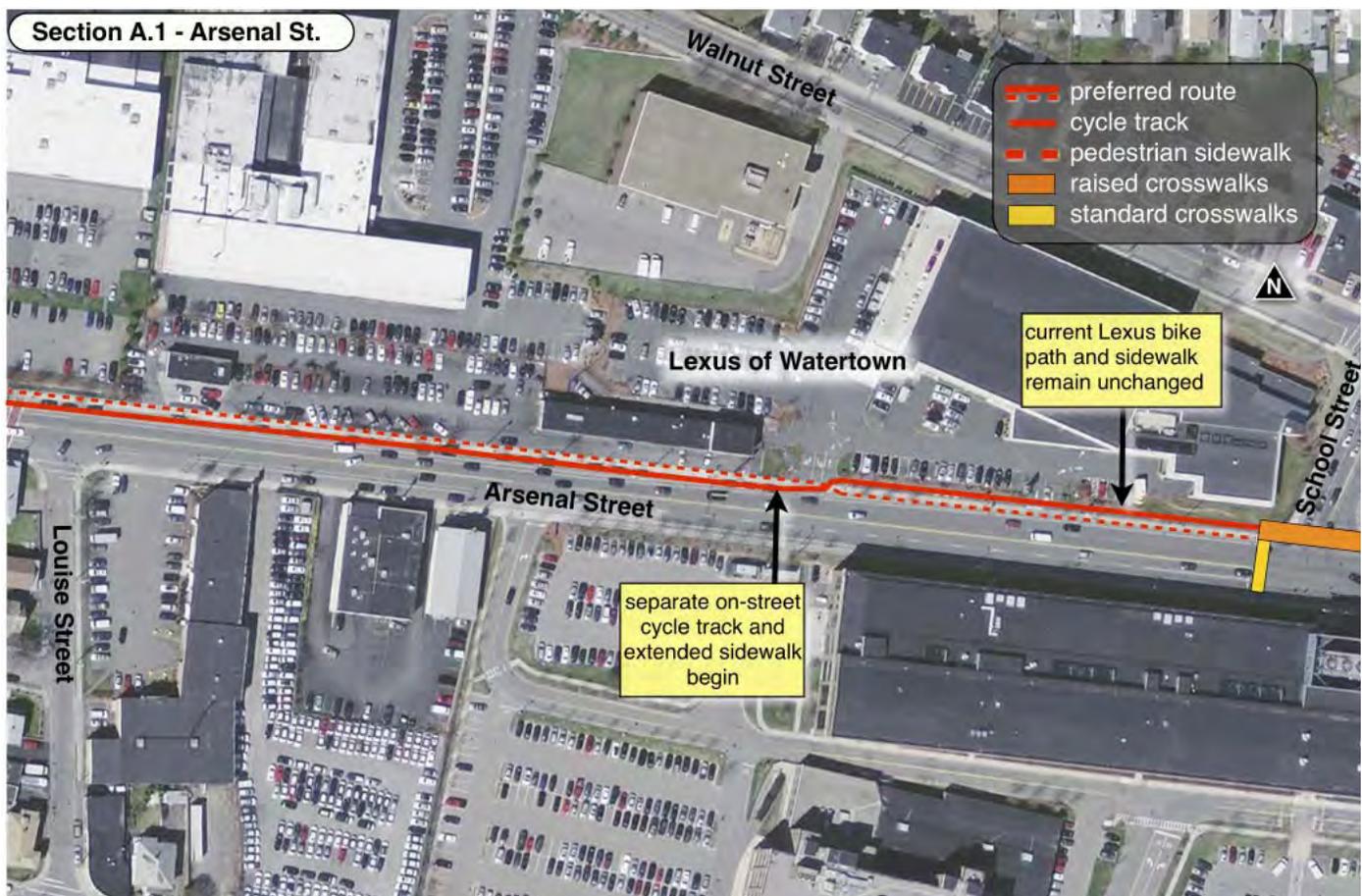
The land abutting Arsenal Street to the north is privately-owned. There are about a half dozen such parcels in the area, the largest being 56-60 Irving Street. That property is 4.1 acres and has approximately 0.25 miles of frontage on Arsenal Street. It is owned by YRT Corporation, which is M. Pirolli and Sons, and is used as a masonry materials storage area.

## Constraints

The main constraint is that the land north of Arsenal Street is privately-owned, so the Town would either have to buy the properties or obtain easements through them. The uses of the land pose a challenge to the development of a multi-use path as well. For example, even if YRT Corp. granted the Town an easement, the property would still present safety issues as it is used as a brickyard; building materials such as concrete blocks would need to be moved throughout the property.

Several of the other properties also pose challenges in terms of space. The car dealerships, in particular, park their inventory tightly, leaving little space to spare. These properties thus could not accommodate a multi-use path without losing parking spaces, which would affect their business operations. It is unlikely that these businesses would give up parking spaces, considering vehicles seem to be occupying them at all times.

Figure 5.3  
Eastern terminus of the Path



## Option 1 - Preferred Route

There is ample space within the roadway on Arsenal Street to accommodate a two-way cycle track for bicyclists and an expanded sidewalk for pedestrians. The cycle track and expanded sidewalk would be on the north side of Arsenal Street, with the cycle track beginning at the eastern end of the two-way bike path that currently exists in front of Lexus of Watertown. The sidewalk would be expanded by about 4 feet.

The cycle track would be 8 feet wide and would be located between the sidewalk and the on-street parking spaces in the roadway. It would be at the same level as the roadway, and there would be a two-foot wide curb or buffer between the cycle track and parked cars. The curb would delineate a clear path of travel for cyclists, while keeping both pedestrians and parked cars out of the cycle track.

Existing on-street parking would be shifted to abut the cycle track and would be 8 feet wide. The motor vehicle travel lanes would each be 11 feet wide, as set forth in the Town's curb and sidewalk ordinance.<sup>1</sup> Currently, there are no painted lines separating on-street parking from travel lanes along the majority of Arsenal Street in this section. To make room for the cycle track and extended sidewalk, the existing on-street bike lanes would be removed from both sides of the street.

Raised crosswalks for pedestrians should be installed at crossings and driveways along Arsenal Street, including the School Street and Irving Street crossings. These raised crosswalks would signal to motor vehicles that they are crossing a pedestrian area. The goal would be to increase safety for pedestrians and others using the sidewalk.

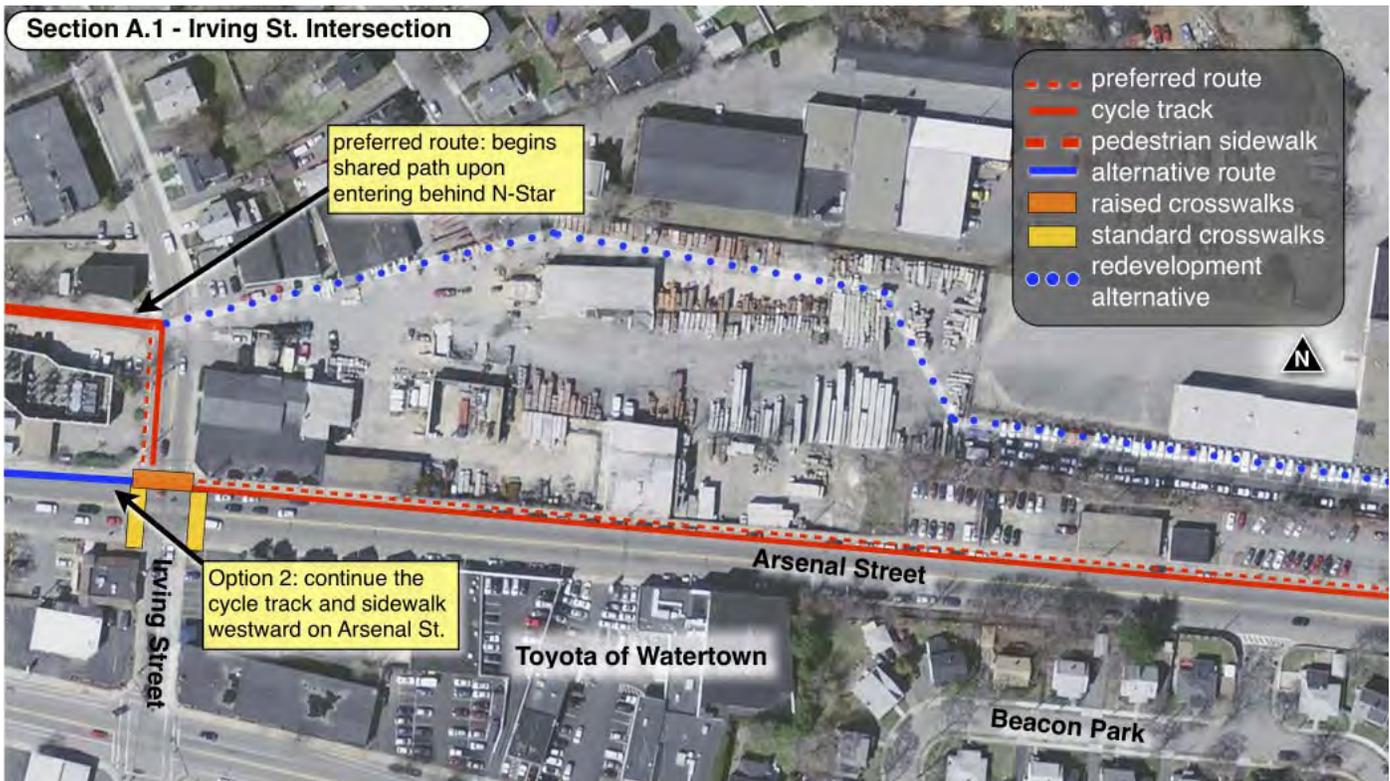
**Figure 5.4:**  
*Bike path in front of Lexus;*  
*Source: Eunice Kim*





Figure 5.5  
Arsenal Street section near businesses

Figure 5.6  
Arsenal Street approaching Irving Street





## Option 2 - Redevelopment Alternative

Another option would be to build the Path off street as private properties along Arsenal Street redevelop. Under this “redevelopment alternative,” the Path would run roughly parallel to Arsenal Street between the rear entrance of VHB and Irving Street. It would cut through the VHB rear parking lot – VHB has granted the Town of Watertown an easement to do so – and behind the commercial building at 222 Arsenal Street that includes UFood Grill. The Path would continue west through 204 Rear Arsenal Street where Boston Volkswagen parks their inventory of vehicles, and it would proceed along the northern portion of the masonry materials storage area owned by YRT Corp. Because all of these properties are privately-owned, this alternative is meant to serve as a long-term option that the Town could pursue if the properties were to be sold or redeveloped. In either case, the Town would have to obtain easements or purchase properties to develop this off-street Path.

**Figure 5.7**

*YRT Corp. property along Arsenal Street;  
Source: Kris Carter*



## Section A.2 - Arsenal Street from Irving Street to Patten Street

### Existing Conditions and Land Use

This area between Irving and Patton streets (on the north side of Arsenal Street) is commercial, and it is largely zoned limited business. It includes an NStar Electric Company building, JiffyLube, and Enterprise Rent-A-Car. Arsenal Street varies in width, being as wide as 55 feet at the Irving Street intersection. This stretch of Arsenal Street has two lanes of traffic, on-street parking on both sides and no bike lanes. There is also one MBTA bus stop on the north side of the street near Irving Street, which is a two-way street.

There is a four-way, signalized intersection at Irving and Arsenal streets, which has four crosswalks. Irving Street (on the north side of Arsenal Street) is 39 feet wide at this intersection and 28 feet wide near M J Pirolli & Sons brickyard. The intersection of Patten and Arsenal streets is not signalized; there is a stop sign and crosswalk at the end of Patten Street. There is a gentle slope going up Patten Street on the bridge.

### Ownership

The properties directly to the north of Arsenal Street are privately-owned, as are the properties behind them where the former railroad ROW is located. The Boston and Maine Corporation sold part of the former railroad ROW – a parcel behind the NStar property – to Irving Street LLC in 2000, with that section being used for parking and storage. It sold another part – a narrow wooded lot on Patton Street behind the Jiffy Lube – to Angelo Paolino, Michael and Susan Penta, and SMC Trust for \$30,000 in 2009. There are no plans to develop this property.

**Figure 5.8**

*Patton Street bridge blocking the former railroad ROW;*  
*Source: Kris Carter*



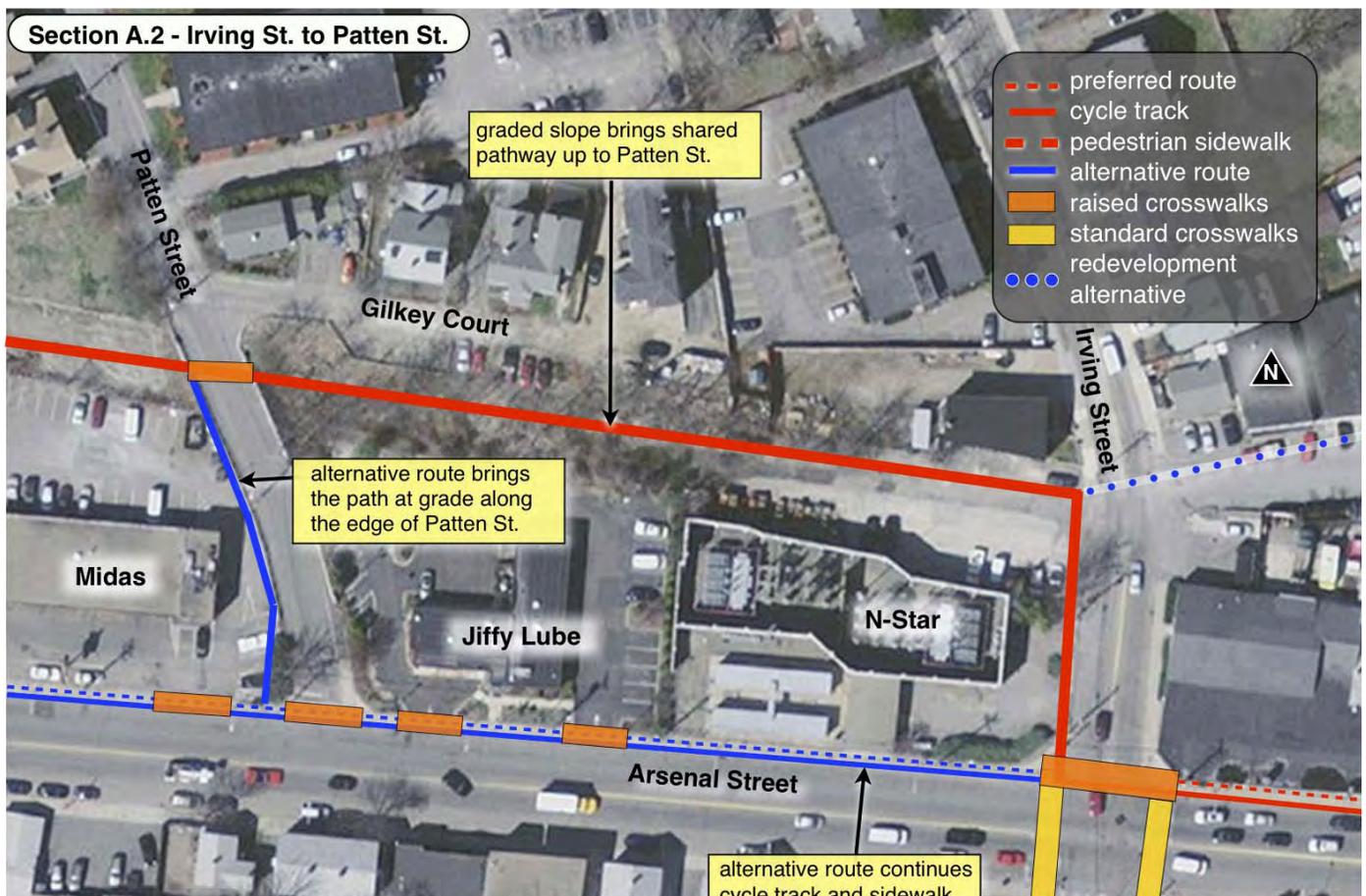
## Constraints

The properties that include the former railroad ROW are privately-owned. The Town would have to buy these properties or obtain easements (this might not make sense given their narrow width) if it wanted to construct the Community Path along the former railroad ROW. The Patten Street bridge provides a difficult obstacle because it was filled in several decades ago. The bridge effectively stands as an 11-foot-high wall in the way of the Path as it reaches Patten Street.

