

ARSENAL STREET

CORRIDOR STUDY



Working Group and Public Information Meeting Summaries

September 30, 2015 – Working Group Meeting #1

January 26, 2016 – Working Group Meeting #2

February 24, 2016 – Public Information Meeting #1

June 28, 2016 – Working Group Meeting #3

August 3, 2016 – Working Group Meeting #4

October 4, 2016 – Public Information Meeting #2

January 24, 2017 – Working Group Meeting #5

March 2, 2017 – Working Group Meeting #6

June 22, 2017 – Public Information Meeting #3

ARSENAL STREET

CORRIDOR STUDY



Arsenal Street Corridor Study Working Group Meeting #1: Summary

September 30, 2015, 3:30 PM, Watertown Savings Bank Meeting Room, Watertown Free Public Library, 123 Main Street, Watertown, MA

Purpose

The purpose of the first working group meeting for the Arsenal Street Corridor Transportation Study was to provide an opportunity for the project team to provide an introduction of the study and solicit feedback on the study goals, objectives, and evaluation criteria.

Handouts

Draft Arsenal Street Corridor Study Goals, Objectives, and Evaluation Criteria

Present

Ethan Britland and Michael Clark, Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning (OTP); Laura Castelli and Albert Ng, VHB; Sarah Paritsky and Emily Christin, Regina Villa Associates (RVA); and the following members of the Working Group:

Andrew Bettinelli, Office of Senator
Brownsberger

Jonathan Bockian, Watertown Public Transit
Task Force (WPTTF)

Pat Connolly, athenahealth

Chief Raymond Dupuis, Watertown Police
Department

Christine Dwyer, Perkins School for the Blind

Susan Falkoff, Watertown Town Council

Sam Feigenbaum, Office of Representative
Hecht

Lisa Feltner, WPTTF/Concerned Citizens Group

Larry Field, Massachusetts Smart Growth
Alliance

Philip Groth, MBTA

John Hawes, Watertown Planning Board

Coriana Hunt Swartz, WPTTF/Flat Earth Theatre

Emily Izzo, Office of Representative Lawn

Raj Kulen, MassDOT District 6

Jaimi Lard, Perkins School for the Blind

Cecilia Lenk, Watertown Town Council

Joe Levendusky, WPTTF

Steve Magoon, Town of Watertown

Raul Mendez, Watertown Police Department

Roberta Miller, The Arsenal Project

Melissa Santucci Rozzi, Watertown Zoning
Board of Appeals

Gideon Schreiber, Town of Watertown

Matt Shuman, Town of Watertown

Meeting Summary

MassDOT Project Manager Michael Clark opened the meeting and reviewed the agenda. Mr. Clark described the background and purpose of the study, which will include an evaluation of existing and

future multi-modal transportation conditions along Arsenal Street. Impacts of future development expected over the next twenty years will be considered, as the study team proposes multimodal and “complete streets” solutions conducive to bus riders, bicyclists, pedestrians, and motorists.

Mr. Clark reviewed the schedule for the study’s six tasks, which will each take place over the next 18 months (approximately). Task 1 involves identifying the study’s goals, objectives, and evaluation criteria, as well as formulating a public involvement plan, which will include six Working Group and three public meetings over the course of the study. Task 2 involves data collection for existing conditions along the corridor and an evaluation of issues and opportunities. Alternatives development will dominate the third task, the fourth task will involve alternatives analysis, and Task 5 will involve recommendations. During Task 6, MassDOT will offer a 30-day public comment period on the Final Report.

Mr. Clark introduced the study’s consulting team and asked Working Group members to introduce themselves.

Laura Castelli of VHB introduced herself and explained the role of the Working Group within the study. Ms. Castelli said the project team will rely on the Working Group to provide feedback and advice on local issues which will help determine the study’s alternatives analysis. Ms. Castelli reviewed the list of Working Group member organizations.