## Option 1 - Preferred Route

The intersection at Irving Street provides an excellent opportunity to bring the Path off of Arsenal Street before crossing a series of driveways closer to Watertown Square and before reaching Watertown Square itself, which is a busy five-way intersection. The Path would cross Irving Street at the current signalized intersection and then turn right on the southbound side of Irving Street. The street is wide enough to accommodate an 11-foot travel lane in each direction, an 8-foot-wide cycle track, and a 4-foot extension of the sidewalk, which is currently 5 feet wide. The Path would become a shared use path as it turned west toward Patten Street. It would run along the former railroad ROW behind the NStar facility and continue through a dirt lot and a wooded parcel, which is currently littered with refuse.

**Figure 5.9**  
*Vacant parcel  
behind NStar property;*



The Patten Street bridge, as mentioned earlier, stands in the way of the Path. The wooded parcel leading up to the bridge is long enough (roughly 200 feet) to create a graded slope or hill (with a 5-6 percent grade), which would allow the Path to then cross Patten Street on a raised crosswalk.

On the other side of the bridge is another vacant property that is also long enough (roughly 200 feet) to create a similar graded slope on which the Path could be located. Both of these slopes or hills should be at least 15 feet wide to increase safety.

## Option 2: Alternative Route

A less attractive option would be to continue the Path – as a cycle track and extended sidewalk – on Arsenal Street until the Patten Street intersection. This route would force the Path to cross several driveways, including those of the Jiffy Lube and Enterprise Rental Car properties. Traffic exiting these driveways could pose potential dangers to pedestrians and cyclists; raised crosswalks are recommended for all driveways and crossings in this section.

The Path would cross Patten Street and turn north onto the property at the corner of Arsenal and Patten streets where Midas is located. The Path would then run along the easternmost edge of this private property (76 Arsenal Street), adjacent to the retaining wall that leads up to the Patten Street bridge. To accommodate the Path, the property would lose approximately three to five parking spaces. In addition, vehicle circulation around the Midas building would likely be constrained, if not blocked. This is because there is only 18 feet of space between the corner of the Midas building and the Patten Street retaining wall, and at least 10 feet of that would be taken up by the Path. On the other hand, this alternative route would allow the Path to remain relatively flat as opposed to having a relatively steep slope leading up to the Patten Street bridge, which would be the case in the preferred route.

**Figure 5.10**

*Vacant parcel behind  
the Jiffy Lube property;  
Source: Kris Carter*



## Section A.3 - Patten Street to Mount Auburn Street

### Existing Conditions and Land Use

This is a commercial area that is mainly zoned central business (along Mount Auburn Street) and limited business (along Arsenal Street). The properties on Arsenal Street include Midas, Cambridge Savings Bank, Wild Willy's Burgers and Firestone. Many of the businesses have parking in the rear. Behind the Firestone property at 40 Arsenal Street is an 8-foot-wide former ROW that currently consists of trees, brush and a fence that separates the property from the abutting parking lot.

There is a 1.5-acre plaza (Watertown Square Plaza) at 49-59 Mount Auburn Street that is home to several businesses such as Dunkin Donuts. Much of the plaza consists of paved parking spaces, particularly in the section behind the businesses near the former railroad ROW. This parking section is 48 feet wide, curb to curb. Several of the spaces are reserved, but the vast majority is not. None of the parking in this plaza is metered. In addition to parking and businesses, this plaza includes a vacant lot just west of the Patten Street Bridge. About 195 feet in length, the vacant lot is part of the former railroad ROW. It is littered with trash and overgrown with brush.

Taylor Street, which is on the western end of this section, is a narrow one-way street that runs between Arsenal and Mount Auburn streets. Vehicles can only travel north on Taylor Street, which leads to Mount Auburn Street. Taylor Street lacks any striping and is in poor condition. There are also two major commercial driveways along this street: one at the Watertown Square Plaza and the other at the Firestone property. On-street parking is allowed on one side the street, the side closest to Watertown Square.

There is a property at 33 Mount Auburn Street, near the corner of Taylor and Mount Auburn streets, which is currently vacant. Approximately



**Figure 5.11**  
*Watertown Plaza parking lot*  
Source: Kris Carter



0.31 acres in size, it used to be a repair garage. In September of 2009, the property was sold to Robert H. Bray of Cambridge. Prospective developers have expressed interest in developing the property, but no plans have yet to be submitted to the Town. Next to the property – at the very corner of Taylor and Mount Auburn streets – is a small triangular parcel known as the “Taylor Street Triangle,” which is owned by the Town of Watertown. It is currently vacant.

Mount Auburn Street is a four-lane major thoroughfare that is classified as a principal arterial. It is approximately 65 feet wide between Taylor Street and Baptist Walk. At this location, there is a crosswalk.

## **Ownership**

All of the properties in this section – except for the Taylor Street Triangle – are privately-owned. As mentioned above, a parcel at 33 Mount Auburn Street was sold in 2009 to Robert Bray, who is selling the property. Another entity, JF Trust Group, has an option to buy the property and is considering developing it.<sup>2</sup> Plans for the project have not been developed. Watertown Square Plaza LLC (local attorney Robert Kaloosdian) owns the plaza on Mount Auburn Street that includes the Dunkin Donuts.

## **Constraints**

As mentioned above, most of the properties are privately-owned, which poses a challenge to developing the Community Path in this section. There is one property owner who controls a key parcel, the Watertown Square Plaza on Mount Auburn Street. Also, unlike previous sections of Arsenal Street, this portion has multiple driveways and high volumes of traffic as the road begins to accommodate four lanes of travel. Crossing Taylor and Mount Auburn streets will also be challenging.

## **Option 1: Preferred Route**

The safest and most direct route would be to build the Community Path along the former railroad ROW, which cuts through the Watertown Square Plaza. This would include filling in the vacant lot just west of the Patton Street bridge to create a graded slope or hill, which would have a grade of about 5.5 percent. The Path would then continue west through the parking lot of the Watertown Square Plaza. Current parking would have to be shifted 6 feet toward the buildings to provide space for the 10-foot-wide Path on the eastern portion of the plaza. Additional spaces could be added alongside the Path up to the Patten Street Bridge to accommodate any lost parking. Currently, a row of Jersey barriers line the southern edge of the parking lot, and a number of spaces are used for snow depositories. Along with the generally wide parking strip, this provides the additional width needed for the Path.

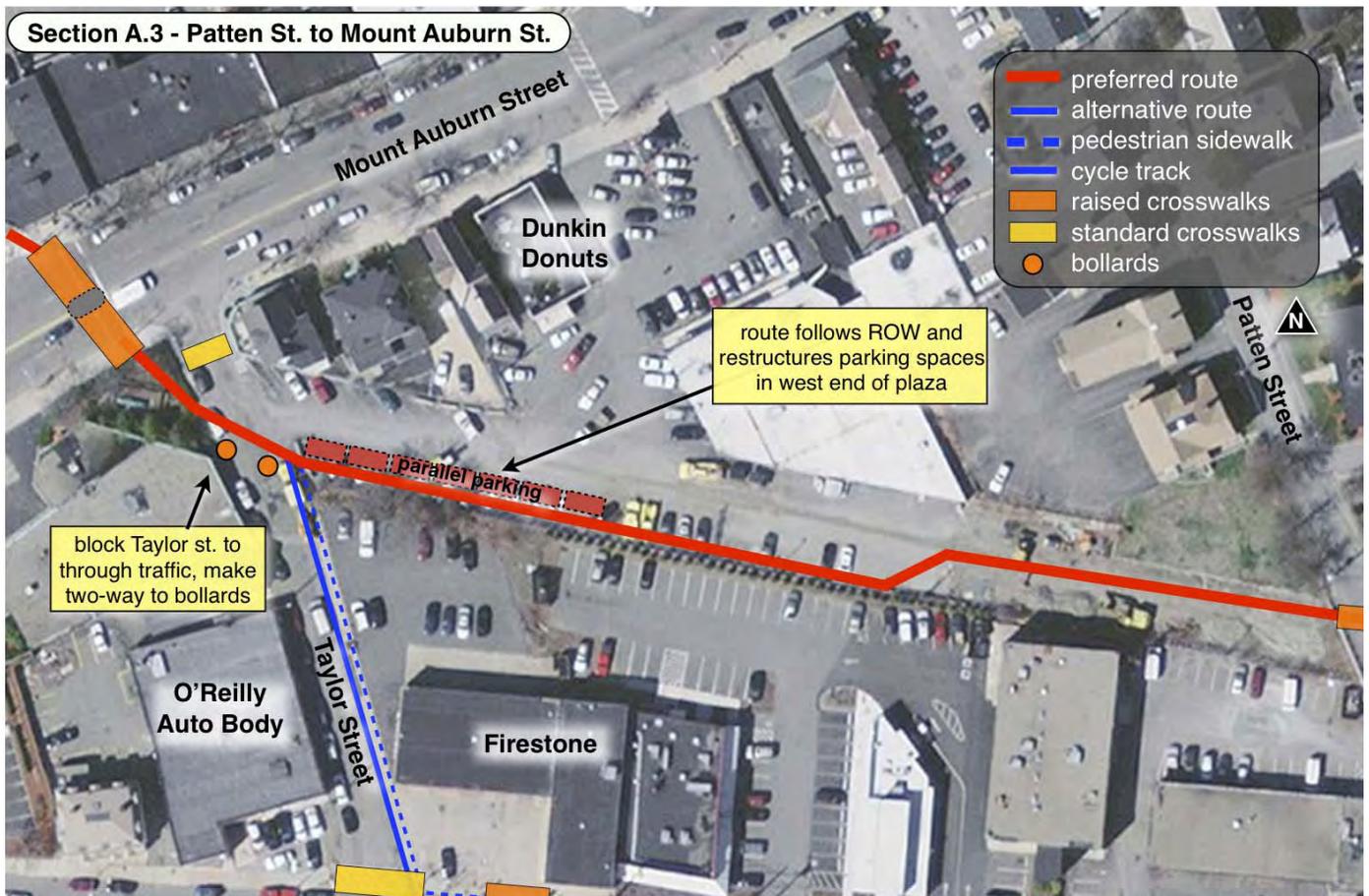
Approaching Taylor Street, the Path would run along the 8-foot ROW on the Firestone property. To make room for the Path, nine parking

spaces would have to be removed near the rear of the Watertown Square Plaza parking lot; these spaces currently face the fence that separates this property from the Firestone property. This parking area – the strip closest to Taylor Street – is not wide enough to accommodate two sides of angled parking if two feet or more is taken up by the Path.

Specifically, this parking strip is about 48 feet wide. Angled parking spaces must be 18 feet long, according to the Town of Watertown Zoning Ordinance Section 6.02, which means two sides of angled parking requires 36 feet<sup>3</sup> There must also be an aisle between the two sides of parking that is 11 to 13 feet wide (for parking that is angled 30-45 degrees and where there is one-way traffic). Given these requirements, there is little to no room to accommodate the extra width needed for the Path. In other words, even if the Path were to run along the 8-foot ROW on the Firestone property, an additional two feet, at a minimum, is needed to accommodate the Path, and the parking strip does not have these two feet to give. Alternatively, the Path could be slightly narrowed in this section if there is a desire to keep the parking spaces. If angled parking were removed, approximately four parallel parking spaces could be created in its place, thereby limiting the number of lost parking spaces to five.

The Path would cross Taylor Street near the intersection of Mount Auburn Street and continue through the Taylor Street Triangle owned by the Town of Watertown. To make this crossing safe, it is recommended that bollards be installed diagonally across Taylor Street between 33 Mount Auburn Street (the front corner of the building facing) and the

Figure 5.12  
Watertown Plaza and Mount Auburn Street crossing



ROW, prohibiting through traffic. The bollards would essentially run along the southern side of the Path. Taylor Street should be made into a two-way street on the Arsenal Street side, but left turns from Taylor Street to Arsenal Street should be prohibited. The portion of Taylor Street on the Mount Auburn Street side should remain one-way only, so pedestrians and bicyclists on the Community Path would not have to contend with cross traffic.

The crosswalk on Mount Auburn Street should be moved west to the eastern corner of Baptist Walk. Due to the excessive crossing distance at this intersection, it is recommended that an 8-foot wide, 52-foot long raised crosswalk be created and a pedestrian island be installed in the center of Mount Auburn Street. The island would provide refuge for pedestrians and cyclists.

## Option 2: Alternative Route

A less attractive option would be to continue the cycle track and extended sidewalk west along Arsenal Street between Patten and Taylor streets. Careful attention should be paid to the entering and exiting vehicle traffic. Raised crosswalks with bright pavement markings would be necessary where the Path crossed driveways. Upon reaching Taylor Street, the Path would continue on the eastern side, abutting the current Firestone building. This would allow access for the garage bays on the western side of Taylor Street.

To accommodate the width of new sidewalks and a cycle track, on-street parking would have to be removed from Taylor Street. The Path would continue north on Taylor Street until the Watertown Plaza driveway or exit. Just prior to the exit, bollards would need to be placed on Taylor Street to prevent through traffic. The Path could then safely cross to the western side of Taylor Street and continue through the Town-owned Taylor Street Triangle to the Mount Auburn Street crossing.

**Figure 5.13**

*Mount Auburn Street crossing;  
Source: Kris Carter*



## Section B - Mount Auburn Street to Pleasant Street

Section B of the proposed Community Path extends between Mount Auburn Street in Watertown Square to Pleasant Street, where it will connect to the Charles River Reservation Path. For much of this section, the completed Linear Park path already exists and is utilized by members of the community. Although portions require improvements, Linear Park will serve as the foundation for the Community Path in this section.

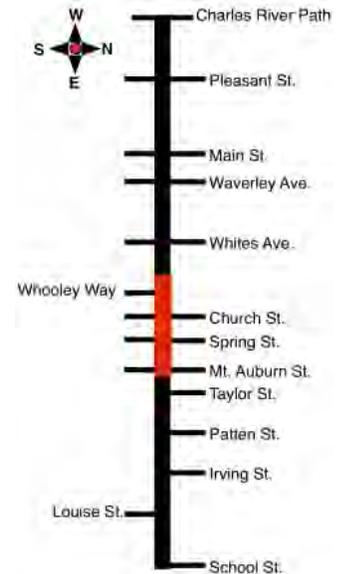
### Section B.1 - Mount Auburn Street to Winter Street

#### Existing Conditions and Land Use

This area consists of several Town-owned parking lots between Mount Auburn Street and Saltonstall Park. These municipal lots provide parking for several Town buildings, including Watertown Town Hall, the Watertown Police Department and the Watertown Free Public Library. They also serve many areas businesses, such as CVS and Not Your Average Joe's. Pedestrian navigation within this section is not easy due to numerous islands with parking meters. These are shown in Figure 5.14.

The Watertown Police Department, as mentioned earlier, is located in this section, but it is expected to move to a new headquarters on Main Street this spring or summer. This move will free up 28 off-street parking spaces that are currently reserved by the Police Department.

Watertown Square, which includes a five-way intersection, is located south of the municipal parking lots. Properties to the north of the parking lots on Winter Street are residential. Most of the properties to the east of Mount Auburn Street in this area are commercial. Saltonstall Park is located at the western end of this section.



**Figure 5.14**  
*Municipal parking lots;*  
*Source: Michelle Moon*



## Ownership

The Town of Watertown owns most of the parking lots in this area, as noted earlier. In addition, the owner of Verona Restaurant owns the strip of parking to the south of Baptist Walk.

## Constraints

The municipal parking lots pose a challenge to the development of the Community Path, as they stand in its direct pathway. Parking spaces would either have to be eliminated or relocated to accommodate the Path. There are several privately-owned parking spaces south of Baptist Walk, next to Mount Auburn Street, which several business owners use. In addition, the municipal parking lot to the north of this private lot is used by customers of Mount Auburn Street businesses.

## Option 1: Preferred Route

In this section, the Community Path would generally be constructed along the northern boundary of the three municipal parking lots. This placement would allow for the Path to flow directly into the Linear Park path. In the area of Baptist Walk, the Path should run along the northern edge of the municipal parking lot. The angle of the parking spaces can be changed from its current 60-degree angle to a 45-degree angle, thus requiring less space behind the spots for motor vehicles to enter and exit this parking lot. Parking spaces would not be lost. As mentioned previously, there will also be additional public parking spaces when the Police Department relocates.

The Path would cross Spring Street and then turn north for a short distance along the sidewalk. It would then continue west across the parking lot, displacing approximately 10 parking spaces. This would essentially cut the southeastern portion of this parking lot into two lots,

**Figure 5.15**

*Parking lot behind the library;*

*Source: Michelle Moon*

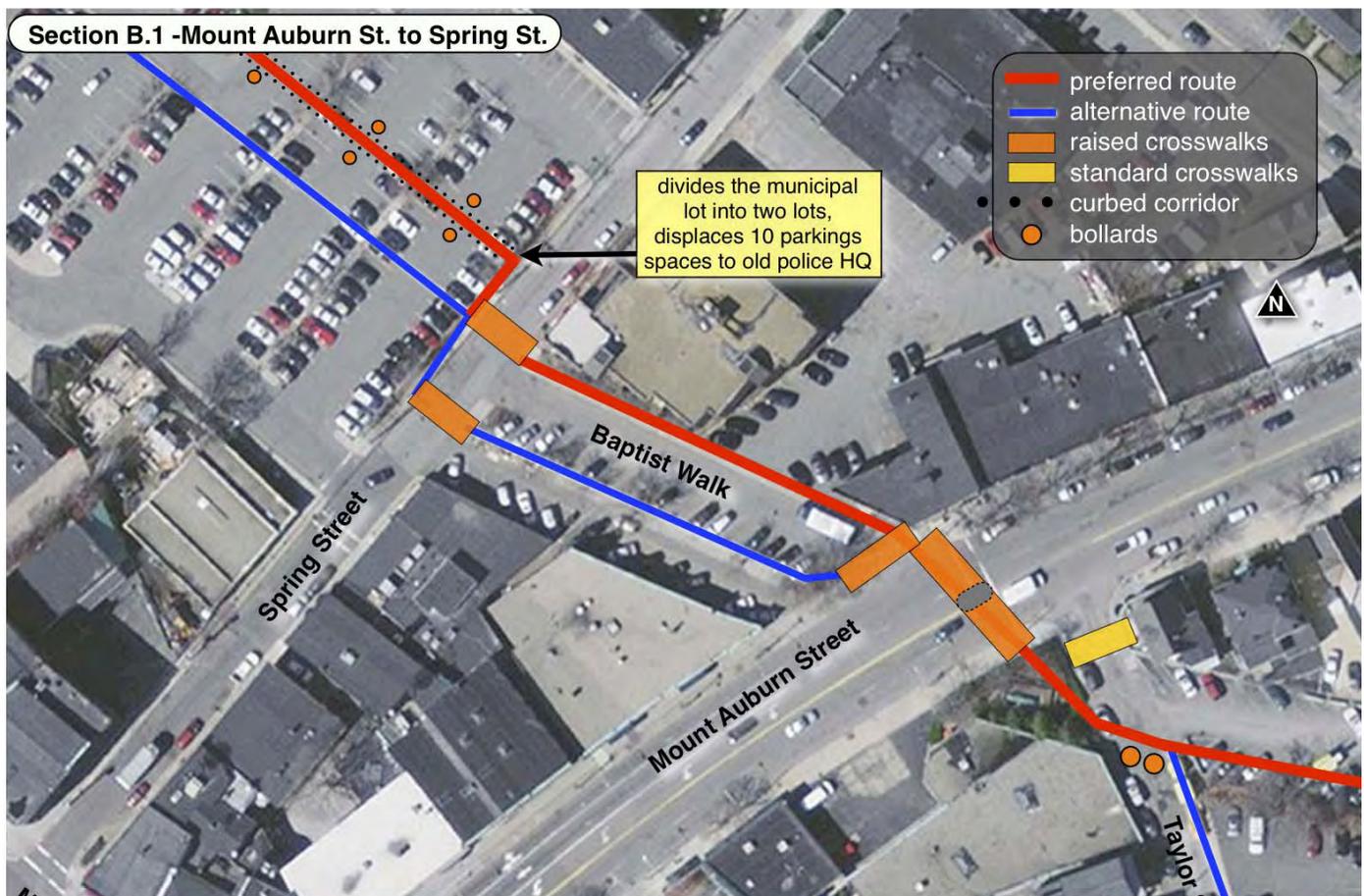


one serving the businesses to the south and one serving the businesses to the north (including Caritas Medical Group). Where the parking lot narrows in width, the Path would continue along the northern boundary, across from the commercial building that includes Tresca's Eating Place. This section of the lot should be converted to one-way traffic flowing west toward Church Street. The straight-angled spots in this area could be angled to 45 degrees in order to make more room, if necessary. The Path would cross Church Street and continue west along the southern boundary of Winter Street. It would then cross John "Sonny" Whooley Way and continue along the vegetated buffer between Winter Street and the municipal parking lot. This vegetated buffer is about 5 feet wide; however, there are utility lines that run down the middle of the buffer, so the Path would have to be located south of these utility lines. The parking spaces directly to the south of the buffer would have to be shifted approximately seven feet to the south. The vertical parking spots on the southern end of this lot could be replaced with about four parallel parking spots. Doing so would reduce the amount of spaces lost to three.

## Option 2: Alternative Route

The Path could run on the northern side of Winter Street. At the western end of Winter Street, it would cut to the southwest across Winter Street and connect to Linear Park. If this route is shown, Winter Street would have to be converted into a one-way street, with traffic flowing west.

Figure 5.16  
Eastern edge of municipal parking lots



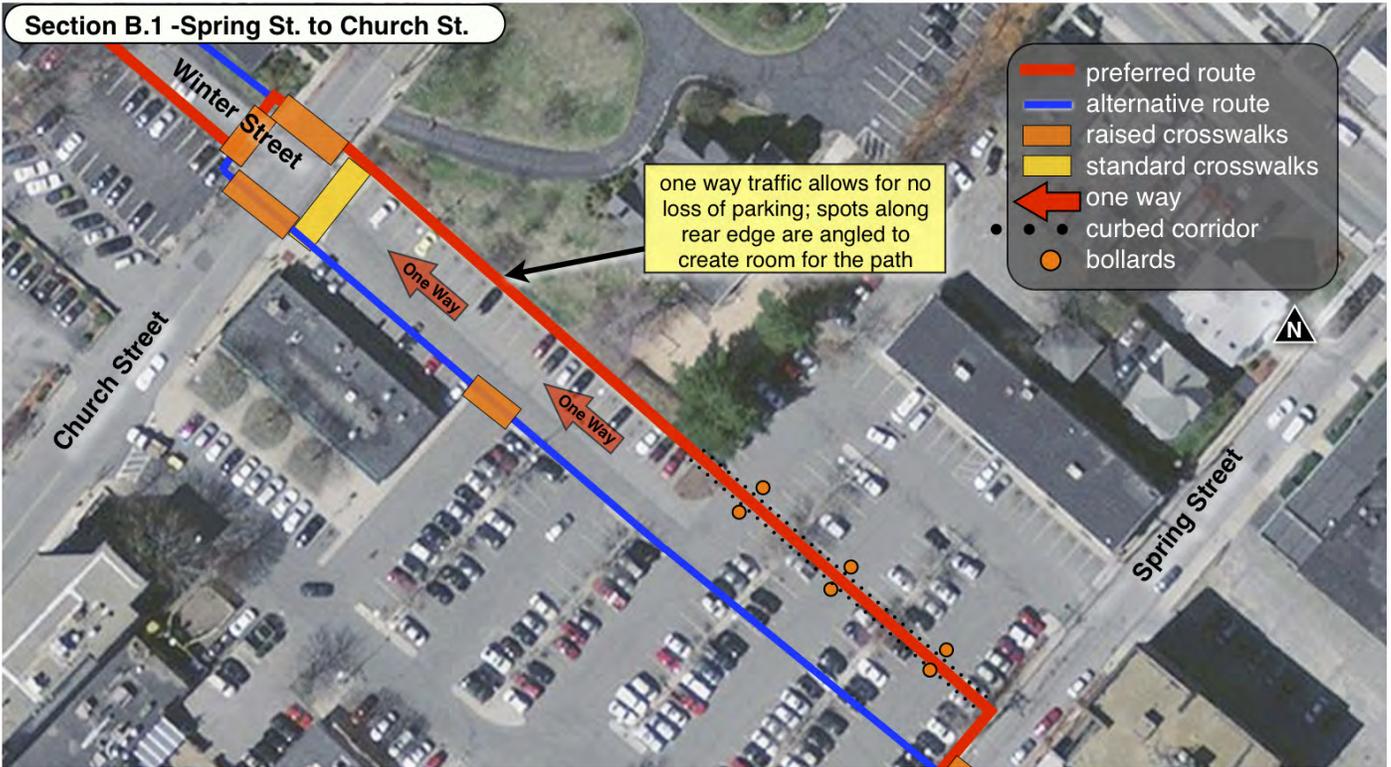
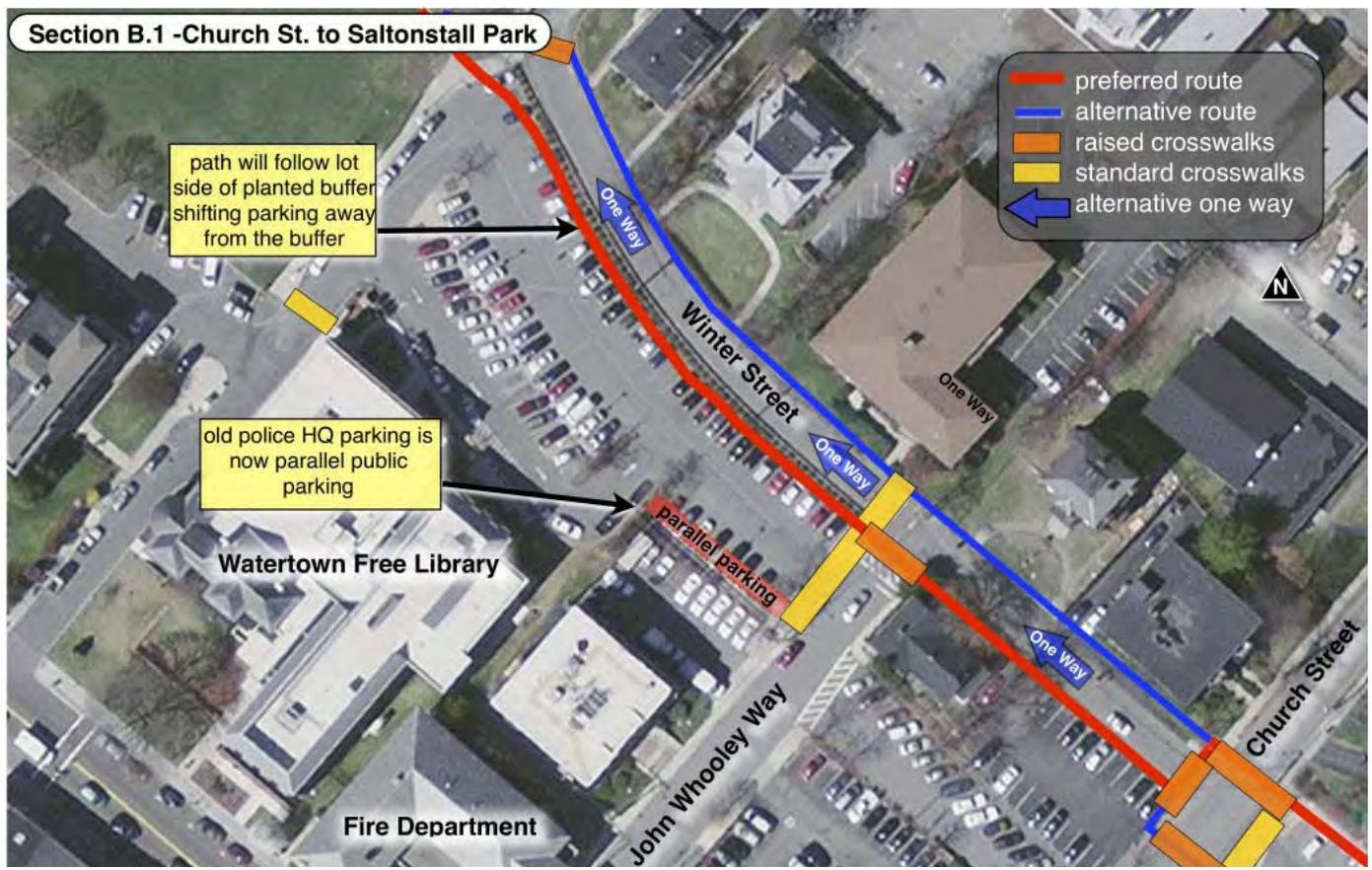


Figure 5.17  
Municipal parking behind businesses

Figure 5.18  
Parking lot behind the library





**Section B.2 - Winter Street to Main Street**

**Existing Conditions and Land Use**

Part of this area is owned by the Town of Watertown. Specifically, the eastern end of the area behind Town Hall is a public park, Saltonstall Park. A narrow, unpaved path runs through Saltonstall Park up a short hill before intersecting with Whites Avenue. Between Whites Avenue and Waverley Avenue is the existing Linear Park path. This path is approximately 10 feet wide. It appears to be in fair condition, though improvements could be made. Fences, hedges and a concrete wall separate the Linear Park path from Whitney Towers Apartments and other abutting residential properties.

To the west of Wwaverley Avenue is Moxley Playground, which contains tennis courts, a baseball field, a small playground and basketball courts. There is an existing unpaved path immediately southeast of Moxley Playground. The unpaved path ends before reaching the rear of the property occupied by Nardone Funeral Home on Main Street. Several residential properties and Whitney Towers Apartments are located in the surrounding area.

**Ownership**

The Town of Watertown owns Saltonstall Park, Moxley Playground and Linear Park path. Carmine Nardone, owner of Nardone Funeral Home, owns a parking lot that borders the former railroad ROW and a green median strip, which separates the funeral home parking lot from the dentist’s office parking lot to the east.

**Figure 5.19**  
*Linear Park path entrance at Saltonstall Park;*  
*Source: Kris Carter*



## **Constraints**

The existing path in Saltonstall Park is very narrow, approximately five feet in width, and does not provide adequate space for both bicyclists and pedestrians. There is also an erosion problem in this area, and water tends to collect in the low sections in the spring. The section of the existing path behind the Watertown Boys and Girls Club is very steep, which is not ideal for bicycles, in-line skates, wheelchairs or strollers. There is also no curb cut on the eastern side of the Whites Avenue crossing.

## **Option 1: Preferred Route**

The existing path between Saltonstall Park and Moxley Playground should be incorporated into the development of the Community Path, though improvements should be made. The portion that runs through Saltonstall Park and behind the Boys and Girls Club should be widened to accommodate use by both bicyclists and pedestrians. It should also be re-graded so that the slope is not as steep. There is a large turf area to the south of the baseball field that can be transformed into flower beds or rain gardens. The installation of either would help stabilize the slope while retaining excess run-off and preventing erosion.

The section of the existing path between Whites Avenue and Waverley Avenue is wide enough (approximately 10 feet) to accommodate shared use between pedestrians and cyclists. Other than surface maintenance and beautification, there is little that needs to be done to the path in this section. The concrete wall that separates the Linear Park path from Whitney Towers could be used for a community art project; it could become a permanent mural.

Near Moxley Playground, the existing unpaved path should be paved. It stretches a few hundred feet before disappearing into grass behind the baseball diamond. From here, a new paved path – part of the proposed Community Path – should be constructed. To get to Main Street, the Path would cut through the landscaped area between the Nardone Funeral Home parking lot and the D'Amico Dental office parking lot. This piece of property owned by the Nardone Funeral Home is approximately 15 feet wide, so it could accommodate the Path. The steel fence between this strip of property and Main Street would need to be dismantled. Curb cuts should be installed on both sides of Main Street where the Path connects to the road.

## **Option 2: Alternative Route**

As an alternative, the Path could run south on Waverley Avenue toward Main Street in the form of a cycle track, as opposed to continuing as a shared-use path through Moxley Park. This would allow Path users to use the existing traffic signal at the intersection of Waverley Avenue and Main Street. This would avoid the creation of a new intersection further west on Main Street.

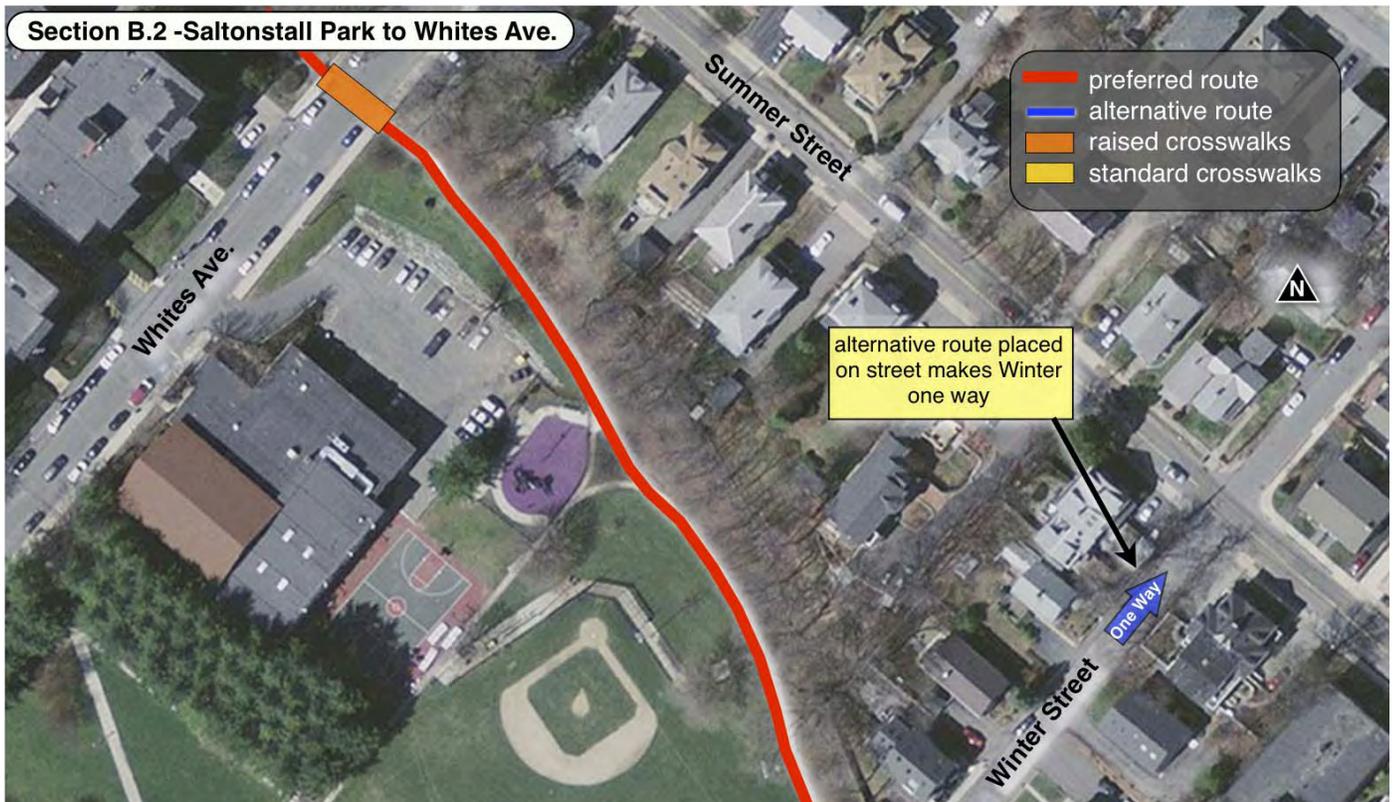
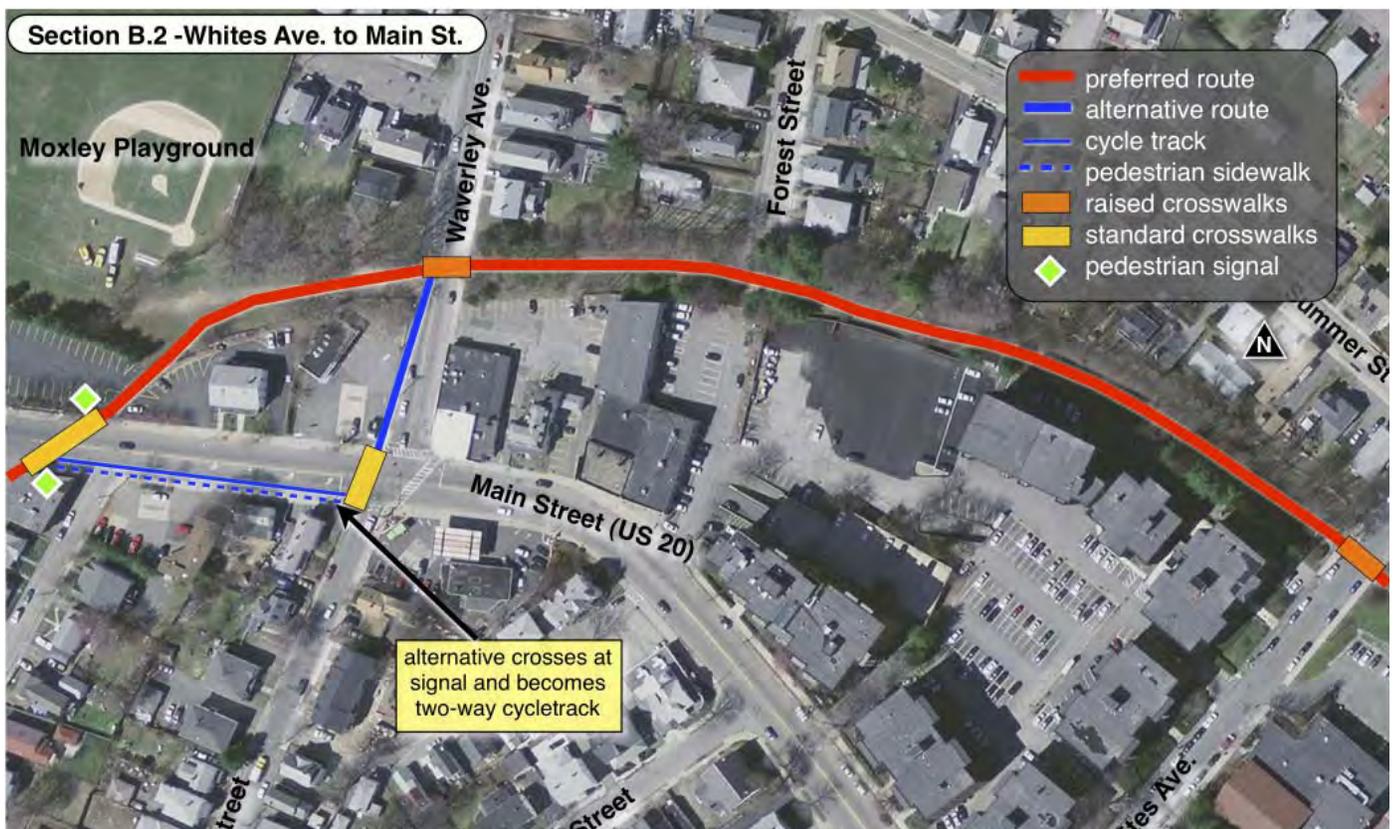


Figure 5.20  
*Connection to Saltonstall Park*

Figure 5.21  
*Linear Park section*



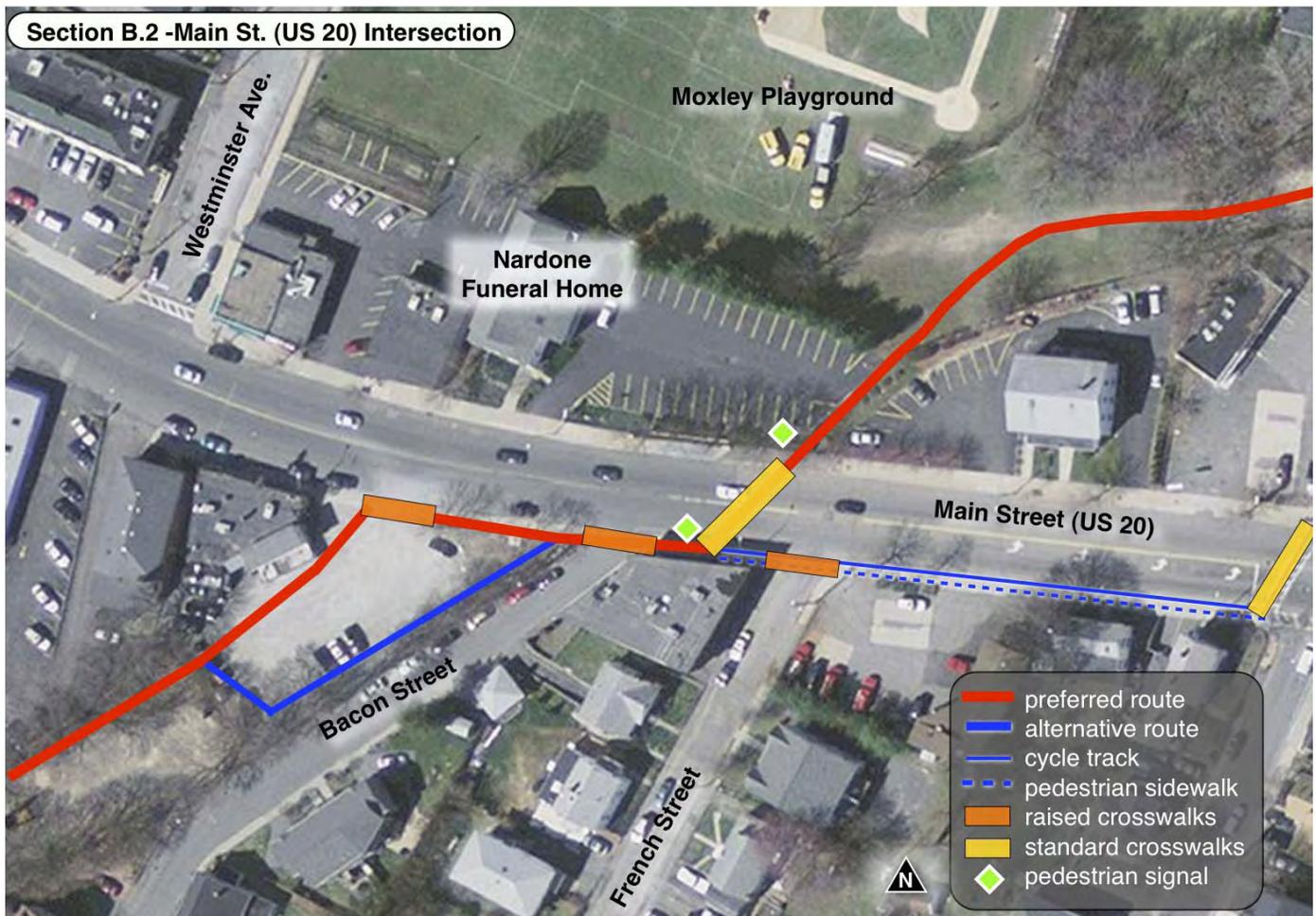


Figure 5.22  
Main Street crossing

Figure 5.23  
Main Street crossing to DPW corridor  
Source: Michelle Moon



## Section B.3 - Main Street to Pleasant Street

### Existing Conditions and Land Use

At the corner of Bacon and Main streets, there is an unpaved dirt parking lot and several fenced-in lots filled with debris and other materials. Beyond the parking lot, the former railroad ROW continues as an unpaved dirt path toward Howard Street. The Watertown DPW currently utilizes this space to store vehicles and machinery. This area will be referred to as the DPW Corridor for the remainder of this report.

Residential properties surround the area to the east and north on Bacon Street, and several industrial sites lie to the west on Howard Street. Howe Park is located at the corner of Bacon and Pleasant streets. The Charles River Reservation Path is located to the south of Pleasant Street.

### Ownership

The Town of Watertown owns the majority of the DPW Corridor as well as the surrounding streets. The City of Cambridge, however, owns a strip of land on the western portion of the DPW Corridor.

### Constraints

The crossing of Main Street poses a significant challenge, as the road is heavily used by fast-moving traffic. The intersections at Main and Howard streets and Main and Bacon streets are also relatively dangerous due to the amount of vehicular traffic that goes through them. On Main Street, Path users could be redirected to the Waverley Avenue crossing where there is an existing crosswalk with a light. However, this route would be relatively indirect. If another pedestrian crosswalk were to be added on Main Street further west, this could potentially slow traffic.



**Figure 5.24**

*Parking lot north of DPW staging area;*

*Source: Michelle Moon*



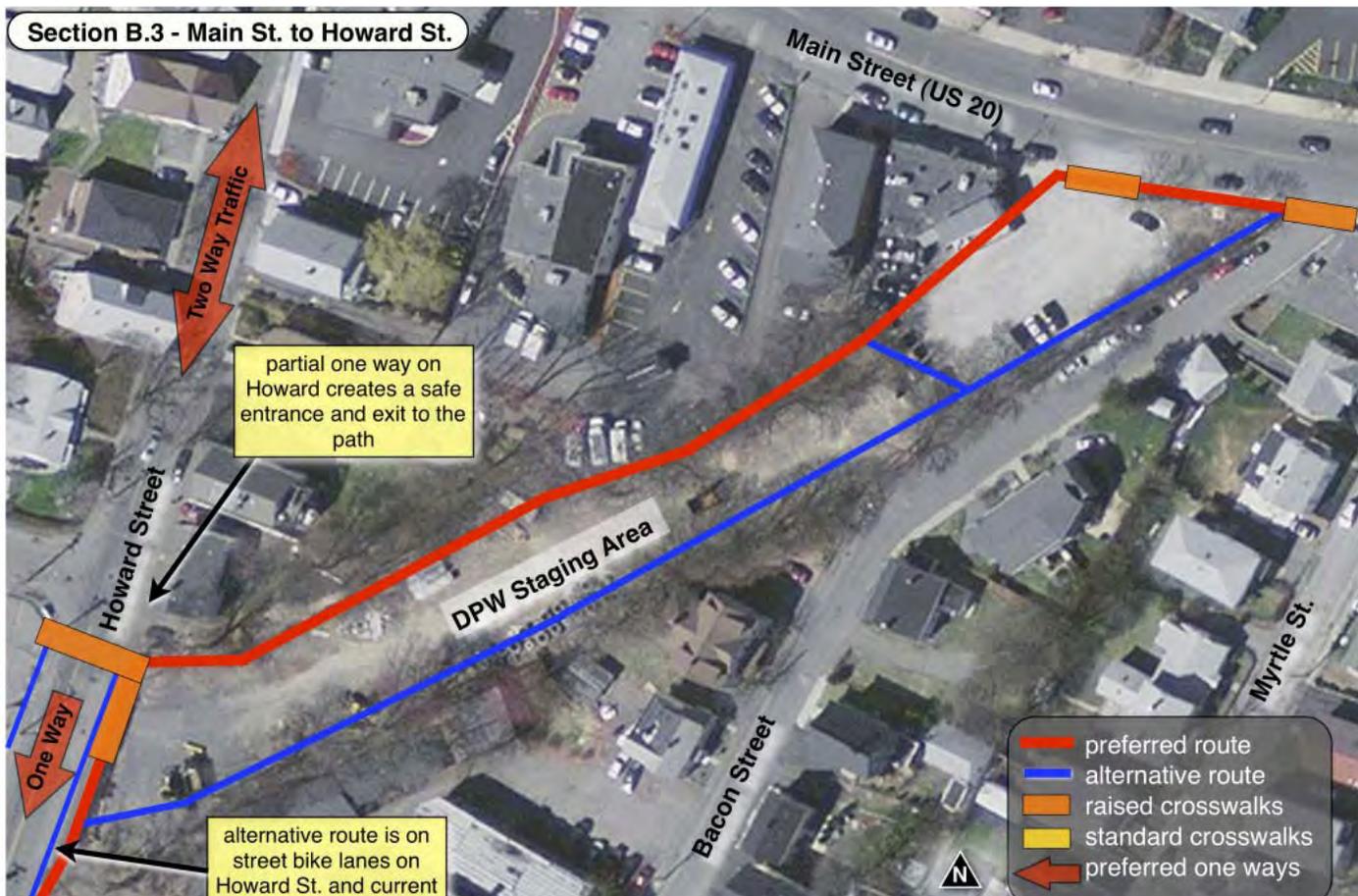


Figure 5.25  
DPW corridor to  
Howard Street

There are several fences along Bacon Street that are not aesthetically pleasing. Shrubs or a hedge could be planted in their place to separate the different spaces. Howard Street has a steep grade and is heavily used by trucks, and Pleasant Street is very busy street. It is already difficult for pedestrians to cross from Howard Street to access the Charles River Reservation Path.

### Option 1: Preferred Route

For safety purposes, a pedestrian/bicyclist-actuated signal button should be installed on Main Street where the proposed Path would cross the street. A clear crosswalk with painted lines should also be installed to improve the safety of the crossing. South of Main Street, the Path would continue into the Town's property, which runs diagonally southwest from Main Street to Howard Street. The Town's concept plan is to redevelop this property into a parking lot for the DPW staging area, parking for residents and the Community Path. The Path would run along the northwestern portion of this property. This concurs with the Town's concept plan for this site.

At Howard Street, the Community Path would be split. Pedestrians would be directed to walk on the existing sidewalk, and an on-street bike lane would be striped for the bicycles. It is also recommended that Howard Street be made into a one-way street, with traffic flowing toward Pleasant



Street. This would increase safety for the new pedestrian and bike traffic that would be created. Another option would be to make the northern part of Howard Street into a two-way street to allow for residents of the area to circulate easily.

A curb cut should be added at the entrance to the Charles River Reservation Path at the intersection of Howard and Pleasant streets. In addition, either a traffic or pedestrian light should be installed to make the crossing safer for pedestrians.

## Option 2: Alternative Route

The alternative would be to site the Path along the southeastern edge of the DPW staging area.

## Endnotes

- 1 Watertown Town Council. "An Ordinance Governing the General Standards and Requirements for Curbs and Sidewalks." 19 February 2010.
- 2 Robert Bray interview, March 31, 2010.
- 3 Watertown Planning Board. "Zoning Ordinance." <http://www.watertown-ma.gov/DocumentView.aspx?DID=1964>.

**Figure 5.26**  
*Connection to Charles River Reservation Path*



## Chapter 6

# DESIGN

This section outlines design standards and guidelines that are recommended for use when constructing the Community Path. The Field Projects team considered these standards when designing the Path and determining where to site it. The goal of following these standards is to help ensure that the Path is safe for pedestrians and bicyclists alike.

The following standards come from several local, regional and national sources. Specifically, those for multi-use paths are from American Association of State Highway and Transportation Officials' (AASHTO) 1999 *Guide for the Development of Bicycle Facilities*. The design standards for cycle tracks are from Northeastern University Transportation Engineer professor Peter Furth, the City of Portland Bureau of Transportation's 2010 report *Bikeway Facility Design: Survey of Best Practices*, and Alta Planning and Design's 2009 report *Cycle Tracks: Lessons Learned*.

### Multi-Use Path Widths

The recommended width for a two-way, paved multi-use path – also called a shared use path – is 10 feet.<sup>1</sup> The width can be reduced to 8 feet under some circumstances, particularly when bicycle and pedestrian use is expected to be low and grades are relatively flat. When use is expected to be high or grades are steep, paths may be as wide as 12 to 14 feet.

### Multi-Use Path Grades

Multi-use paths should have grades of no more than 5 percent.<sup>2</sup> Grades can be steeper for short sections when necessary, though it is recommended that paths be widened by 4 to 6 feet where grades are steep. AASHTO's *Design for the Development of Bicycle Facilities* provides the guide for grade restrictions and lengths:

Grade Restriction	Lengths
5-6%	for up to 800 ft
7%	for up to 400 ft
8%	for up to 300 ft
9%	for up to 200 ft
10%	for up to 100 ft
11+%	for up to 50 ft

Most of the Watertown Community Path is expected to run along a relatively flat corridor, though there is a gentle slope on Arsenal Street toward Watertown Square. There is at least one area – the section around the Patton Street bridge – that may require a steep grade. If the properties on either side of the bridge are made into graded slopes or hills to accommodate the Path, the grade would be about 5.5 percent (for up to about 200 feet on either side).

## Cycle Track Separation Devices and Widths

Cycle tracks are bicycle paths that are separated from pedestrian and vehicular traffic by a physical barrier, such as on-street parking, curbs, planting buffers, or bollards. They can also be grade-separated from roadways and sidewalks. The photos in Figures 6.1 and 6.2 show different types of barriers or separation devices.

**Figure 6.1**

*Vasser Street Cycletrack in Cambridge, MA;*  
*Source: Kris Carter*



**Figure 6.2**

*Kent Street Cycletrack in New York City;*  
*Source: Seth Holladay*



Cycle tracks are best suited for arterial roadways with higher motor vehicle speeds and volumes and roads with longer blocks and fewer cross-streets.<sup>3</sup> To show that cycle tracks are intended for bicyclists, pavement markings or different textures or colors should be used.<sup>4</sup>

A two-way cycle track should be at least 7.5 feet wide, with about 3.75 feet for each “lane.”<sup>5</sup> Wider is typically better, though recommended widths tend to vary depending on the bicyclist traffic volumes.

## Centerlines

A 4-inch painted centerline is recommended for cycle tracks that are more than 6.5 feet wide.<sup>6</sup> Similarly, a 4-inch yellow centerline is suggested for multi-use paths to separate opposite directions of travel.<sup>7</sup>

## Cycle Track Intersections

At intersections with driveways and low-volume cross streets, bicyclists in a cycle track should have the right-of-way.<sup>8</sup> At these crossings, the cycle track could have markings or a different coloration or texture to indicate that motor vehicles entering or exiting the driveways and cross streets are expected to yield. The grade of the cycle track should remain the same throughout the crossings. This applies to cycle tracks that are already at a higher grade than the roadway; the cycle tracks become “raised sidewalks” at the crossings.<sup>9</sup> The photo below shows an example of this.

At signalized intersections – like the one at Irving and Arsenal streets – several treatments or techniques can be used to improve safety conditions for bicyclists. The following examples are from Alta Planning and Design as well as Dr. Furth’s cycle track presentation.<sup>10</sup>

**Figure 6.3**

*Raised crosswalks provide safer crossings*  
*Source: Washingtonpost.com*



- Move the stop line for motor vehicles about 16 feet back, while allowing cyclists to wait closer to the intersection;
- Drop into a bicycle lane about 16 feet from the intersection;
- Remove parking within 16 feet of the intersection;
- Paint the cycle track or put down bike markings through the intersection;
- Only allow motor vehicles to turn left across a cycle track on a green arrow (protected left);
- Use a leading “thru” arrow, which allows bikes to cross the intersection before allowing motor vehicles to turn left across a cycle track;
- Use separate signal phases for motorists from signal phases for bicyclists, and use a bicycle signal head;
- Install a pedestrian/bicyclist-actuated signal button.

## Multi-Use Path Intersections

There are several improvements that can be made to intersections where a multi-use path crosses through an existing intersection like the one at Irving and Mount Auburn streets. AASHTO’s *Design for the Development of Bicycle Facilities* provides several suggestions, including the installation of a signal.<sup>11</sup> This could include a bicyclist/pedestrian-actuated signal button, which should be placed about 4 feet high. Another option, particularly for roads with high volumes of traffic, is to provide a refuge island to make a two-step crossing for path users. In addition, crossing distances can be shortened by using bump-outs.

Pavement markings should also be used at the crossing to clearly indicate to motorists the presence of the Path. Other options include raised crosswalks and colorized pavement crosswalks.

## Sidewalks and Curbs

An ordinance adopted by the Watertown Town Council in February 2010 sets out standards and requirements for curbs and sidewalks in town. It also outlines adequate widths for travel and parking lanes for different roadway classifications.<sup>12</sup>

- Travel lane width: 11 feet on principal arterials (Arsenal, Main, Mount Auburn and Pleasant streets) and minor arterials, and 10 feet for collectors and local roads; and
- Parking lane width: 7 feet in residential areas and 8 feet in commercial areas.

Under the ordinance, sidewalks are to have a “preferred clear walking surface of 5 feet, not including curbing with a minimum of 4 feet.”<sup>13</sup> They are to conform to the Americans with Disabilities Act and Massachusetts Architectural Access Board guidelines unless exempted by Watertown’s Superintendent of Public Works. In addition, at least 3 feet of clearance must be provided around obstructions like utility poles.

## 6.2 Cross Sections

Figure 6.4 depict cross sections for Arsenal Street between School Street and Irving Street and between Louise Street and Irving Street. They show existing conditions on Arsenal Street between School and Louise streets (with bike lanes) and Arsenal Street east of Louise Street (no bike lanes). Also shown is the recommended cross section, which includes a cycle track and extended sidewalk.

**Figure 6.4**  
*Cross sections along Arsenal Street*  
 Source: Eunice Kim

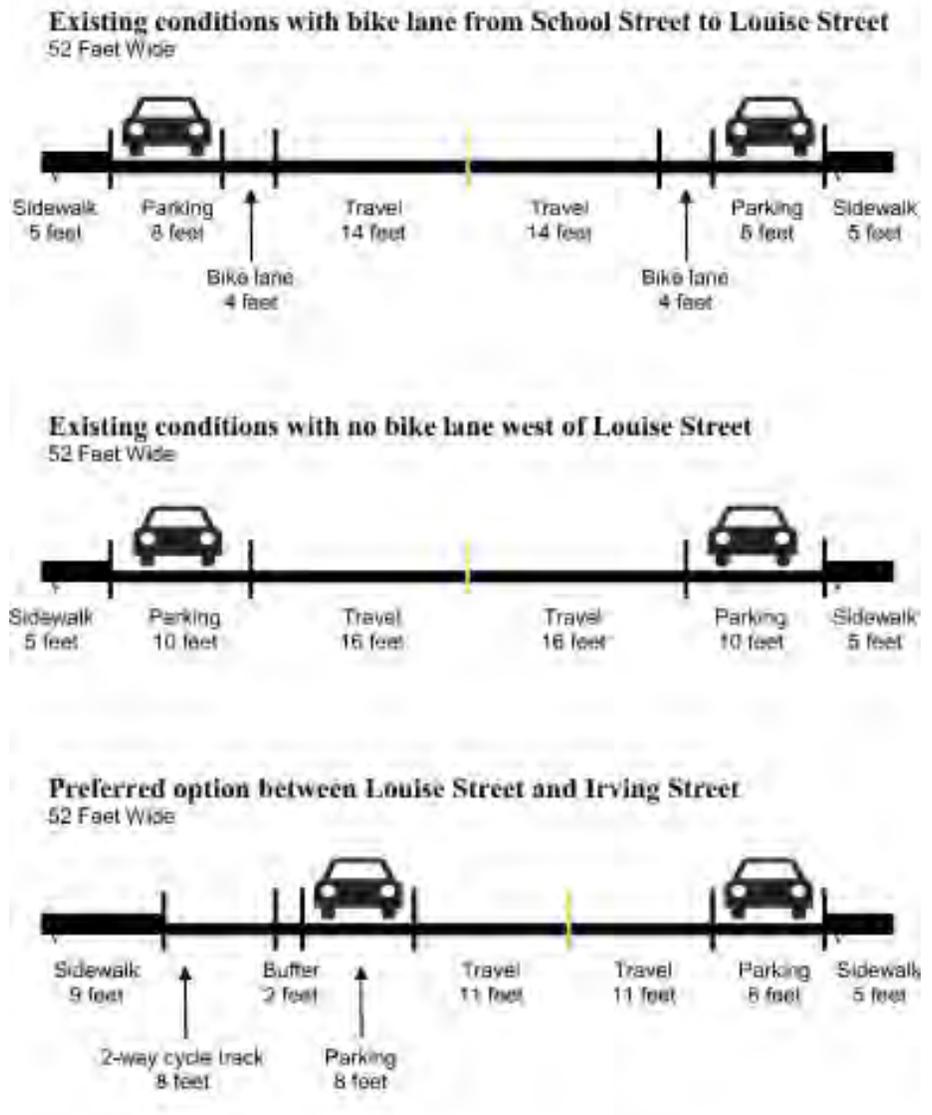
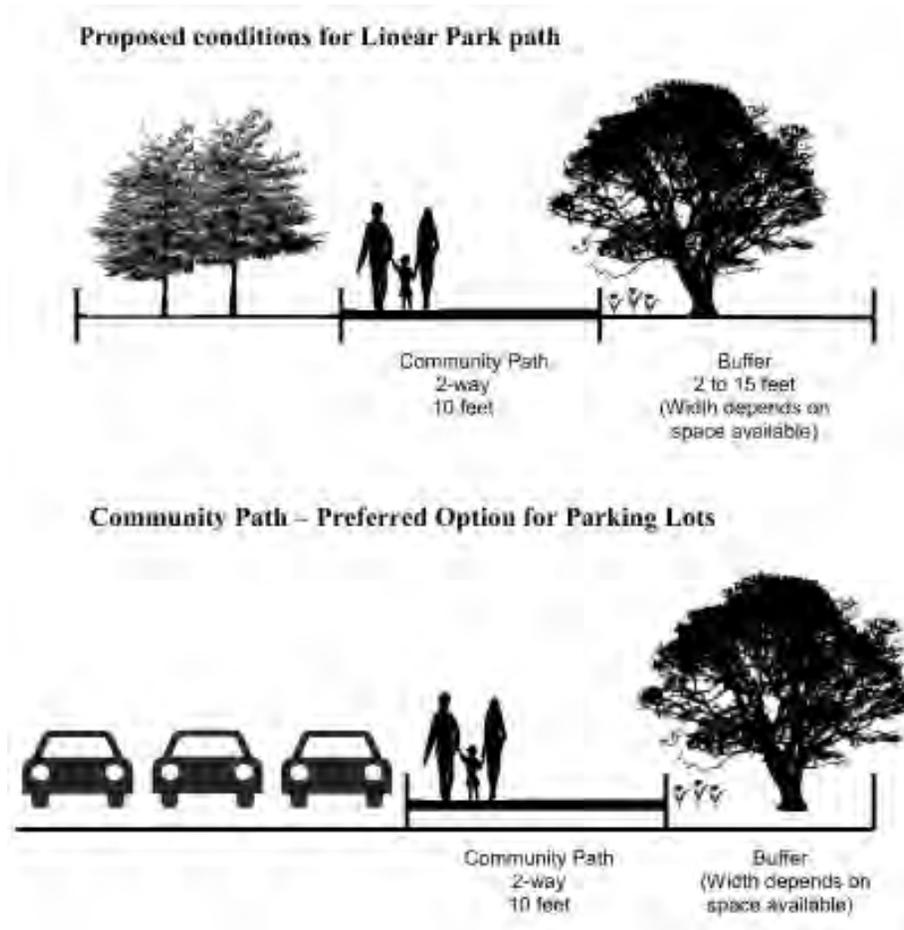


Figure 6.5 shows recommended cross sections for the existing Linear Park path and the municipal parking lots. In both areas, the team recommends that the proposed Community Path be 10 feet wide. The width of the vegetation will differ.



**Figure 6.5**  
*Cross sections for multi-use paths*  
Source: Michelle Moon

### 6.3 Conceptual Drawings

The Field Projects team developed conceptual drawings to help illustrate what different sections of the Community Path could look like. The drawings consist of three scenarios: a cycle track along Arsenal Street, a shared use path through the municipal parking lot behind the library in Watertown Square, and the existing Linear Park path.

## Cycle Track

The Field Projects team has recommended that a cycle track be constructed on Arsenal Street from School Street to Irving Street as part of the preferred route discussed in Section A.1 of Chapter 5. A cycle track is also recommended as an alternative route between Irving and Taylor streets. Figures 6.6 and 6.7 show a conceptual design of a cycle track on Arsenal Street.

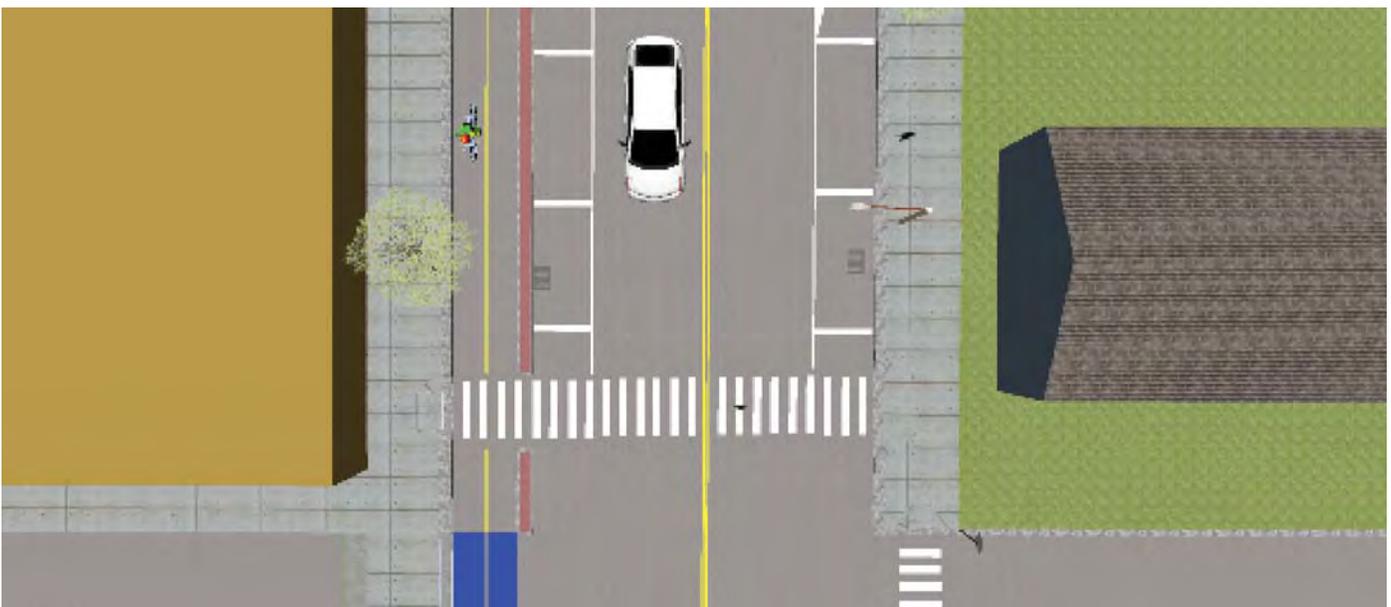
**Figure 6.6**

*View of an 8-foot-wide cycle track on Arsenal Street with a 2-foot-wide curb to act as a buffer from the parked cars;  
Source: Michelle Moon*



**Figure 6.7**

*Plan view of cycle track along Arsenal Street;  
Source: Michelle Moon*



## Municipal Parking Lot

Figures 6.8. and 6.9 show conceptual designs for the Community Path through the municipal parking lot behind the Watertown Free Public Library. That portion of the Path is explained in Section B.1 of Chapter 5. The conceptual designs include wide vegetative buffers, raised crosswalks, benches and additional lighting. There may only be a few opportunities to realize this ideal scenario, but modifications can be made where space is limited. For example, the width of the vegetative buffers can be reduced.

**Figure 6.8**

*View of the Path passing through municipal parking lots in Watertown Square;  
Source: Michelle Moon*



**Figure 6.9**

*Plan view of the Path in the municipal parking lots;  
Source: Michelle Moon*



## Shared Use Path

Figures 6.10 and 6.11 show conceptual designs of the existing Linear Park path, which is discussed in Section B.2 of Chapter 5. The designs include improvements to the existing path.

**Figure 6.10**

*Plan view of Linear Park path entrance*

*Source: Michelle Moon*



**Figure 6.11**

*Linear Park path entrance*

*Source: Michelle Moon*



## 6.4 Amenities

There are a number of amenities that would help make the Community Path safer and more attractive. They could also be used to improve the existing Linear Park path. Many of the amenities, which are listed below, are depicted in the conceptual designs and are merely suggestions.

### Convenience Amenities

- Benches
- Garbage cans
- Bike racks
- Picnic tables
- Drinking water fountains
- Educational signage
- Doggy bag stations

### Other Amenities

- Landscaping
- Bird box
- Community art
- Storage facilities

### Navigation

- Bicycle and pedestrian signs
- Pavement markings
- Directional signage
- Intersection signage for Path users

### Safety

- Bollards
- Gates
- Lights
- Signs with emergency call numbers
- Emergency phones

**Figure 6.12**

*Seating and brickwork along the Somerville Community Path;  
Source: Michelle Moon*



## Recommended Plants

There are many horticultural opportunities along the Path corridor. Because shared use paths and bike paths are linear, they have the tendency to only include a few species of plants. However, to make the Path more visually interesting, it is important to use a variety of plants. This would also increase the biodiversity in Watertown and create four seasons of interest. Perennials and annuals would provide color during the summer months, while magnolia trees, tulips and daffodils would provide color in the spring. Figures 6.13 and 6.14 show an example of this plant variety. A list of plants is also provided in Appendix D.

**Figure 6.13**

*Example of diverse plantings;*

*Source: Michelle Moon*



**Figure 6.14**

*Colorful perennial garden;*

*Source: Michelle Moon*



## Additional Design Elements

This section provides several ideas about how to design the Community Path and its corridor in a more interesting, bio-diverse and environmentally-friendly way. The following elements are suggestions.

- ▶ **Rain Gardens:** The municipal parking lot scenario in Chapter 6.3 offers environmental opportunities to address the issue of stormwater run-off through low impact design. The impervious surfaces of parking lots do not allow for stormwater run-off to infiltrate into the soil, instead directing the water to the sewer system. Installing rain gardens alongside the Community Path would allow for this stormwater to infiltrate the soil, thus alleviating pressure on the sewer system and providing natural irrigation.
- ▶ **Edible Plants:** There are opportunities to plant edible plants like blueberries and apple trees along the Path corridor in Sections B.2 and B.3. It is important to purchase grafted trees to ensure they are small and to help reduce the time it takes for a tree to start producing edible fruit. Educational signs should also be installed alongside the plants to inform Path users about the specific plants and which ones are safe to eat.
- ▶ **Habitat Areas:** Vegetation along the Path will help provide habitat for animals. For community or school projects, bird houses and feeders could be installed along the Path to help attract a greater diversity of wildlife.
- ▶ **Educational and Directional Signage:** Signs are an important element to direct and educate users and to help visually unify the Path. Maps depicting distances and places of interest would also help users navigate the Path. Educational signs could include information about historic Watertown.

**Figure 6.15**

*Example of a rain garden;  
Source: Pararie Restorations Inc.*



## Educational and Community Opportunities

There are many opportunities for the Town to partner with other organizations or public schools. Local garden clubs and community groups could help create the text for the signs or information kiosks along the Path. This would be a way to help engage local youth and help reduce Path-related costs. School groups of all ages could be invited to learn about horticulture and environmental science along the Path. Students could help with the maintenance of the Community Path during the summer. This would help meet several goals, including continued engagement of the community and proper maintenance of the Path.

The concrete wall that separates the Linear Park path from the Whitney Towers could be used for a community art project, which would result in a permanent mural. Various issues would need to be addressed, including artist choice and payment, necessary approvals, community involvement, long-term maintenance plans and support from abutters. Some community groups, including the Watertown Middle School Community Mural Club, have already expressed an interest in seeing this mural become a reality. This wall is approximately 210 feet long, 7 feet high and 1,470 square feet in size.

## Endnotes

- 1 American Association of State Highway and Transportation Officials. "Guide for the Development of Bicycle Facilities." [http://safety.fhwa.dot.gov/ped\\_bike/docs/b\\_aashtobik.pdf](http://safety.fhwa.dot.gov/ped_bike/docs/b_aashtobik.pdf).
- 2 Ibid, page 39.
- 3 City of Portland Bureau of Transportation. "Bikeway Facility Design: Survey of Best Practices." <http://www.portlandonline.com/transportation/index.cfm?c=44674&a=266116>.
- 4 Alta Planning and Design. "Cycle Tracks: Lessons Learned." [http://www.altaplanning.com/App\\_Content/files/pres\\_stud\\_docs/Cycle%20Track%20lessons%20learned.pdf](http://www.altaplanning.com/App_Content/files/pres_stud_docs/Cycle%20Track%20lessons%20learned.pdf).
- 5 Peter Furth. "Cycle Tracks: Concepts and Design Practices; Part 1: General Design, Intersection Safety Treatments and Safety Studies." [http://www.apbp.org/resource/resmgr/webinars/ada\\_tp\\_3-17-10\\_full\\_slide\\_se.pdf](http://www.apbp.org/resource/resmgr/webinars/ada_tp_3-17-10_full_slide_se.pdf).
- 6 Alta Planning and Design. "Cycle Tracks: Lessons Learned." page 12.
- 7 American Association of State Highway and Transportation Officials. "Guide for the Development of Bicycle Facilities."
- 8 Alta Planning and Design. "Cycle Tracks: Lessons Learned." page 6.
- 9 Peter Furth. "Cycle Tracks: Concepts and Design Practices; Part 1: General Design, Intersection Safety Treatments and Safety Studies."
- 10 Peter Furth. "Cycle Tracks: Concepts and Design Practices; Part 1: General Design, Intersection Safety Treatments and Safety Studies;" American Association of State Highway and Transportation Officials. "Guide for the Development of Bicycle Facilities." page 7-9.
- 11 American Association of State Highway and Transportation Officials. "Guide for the Development of Bicycle Facilities." page 49.
- 12 Watertown Town Council. "An Ordinance Governing the General Standards and Requirements for Curbs and Sidewalks."
- 13 Ibid.





## Chapter 7

# IMPLEMENTATION

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This section outlines a strategy for developing the Community Path. It recommends short and long-term actions that the Town of Watertown can take to reach this goal. Some of the short-term actions, such as striping bike lanes, can be accomplished as the Town works toward achieving longer-term goals.

### Short-Term Actions

1. Stripe 5-foot bike lanes on both sides of Arsenal Street, extending them from the VHB property to Taylor Street.
2. Stripe 5-foot bike lanes on both sides of Howard Street.
3. Install a raised crosswalk with a pedestrian island on Mount Auburn Street between Taylor Street and Baptist Walk.
4. Remove the fences between the DPW Corridor and Bacon Street.
5. Make improvements to the Linear Park path, such as widening it near Saltonstall Park and creating a mural on the concrete wall near Whitney Towers Apartments.
6. Continue to publicize information about the Community Path and update the community on any progress.

### Long-Term Actions

1. Finalize the route for the Path after seeking enough feedback from the community. This could include making detailed maps of the route and site plans of specific properties.
2. Create a maintenance plan for the Path. It is recommended that

this plan be created by the Town of Watertown Department of Recreation (Parks & Fields division), the Tree Warden, DPW, DCDP and any other relevant departments. It should include tree and lawn care, garbage and debris collection, and snow removal.

3. Incorporate the Community Path project into the Town's future Comprehensive Plan. The project may need to be divided in several phases, particularly as properties become available or opportunities arise. If any zoning overlays need to be adopted, this should be addressed as the Path is incorporated into the Comprehensive Plan. Coordination with relevant Town departments and projects is necessary to ensure that the Path is implemented as efficiently as possible.
4. Apply for funding from state and federal governments. Another option is to seek private funding.
5. Obtain easements on properties through which the Path will pass. This may apply to the Watertown Square Plaza on Mount Auburn Street where the Path is proposed to run through the back parking lot.
6. Purchase properties through which the Path will pass such as the Patten Street parcel.
7. Reconfigure municipal parking lots in Watertown Square to accommodate the Path.
8. Create an on-street cycle track along Arsenal Street from School Street to Irving Street.
9. Create a graded slope on vacant parcels abutting the Patten Street bridge.
10. Redevelop the Watertown Department of Public Works staging area to include the Path.
11. Request proposals for construction-related surveys
  - a) Geophysical survey to scan for utility lines and other shallow subsurface obstacles;
  - b) Environmental survey to test the soil and groundwater quality in all excavation areas in order to protect construction workers; and
  - c) Engineering surveys to ensure soil and other engineering requirements are met.
12. Construct the remainder of the Path. When possible, construction activities should coincide with other Town projects in the area of the Path. Some existing landscaped areas will have to be disturbed in order to accommodate the Path. However, landscaped areas should be left intact whenever possible.
13. Maintain the Path according to the maintenance plan.
14. Continue to connect with community groups and other stakeholders who can help develop programs and projects related to the Path.



## Chapter 8

# CONCLUSION

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Based on research and site analysis, the Field Projects team has determined that it is feasible to design and implement the proposed Community Path in Watertown. The team has recommended preferred and alternative routes that meet local zoning regulations, follow design standards and include optional amenities. The team has also outlined short and long-term actions that the Town of Watertown can take to develop the Path.

Bicycle and pedestrian advocates continue to push for the Path's creation, backed by several Town officials. There also appears to be broad community support for the Path's development, though some residents and business owners have voiced concerns related to safety, parking, maintenance and funding. These issues need to be addressed to ensure that support from the community endures. Property constraints and barriers must also be overcome if the preferred route is to be implemented. Despite these challenges, the Community Path can be created, and it will help make Watertown a more attractive, sustainable and livable community.





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# APPENDIX A

## List of interviews

Name	Title	Date	Place of interview	Method
Jason Abrahams	Manager of Firestone Complete Auto Care	April 2, 2010	Firestone Complete Auto Care, 40 Arsenal Street, Watertown	In person
Robert Bray	Owner of 33 Mount Auburn Street	March 31, 2010	33 Mount Auburn Street, Watertown	In person
Joel Bennett	Coordinator, Friends of the Community Path	May 3, 2010	NA	Phone
Marcio Costa	Shift manager of Ufood Grill	April 2, 2010	Ufood Grill, 222 Arsenal Street, Watertown	In person
Dr. Domenic D'Amico	Dentist, proprietor of D'Amico Dental Associates	April 1, 2010	D'Amico Dental Associates, 359 Main Street, Watertown	In person
Louie Farese	Owner of 16-24 Mount Auburn Street (including Verona Restaurant property and adjacent parking lot)	March 25, 2010	Verona Restaurant, 18 Mount Auburn Street, Watertown	In person
Tom Fortmann	Involved in Lexington portion of the Minuteman Bikeway	February 15, 2010	NA	Email
Joey Glushko	Town of Arlington Planner	February 11, 2010	NA	Email
Ellen Hayes	Owner of Watertown Sportswear	March 25, 2010	Watertown Sportswear, 34 Mount Auburn Street, Watertown	In person
Steven Miller	Board member of Livable Streets Alliance	February 25, 2010	NA	Email
Carmine Nardone	Owner of Nardone Funeral Home	March 4, 2010	Watertown Town Hall, 149 Main Street, Watertown	In person
Chris Oldford	Owner of Midas	April 13, 2010	Midas, 76 Arsenal Street, Watertown	In person
Bernie O'Reilly	Owner of O'Reilly & Son Auto Body	April 13, 2010	O'Reilly & Son Auto Body, 32 Arsenal Street, Watertown	In person
Angelo Paolini	One of the owners of the Patten Street parcel	April 27, 2010	NA	Phone
Eric Weis	Trails Program Coordinator of East Coast Greenway Alliance	March 2, 2010	NA	Email
Receptionist	Bask Tanning	April 2, 2010	Bask Tanning, 222 Arsenal Street, Watertown	In person
Assistant Manager	American Tile Company	April 2, 2010	American Tile Company, 222 Arsenal Street, Watertown	In person
Associate	Bloom & Company	April 1, 2010	Bloom & Company, 60 Howard Street, Watertown	In person
Employee	Meat Spot	March 25, 2010	Meat Spot, 28 Mount Auburn Street, Watertown	In person
Employee	Fine European Furniture	March 25, 2010	Fine European Furniture, 19 Spring Street, Watertown	In person
Employee	Dyer Discount Liquors	March 25, 2010	Dyer Discount Liquors, 40 Mount Auburn Street, Watertown	In person
Receptionist	Martin and Malcolm Greene, Optometrists	March 25, 2010	Martin and Malcolm Greene, 31 Spring Street, Watertown	In person
Anonymous		February 12, 2010		Email



### Bike and pedestrian path would bypass Watertown Square's dangers

By Jen Thomas, Staff Writer

Wicked Local Wellesley

Posted Feb 25, 2010 @ 09:50 AM

WATERTOWN — A decades-old plan to connect the Minuteman Bikeway to the Charles River might finally have some legs — and wheels.

Beginning this spring, a section of the proposed path from School Street to Arlington Street along an abandoned rail line will be constructed with the help of state funds. The \$847,000 project will cover 2/3 of a mile, and will include the construction of a 10-foot-wide asphalt path with grass shoulders.

"It's been a really, long complicated process," said Janet Jameson, a member of the Watertown Bicycle and Pedestrian Committee, who said residents have been working toward a connector path since the 1980s. "The exciting part is that there is money to actually build the part from School to Arlington ... I hope in my lifetime to be able to see the full path built."

The eventual goal is to have a complete community path that will extend from the Minuteman path in Cambridge, through Watertown Square, and to the multi-use paths that run along the Charles River. An old railroad route that runs from Fresh Pond in Cambridge is seldom used and could more or less be the outline of a rail trail for the community.

Members of the Bicycle and Pedestrian Committee hope that an eventual trail will circumvent the high-traffic intersection at Watertown Square that proves so dangerous for cyclists and pedestrians.

"Getting through Watertown Square is daunting as it is, so this network would bypass that. That just makes sense," said Deb Peterson, a member of the Bike and Pedestrian Committee.

A research team of graduate students from Tufts University's Urban and Environmental Policy and Planning program are working with the town to determine just how a path could work.

"We're trying to figure out areas we can put the path, what are the obstacles, what kinds of designs make sense for the community, for business owners and for residents," said Kris Carter, a first-year student on the team.

Other than the section slated for construction this spring, the plan for the rest of the path is still uncertain.

"We hope that because this one segment is being built, we hope it will encourage more building," Jameson said.

Next Thursday, the Tufts team will host a community meeting to solicit community input on the fate of the path. The students are also collecting surveys and are hoping residents will help spur some action on the path.

"We want to make sure residents and business owners have a say in what happens next," Carter said.

The group is looking to identify all the property owners and working with them to discuss options for development.

"The idea is to have a way for people to get around town that isn't cars," Jameson said.

#### Community meeting about the path

Tufts graduate students will hold a community meeting Thursday, March 4, 7 p.m., in the Council chamber at Town Hall, 149 Main St. Tufts is also doing an online survey at [www.surveymonkey.com/watertownpath](http://www.surveymonkey.com/watertownpath).

Comments (3)

R\_Adams

5 days ago

Report Abuse

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# APPENDIX C

## Community One-Pager

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### Watertown Community Path

The Watertown Community Path is a proposed multi-use path that will provide pedestrians and bicyclists with a safe and easily accessible route through much of Watertown. A project spearheaded by the Town of Watertown, Watertown Bicycle and Pedestrian Committee and Watertown Citizens for Environmental Safety, the path is expected to run from the intersection of School and Arsenal streets in East Watertown, through Watertown Square and to the intersection of Pleasant and Howard streets near the Charles River. It will provide a link between the Minuteman Bikeway and the Charles River Reservation Path.

A team of graduate students from Tufts University's Urban and Environmental Policy and Planning program has recommended a route for the Community Path after three months of research, site analysis and community outreach. Approximately 1.75 miles in length, the preferred route roughly follows a former railroad right-of-way (ROW). It includes an 8-foot-wide, two-way cycle track – a bicycle path separated from traffic by a physical barrier – and a 10-foot-wide shared-use path. The preferred route and accompanying recommendations are as follows.

#### **Arsenal Street from School Street to Irving Street**

- Cycle track and extended sidewalk on the northern side of Arsenal Street

#### **Irving Street to Mount Auburn Street**

- Off-street shared use path along the former railroad ROW
- Raised crosswalk and pedestrian island on Mount Auburn Street

#### **Mount Auburn Street to Winter Street**

- Off-street shared use path along Baptist Walk and through the municipal parking lots

#### **Winter Street to Main Street**

- Widened and paved Linear Park path

#### **Main Street to Pleasant Street**

- Crosswalk and pedestrian signal at Main Street
- Off-Street shared use path through the Town's property between Bacon and Howard streets
- On-street bike lanes on Howard Street
- Pedestrian signal at the intersection of Howard and Pleasant streets

The Tufts University research team also outlined alternative routes for the Community Path. To see these alternative routes and detailed maps of each section, please read the research team's full report on the Town's website. To ask questions, provide comments, or get involved, contact Danielle Evans, Senior Planner at the Town of Watertown Department of Community Development and Planning at (617) 972-6417 or [devans@watertown-ma.gov](mailto:devans@watertown-ma.gov).



# APPENDIX D

## Plant List

### Section A.2 and B.1: The Parking Lots

Many plants included are good for rain gardens

Both lists can be adapted to site specific locations

Botanical name	Common Name	Seasonal or Botanical Interest	Additional Benefits
<b>Trees</b>			
<i>Acer x freemanii</i>	Freeman Maple	Fall interest	
<i>Carya ovata</i>	Shagbark Hickory	Ornamental bark	Good for dry soils
<i>Corylus avellana</i>	American Hazelnut		
<i>Ginkgo biloba</i>	Ginkgo	Very unique leaves and fruit	Good for city environments
<i>Gleditsia triacanthos var. inermis</i>	Thornless Honeylocust	Fall interest	
<i>Koelreuteria japonica</i>	Golden Raintree	Bright yellow flowers	Good for dry soils
<i>Magnolia x loebneri</i>	Magnolia Leonard Messel	Pink flowers in spring	
<i>Magnolia stellata</i>	Star Magnolia	White flowers in spring	
<i>Picea</i>	Spruce	Color all year round	
<i>Platanus x hispanica</i>	London Planetree	Bark that peels	Good for city environments
<i>Quercus palustris</i>	Pin Oaks Green Pillar	Fall interest	Branches grow upright
<i>Quercus phellos</i>	Willow Oak	Unique willow shaped leaves	
<i>Quercus x warei</i>	Long Regal Prince	Bicolor leaves	
<i>Ulmus americana</i>	Elm	Good fall color	Disease resistant cultivar
<b>Shrubs</b>			
<i>Clethra alnifolia</i>	Clethra-Ruby Spice		Good in many types of soil
<i>Cornus alba or Cornus kousa</i>	Red Twig Dogwood	Fall color, in winter has red stems	
<i>Forsythia</i>	Forsythia	Spring interest, yellow flowers	
<i>Illex verticillata</i>	Winterberry	Winter interest	Native plant
<i>Pieris japonica</i>	Pieris	Spring interest, blooms for long period of time	Good in soil types and conditions
<i>Rhododendron</i>	Rhododendron	Spring interest- variety of colors	Green all year round
<b>Perennials</b>			
<i>Echinacea purpurea</i>	Purple Coneflower	Large purple flowers	Native plant
<i>Lavandula</i>	Lavender	Purple color, very fragrant	
<i>Miscanthus</i>	Miscanthus	Tall grass, good fall color, winter interest	
<i>Narcissus</i>	Daffodil	Early spring interest, many varieties	
<i>Nepeta</i>	Catmint	Purple color , very fragrant	
<i>Perovskia</i>	Russian Sage	Purple color	
<i>Rudbeckia</i>	Black-eye Susan	Large yellow flowers	Native plant
<i>Tulipa</i>	Tulip	Early spring interest, many varieties	

## Section A.2, A.3, B.2, B.3: Multi-use path with vegetated buffer

Botanical name	Common Name	Seasonal or Botanical Interest	Benefits
<b>Trees</b>			
<i>Acer japonica</i>	Japanese Maple	Unique leafs and has red color	
<i>Acer x freemanii</i>	Freeman Maple	Fall interest	
<i>Betula</i>	River or Paper Birch	Interesting bark	
<i>Carya ovate</i>	Shagbark Hickory	Ornamental bark	Good for dry soils
<i>Ginkgo biloba</i>	Ginkgo	Very unique leaves and fruit	Good for city environments
<i>Gleditsia triacanthos var. inermis</i>	Thornless Honeylocust	Fall interest	
<i>Koelreuteria japonica</i>	Golden Raintree	Bright yellow flowers	Good for dry soils
<i>Magnolia x loebneri</i>	Magnolia Leonard Messel	Pink flowers in spring	
<i>Magnolia stellata</i>	Star Magnolia	White flowers in spring	
<i>Malus domestica</i>	Apple Tree	Pink flowers, fruit	Apples
<i>Picea</i>	Spruce	Color all year round	
<i>Prunus</i>	Cherry Tree		
<i>Platanus x hispanica</i>	London Plane Tree	Bark that peels	Good for city environments
<i>Quercus palustris</i>	Pin Oaks Green Pillar	Fall interest	Branches grow upright
<i>Quercus phellos</i>	Willow Oak	Unique willow shaped leaves	
<i>Quercus x warei</i>	Long Regal Prince	Bicolor leaves	
<i>Ulmus americana</i>	Elm	Good fall color	Disease resistant cultivar
<b>Shrubs</b>			
<i>Buddleja</i>	Butterfly Bush	Purple flowers in summer	Attract butterflies
<i>Clethra alnifolia</i>	Clethra-Ruby Spice	Fragrant rose-pink flowers	
<i>Cornus alba</i>	Red Twig Dogwood	Good fall color and in winter stems are red	Grows in different soil types
<i>Cornus kousa</i>	Dogwood	Good fall color	Grows in different soil types
<i>Forsythia</i>	Forsythia	Spring interest, yellow flowers	
<i>Fothergilla gardenii</i>	Dwarf Fothergilla Mount Airy	Unique flowers	
<i>Pieris japonica</i>	Pieris	Early spring interest	Grows in different soil types
<i>Rhododendron</i>	Rhododendron	Spring interest, variety of colors	Grows in different soil types
<i>Rhus glabra</i>	Smooth Sumac	Fall and winter interest	Native plant
<i>Vaccinium Uliginosum</i>	Bog Blueberry	Produces blueberries	Blueberries to eat
<b>Perennials</b>			
<i>Echinacea purpurea</i>	Purple Coneflower	Large purple flowers	Native plant
<i>Lavandula</i>	Lavender	Very fragrant	
<i>Miscanthus</i>	Miscanthus Purpurascens	Foliage turns red-orange	
<i>Monarda</i>	Bee balm	Large red flowers	Native plant
<i>Narcissus</i>	Daffodils	Early spring interest, many varieties	
<i>Nepeta faassenii</i>	Catmint	Purple color , very fragrant	
<i>Perovskia</i>	Russian Sage	Purple color	Can tolerate poor soil
<i>Phlox</i>	Phlox	Fall interest , many varieties	
<i>Rudbeckia hirta</i>	Black-Eye Susan	Large yellow flowers	Native plant
<i>Tulipa</i>	Tulip	Early spring interest, many varieties	
<i>Iris</i>	Iris	Early spring interest, many varieties	

# APPENDIX E

## Additional conceptual designs

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*Below: Alternative view of the Path through the municipal parking lots*

*Source: Michelle Moon*



*Below: Alternative view of the Path through the municipal parking lots*

*Source: Michelle Moon*





*Above: Example of seating and landscaping  
Source: Michelle Moon*

*Below: Plan view of the Path through the  
municipal parking lot on Winter Street  
Source: Michelle Moon*



*Below: View of Path through the municipal  
parking lot on Winter Street  
Source: Michelle Moon*



# APPENDIX F

## Frequently asked questions

### Watertown Community Path Frequently Asked Questions

#### 1. What is the Watertown Community Path?

The Watertown Community Path (the “Community Path”) is a proposed multi-use path that will provide a link between the 18-mile Charles River Reservation Path and the Minuteman Bikeway, which extends 11 miles from Cambridge to Bedford. The path will run from the intersection of School and Arsenal streets to Watertown Square, roughly following a former railroad right-of-way that is 1.1 miles long. From there, the path will connect to the existing Linear Path behind Town Hall and continue to Pleasant Street where it will hook up to the Charles River Reservation Path (see attached map).

The Community Path project is part of a broader effort to augment the multi-use network of paths and trails in the region. For example, the Massachusetts Department of Conservation and Recreation is expected to start construction this spring on the first phase of the future 1.75-mile multi-use path known as the Charles River Connector Rail Trail. When complete, the rail trail will connect to Fresh Pond and then to the Minuteman Bikeway and Somerville Community Path. The first phase of work will be to build the segment of the rail trail that connects to the Community Path at School Street and stretches to Grove Street in Watertown, following the former railroad right-of-way. In addition to providing these regional links, the Community Path also provides an important opportunity to link portions of Watertown, particularly across Watertown Square, in an accessible and safe manner.

#### 2. Who is proposing to develop the Community Path?

The Community Path is a project being spearheaded by the Town of Watertown’s Department of Community Development and Planning, the Watertown Bicycle and Pedestrian Committee, and Watertown Citizens for Environmental Safety. Graduate students from Tufts University’s Urban and Environmental Policy and Planning program are working to complete a conceptual design of the path. They will also recommend implementation steps that the Town of Watertown can take to help see that the path is successfully developed.

#### 3. When will the Community Path be constructed?

The Community Path is not currently a funded project; therefore it does not have an identified construction date. The work being done by the Tufts University students is the first step in identifying and refining the details of the project so that it can eventually become a reality.

#### 4. How much will the project cost, and who will pay for it?

There is not a cost estimate for the project at this point; it would be premature given that the path has not yet been designed. Once the project begins to be clarified, then details like project costs and funding sources can be pursued. The project can be paid for in a variety of ways, including the Town’s capital

improvement process, state or federal grants, developer contributions, or other private contributions.

#### 5. What are the benefits of building the Community Path?

The Community Path will not only provide a link in the region’s network of paths and trails, but it will also offer pedestrians and cyclists an easily accessible route through much of Watertown, including Watertown Square. The path will also increase the amount of open space in town and provide pedestrians and cyclists a safe connection to businesses, parks, playgrounds, and other recreational and cultural facilities. Vehicular traffic could also be reduced, which would ease congestion and benefit the environment. Also, by providing safe alternative routes within Town, it encourages residents to remain local when shopping and dining, thereby encouraging the economic growth of the community.

#### 6. Who owns the land where the Community Path is likely to be built?

The entire route has not yet been determined, but the Town of Watertown owns much of the land along the proposed Community Path, including two municipal parking lots near Town Hall. Other properties are owned by private parties. Several of those property owners have agreed to allow the Community Path to cross their properties. Discussions with other property owners still need to occur.

#### 7. Could the land be used for another purpose?

A lot of the land along the proposed path is underutilized but could not likely be used for another purpose due to size and other constraints. For example, there are several properties (such as one on Patton Street) that are small and sitting vacant, collecting trash and debris. Other pieces of land along the possible route of the path are part of public or private parking lots, which would not likely be developed unless the entire lots were to be redeveloped.

#### 8. Who is expected to use the Community Path?

Watertown residents of all ages, including pedestrians, bicyclists, parents with strollers, and even commuters, will likely use the Community Path. When the region’s network of paths and trails is complete, residents from surrounding towns may also use the path as they cross through the Watertown portion.

#### 9. How will the Community Path affect property values in the area?

Numerous studies have shown that the average value of properties along similar paths is higher than that of properties further away. One such study in 2006 examined home sales in seven Massachusetts towns through which the Minuteman Bikeway and Nashua River Rail Trail run. It found that “homes near these rail trails sold at 99.3% of the list price as compared

*Compiled by the student research team from the Urban & Environmental Policy & Planning graduate program at Tufts University*

to 98.1% of the list price for other homes sold in these towns.”<sup>[1]</sup> The study also showed that home sales near trails sold in an average of 29.3 days as compared to 50.4 days for other homes.<sup>[2]</sup>

A study of six different multi-use trails conducted in 2001 by the University of Indiana found that 86% to 95% of neighboring property owners saw either positive effects or no effects on their property values as a result of a trail. In the same study, between 81% and 93% reported it was easier for them to sell their property.<sup>[3]</sup> In addition, a research study conducted by the University of Cincinnati in 2008 concluded that sale prices near a path increased by \$7.05 for every foot closer a property is located to the trail.<sup>[4]</sup>

**10. Will the Community Path increase crime in the area?**

Studies conducted across the country have found that paths and trails do not increase crime. For example, a 1998 Rails-To-Trails Conservancy study looked at 372 trails in the United States to document and review the extent of crime on rail-trails.<sup>[5]</sup> It found that only 11 rail-trails in 1995 and 10 rail-trails in 1996 experienced a major crime such as a mugging or assault.<sup>[6]</sup> That is only 3 percent of the responding trails. In addition, only a fourth of rail-trail managers reported any type of minor crime such as littering or graffiti.<sup>[7]</sup> The following statistics from the study are for urban rail-trails:

- The national rate of burglary in urban areas is 1,117 incidents per 100,000 inhabitants; none of the urban rail-trails reported burglary to adjacent homes in 1996

- 5% reported trespassing
- 26% reported graffiti
- 24% reported littering
- 22% reported sign damage
- 18% reported unauthorized motorized use

**11. How can Watertown residents provide input or express concerns about the Community Path?**

Residents are encouraged to provide comments. Comments can be sent to Danielle Evans, Senior Planner with the Town of Watertown Department of Community Development and Planning ([devans@watertown-ma.gov](mailto:devans@watertown-ma.gov)), Deborah Peterson with the Watertown Citizens for Environmental Safety ([deb.peterson@verizon.net](mailto:deb.peterson@verizon.net)), or Janet Jameson with the Watertown Bicycle and Pedestrian Committee ([janet\\_jameson@hms.harvard.edu](mailto:janet_jameson@hms.harvard.edu)).

[1] Craig Della Penna. *Home Sales Near Two Massachusetts Trails*. Northampton: The Murphys Realtor, Inc. 2006, [http://www.greenway.org/pdf/ma\\_home\\_sales.pdf](http://www.greenway.org/pdf/ma_home_sales.pdf).  
 [2] Ibid.  
 [3] Wolter, Stephen & Lindsey, Greg. Summary Report Indiana Trails Study. Indiana University, November 30, 2001  
 Family Residential Property Values. University of Cincinnati, 2008.  
 [4] Karadeniz, Duygu. The Impact of the Little Miami Scenic Trail on Single Family Residential Property Values. University of Cincinnati, 2008.  
 [5] Tammy Tracy and Hugh Morris. *Rails-Trails and Safe Communities, The Experience of 372 Trails*. Washington D.C.: Rails-To-Trails Conservancy, 1998, [http://safety.fhwa.dot.gov/ped\\_bike/docs/rt\\_safecomm.pdf](http://safety.fhwa.dot.gov/ped_bike/docs/rt_safecomm.pdf).  
 [6] Ibid, page 4.  
 [7] Ibid, page 7.

**How can residents get more information about the Community Path?**

Residents can contact the Town of Watertown’s Department of Community Development and Planning, Watertown Bicycle and Pedestrian Committee or Watertown Citizens for Environmental Safety for more information. Danielle Evans, Deborah Peterson and Janet Jameson can be reached by their email addresses, which are listed above.

*This FAQ was compiled by a research team at Tufts University in the graduate program for Urban and Environmental Policy*



Compiled by the student research team from the Urban & Environmental Policy & Planning graduate program at Tufts University

# APPENDIX G

Community meeting flyer

## The Watertown Community Path Public Meeting - March 4th

### What is the Path?

The Watertown Community Path is a proposed multi-use path that will provide a link between the 18-mile Charles River Reservation Path and the Minuteman Bikeway. It will run from the intersection of School and Arsenal streets through Watertown Square to Pleasant Street, providing residents with a safe and accessible route through town.

### Who is conducting this?

Graduate students from Tufts University's Urban and Environmental Policy and Planning program are working to complete a conceptual design of the proposed path.

### How do I fit in?

The planning team from Tufts University would like to get your input on the proposed path. We invite you and other members of the community to attend a meeting about the Watertown Community Path and participate in a discussion about its design and development.

7:00PM

Watertown Town Hall  
Council Chambers  
149 Main Street



proposed path shown in black

Come learn more about the project and express your thoughts, wishes, or concerns

Can't Make It? Fill out and return the enclosed survey or visit: [www.surveymonkey.com/s/watertownpath](http://www.surveymonkey.com/s/watertownpath)

The Watertown Community Path is a project spearheaded by:

- Town of Watertown's Department of Community Development and Planning
- Watertown Bicycle and Pedestrian Committee
- Watertown Citizens for Environmental Safety

For comments about community path please contact:

Danielle Evans, Senior Planner at  
[devans@watertown-ma.gov](mailto:devans@watertown-ma.gov)

For more information about the meeting please contact: [kristopher.carter@tufts.edu](mailto:kristopher.carter@tufts.edu)

# APPENDIX H

## Community Survey

Watertown Community Path Survey

Gender (Circle one): M F

Age (Circle one): 0-18 18-25 25-35 35-45 45-55 55-65 65-75 75+

\*Your Address: \_\_\_\_\_

City: \_\_\_\_\_

\*This information is used for validation purposes and is strictly confidential to the Tufts University Research Team

**Please answer the following statements about the proposed Watertown Community Path**  
(Circle one answer per question)

		Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree
1.)	I would use the path to access Watertown Square shops and restaurants	1	2	3	4	5
2.)	I would use the path for exercise and recreation	1	2	3	4	5
3.)	I would use the path to commute to school or work	1	2	3	4	5
4.)	I would not use the path for any purpose	1	2	3	4	5
5.)	I have concerns about safety in the area of the path	1	2	3	4	5
6.)	I have concerns that the path will negatively impact my property	1	2	3	4	5
7.)	I view parks and open space as important to my community	1	2	3	4	5
8.)	I support the creation of the Watertown Community Path	1	2	3	4	5
9.)	Current parking on Arsenal Street is at capacity	1	2	3	4	5
10.)	I would use the community path to access the Charles River	1	2	3	4	5

**Please answer the following questions with as much detail as you can provide (use back of page if needed):**

1. Have you heard about the path project before today? If so where, and what have you heard?
  
2. What concerns, if any, do you have about the Watertown Community Path?
  
3. What potential benefits do you see from the construction of the path?
  
4. On a scale of 1 (very unsupportive) to 5 (very supportive) how would you rate your feelings about the path project?

1      2      3      4      5

# APPENDIX I

## Somerville Community Path

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*The Somerville Community Path case study is located in the appendix because the interview occurred too late to directly inform the Research Team's decisions regarding the Watertown Community Path. However, some of the lessons learned from Somerville are directly applicable to Watertown and the following analysis may be useful for proponents of the path.*

According to Mr. Joel Bennett of the Friends of the Community Path, the Somerville Community Path was originally planned and constructed as two segments. The segment running from Davis Square to Alewife was part of the Red Line extension plan, which was completed in 1984. The second portion from Cedar Street in Somerville to Davis Square was planned separately.

Overall, there was relatively little resistance for the path. However, as is the case with many new initiatives or proposals, there were various reactions from the community. Some people were simply concerned about the change in layout of their neighborhood and how it would affect them. There were also some concerns that the path would raise property values and gentrify the community, attract crime and lower property values. But Mr. Bennett said that The Friends of the Community Path dispelled much of these concerns by providing carefully-researched statistics which showed that such things are not common when new paths are built. Other than these concerns, which were subsequently addressed, the path was constructed without problems.

The one exception was when the Friends of the Community Path proposed to construct the path right through Davis Square, which would have allowed bicyclists to ride through the square. The Davis Square Task Force (comprised mainly of business owners in Davis Square) vehemently opposed the idea because they feared for pedestrian safety. As a result, bicyclists now have to dismount at Davis Square and walk across the two street crossings and behind the Elm Street entrance to the Davis Square T Stop, before remounting and riding. Also because of this, there is visibly no proper bicycle path or sidewalk on the left side of the Davis Square bus way, although Mr. Bennett said that improvements are slated to begin to improve this stretch. Other than putting up clear signage, there is no effective way to guide users from one end to the next. This situation is similar to the Arsenal Street and Mount Auburn Street intersection in Watertown Square. It is likely that the Path will need to circumvent the five-way Watertown Square intersection to provide a safe route for users.

The Friends of the Community Path were able to get this path built on major account of having the full support of the Mayor and the City of Somerville. The Friends held events, went door to door, advertised, and otherwise made a far-reaching effort toward community outreach to get the word out about the path. The original segments did not require any easements to be acquired, but the proposed extension into Boston did require at least one. The City of Somerville struck a deal with Cambridge Health Alliance, who owns a parking lot in the proposed corridor, obtaining rights to that lot. Mr. Bennett said that for the Watertown Community Path to be built the process must be very transparent with the community and the town should provide as much access to information as possible to the public in order to gain support.



# APPENDIX J

## Memorandum of understanding

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**MEMORANDUM OF UNDERSTANDING**  
**BETWEEN**  
**TUFTS UNIVERSITY FIELD PROJECTS TEAM NO. 10**  
**AND**  
**WATERTOWN DEPARTMENT OF DEVELOPMENT AND PLANNING;**  
**WATERTOWN BICYCLE AND PEDESTRIAN COMMITTEE;**  
**WATERTOWN CITIZENS FOR ENVIRONMENTAL SAFETY**

### I. Introduction

Project (i.e., team) number: UEP Spring 2010 Team #10

Project title: Watertown Community Path Project

Client: Watertown Department of Development and Planning, Watertown Bicycle and Pedestrian Committee, Watertown Citizens for Environmental Safety

This Memorandum of Understanding (the “MOU”) summarizes the scope of work, work product(s) and deliverables, timeline, work processes and methods, and lines of authority, supervision and communication relating to the Field Project identified above (the “Project”), as agreed to between (i) the UEP graduate students enrolled in the Field Projects and Planning course (UEP-255) (the “Course”) offered by the Tufts University Department of Urban and Environmental Policy and Planning (“UEP”) who are identified in Paragraph II(1) below (the “Field Projects Team”); (ii) Watertown Department of Development and Planning, further identified in Paragraph II(2) below (the “Client”); and (iii) UEP, as represented by a Tufts faculty member directly involved in teaching the Course during the spring 2010 semester.

### II. Specific Provisions

(1) The Field Projects Team working on the Project consists of the following individuals:

Kristopher Carter	email address: kristopher.carter@gmail.com
Eric Giambrone	email address: egiambrone@gmail.com
Eunice Kim	email address: eunicelkim15@gmail.com
Michelle Moon	email address: michelle.moon1@gmail.com
Jong Wai Tommee	email address: jong.tommee@tufts.edu

(2) The Client's contact information is as follows:

Client name: Watertown Department of Community  
Development and Planning

Key contact/supervisor: Danielle Fillis, Senior Planner

Email address: Dfillis@watertown-ma.gov

Telephone number: 617-972-6417

FAX number: 617-972-6484

Address: Town of Watertown Department of Community Development and Planning, 149 Main  
Street, Watertown, MA 02472

Web site: [www.ci.watertown.ma.us](http://www.ci.watertown.ma.us)

(3) The goal/goals of the Project is/are:

- Design the Watertown Community Path, a multi-use path that runs from School Street through Watertown Square and onto the Charles River Reservation Path
- Help build community support for the path

(4) The methods and processes through which the Field Projects Team intends to achieve this goal/these goals is/are:

- Research existing paths in other communities
- Complete a preliminary design for the path, including a preferred route and alternatives
- Interview key stakeholders, including abutters and business owners
- Conduct a site analysis to identify obstacles

(5) The work products and deliverables of the Project are (this includes any additional presentations for the client):

- Map showing the preferred route and possible alternatives
- Cross-sections for minimum and preferred on-street and off-street portions of the path
- Identification of obstacles and challenges and their potential resolutions
- Presentation before Watertown Town Council
- Planning document that outlines action steps
- "Media ready" materials that give an overview of the Community Path

- (6) The anticipated Project timeline (with dates anticipated for key deliverables) is:
- Site visits to roughly position the path and possible alternatives: Mid-February
  - Identify and interview key private property owners along the path: Early March
  - Interview officials from other communities to gather information on strategies for developing paths and building support: February and March
  - Design cross-sections: Mid-March
- Map potential routes: End of March
- Draft of final report, maps and designs: April 6
- Deadline for clients to submit any comments on the final report, maps and designs to the field projects team: April 13
- Final presentation to Watertown Town Council: May 4 (subject to change)

(7) The lines of authority, supervision and communication between the Client and the Field Projects Team are (or will be determined as follows):

- Field projects team's liaison to the client: Eunice Kim
  - Primary client contact: Danielle Fillis
- Other client contacts: Deborah Peterson (Watertown Committee for Environmental Safety) and Janet Jameson (Watertown Bicycle and Pedestrian Committee)

(8) The understanding with regard to payment/reimbursement by the client to the Field Projects Team of any Project-related expenses is:

- Reimbursement for mileage and other means of transportation to the site
- Printing costs
- Presentation materials (ie. Boards)
- Other needed supplies

### **III. Additional Representations and Understandings**

A. The Field Projects Team is undertaking the Course and the Project for academic credit and therefore compensation (other than reimbursement of Project-related expenses) may not be provided to team members.

B. Because the Course and the Project itself are part of an academic program, it is understood that the final work product and deliverables of the Project (the "Work Product") – either in whole or in part – may and most likely will be shared with others inside and beyond the Tufts community. This may include, without limitation, the distribution of the Work Product to other students, faculty and staff, release to community groups or public agencies, general publication, and

posting on the Web. Tufts University and the Field Projects Team may seek and secure grant funds or similar payment to defray the cost of any such distribution or publication. It is expected that any issues involving Client confidentiality or proprietary information that may arise in connection with a Project will be narrow ones that can be resolved as early in the semester as possible by discussion among the Client, the Field Projects Team and a Tufts instructor directly responsible for the Course.

C. The work products of the field projects team may not be altered without prior approval of the team. Any presentation or copies of the field projects team's work must include reference to Tufts University's Urban and Environmental Policy and Planning program. The clients will not have access to any raw data collected by the field projects team.

D. It is understood that this Project may require the approval (either through full review or by exemption) of the Tufts University Institutional Review Board (IRB). This process is not expected to interfere with timely completion of the project.

#### IV. Signatures

Danielle Fillis Evans

For Watertown Department of Community Development and Planning

By: Danielle Fillis Evans

Date: Feb. 5, 2010

Eunice Kim

Representative of the Field Projects Team

By: Eunice Kim

Date: Feb 5, 2010

Rusty Russell

Tufts UEP Faculty Representative

By: Rusty Russell

Date: Feb. 16, 2010

#### II. Specific Provisions

(1) The Field Projects Team working on the project consists of the following individuals:

1. Christopher Carter  
email address: krcarter@tufts.edu
2. Eric Glambrey  
email address: eglambrey@gmail.com
3. Eunice Kim  
email address: eunice.kim@tufts.edu
4. Michelle Moon  
email address: mmoon@tufts.edu
5. Spring Wa...  
email address: jing@tufts.edu

# APPENDIX K

## IRB APPROVAL



### OFFICE OF THE VICE PROVOST

Social, Behavioral, and Educational Research  
Institutional Review Board

FWA00002063

Re: IRB Study # 1002042  
Title: UEP Field Projects: Watertown Community Path  
PI: Jong Wai Tommee  
Co-Investigator(s): Eunice Kim  
Study Coordinator: Michelle Moon  
Faculty Advisor: Rusty Russell  
IRB Review Date: 3/1/2010

March 1, 2010

Dear Jong Wai,

Your *Application for Exempt Status* for the above referenced study has been reviewed. The survey, community meeting, and interview portions of this study all qualify as exempt from review under the following federal guidelines:

Exempt Category 2 as defined in 45 CFR 46.101 (b). For complete details please visit the United States Department of Health and Human Services Office (DHHS) for Human Research Protections (OHRP) website at:

<http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.htm#46.101>

Please know that this exemption does not relieve the investigator of any responsibilities relating to the research subjects; equal care must still be taken to ensure that subjects experience no harm to themselves or to their legitimate interests.

Furthermore research should be conducted in accordance with the ethical principles, (i) Respect for Persons, (ii) Beneficence, and (iii) Justice as outlined in the Belmont Report.

Any changes to the protocol or study materials that might affect the exempt status must be referred to the Office of the IRB for guidance. Depending on the changes, you may be required to apply for either expedited or full review.

If you have any questions, please contact the Office of the IRB at (617) 627-3417.

Sincerely,

A handwritten signature in black ink that reads "Yvonne Wakeford".

Yvonne Wakeford, Ph.D.  
IRB Administrator