Ms. Castelli then described the Study Area. The study team will collect quantitative data along Arsenal Street from Watertown Square to Birmingham Parkway in Boston. Regional data will be qualitatively analyzed beyond the local study area. There are twenty intersections along the corridor where traffic data (vehicle speeds and volumes) were collected. She pointed out the intersections along Arsenal Street where traffic is most dense.

Question: Are we taking into consideration the intersections of Mt. Auburn Street, School Street, and Walnut Street? Ms. Castelli said the team will qualitatively assess those intersections.

Question: Is it possible to collect additional traffic counts at new locations if, later in the process, they are needed? Ms. Castelli said the study team could collect additional traffic counts to support short-term alternatives, if needed, but not to better inform long-term alternatives. Additional traffic counts required to advance long-term alternatives would be collected as part of the further planning and design of those alternatives.

Question: There are many impacts to bus service on Arsenal Street that happen outside of the corridor. How will those be taken into account? Ms. Castelli said the study team will be assessing the regional impacts qualitatively.

Ms. Castelli moved on to describe the study’s goals and objectives and explained that these will be the basis for developing and analyzing the alternatives. Alternatives may include long-term solutions over the next 10 to 20 years that will ultimately undergo a separate permitting and design process, short-term solutions that could be implemented over the course of two to 10 years, and immediate changes that can be implemented in six to 12 months. Ms. Castelli reviewed the evaluation criteria for each of the following goals:

- Improve mobility and traffic flow
- Enhance safety
- Improve access/connectivity for all modes

- Meet transportation goals while supporting economic development and improving quality of life
- Meet transportation goals while minimizing impacts to the environment
- Develop a range of multi-modal recommendations that support ongoing changes and have lasting benefits

Ms. Castelli noted that some of the evaluation criteria for these goals and objectives are related to improving public health, which will be used as another benchmark to help rank alternatives. Ms. Castelli said there are three high-crash locations along the corridor – the study will look at why these clusters are occurring here and if the study can recommend changes to improve safety for all transportation users. Ms. Castelli also noted that the study’s alternatives will support ongoing traffic changes and have long-term improvements to traffic flow. The solutions will comply with MAP-21, the federal transportation funding program (or its fiscal year 2016 replacement).

Question: How will the public health considerations be called upon to rank alternatives? Ms. Castelli noted that public health is only one of the ways to prioritize alternatives. The team does not yet know what health data are currently available, so there is no weight designated to the evaluation criteria at this time.

Ms. Castelli emphasized the importance of having an open and inclusive process for the study. There will be many opportunities for public comment throughout the study. The study team will reach out to communities traditionally underserved as well. Ms. Castelli introduced Sarah Paritsky from RVA to discuss the Public Involvement Plan.

Ms. Paritsky explained that the schedule for the six Working Group meetings and three public information meetings is subject to change, but will be aligned with key project milestones. Ms. Paritsky encouraged the members of the Working Group to let the project team know if any additional people/organizations should be included in the Working Group. There is a project website and two email lists: one for the Working Group and one for the public. The study team will notify both email lists of study updates and scheduled meetings. Ms. Paritsky also noted that MassDOT’s media team will reach out to local newspapers regarding the study and announce public meetings.

Ms. Castelli explained that the data collection is ongoing and a lot of work has already been done. The existing conditions analysis is underway and the team expects to receive the collected traffic volume data shortly. The team will be collecting environmental resource data in the study area over the next two months. A highway engineering review will look at the accessibility of ramps and sidewalks.

Ms. Castelli reviewed the study’s next steps. The existing conditions data evaluation will be the major baseline for the study. The study team will identify issues, opportunities, and constraints before developing alternatives. The next Working Group meeting is scheduled for approximately mid-January 2016.

Question & Answer Session

Ms. Castelli welcomed questions from the Working Group.

Question: Will the study include analysis of land use data? Ms. Castelli is collecting land use data at the parcel scale.

Question: What do you mean by “community effects”? Ms. Castelli is considering socioeconomic data and potential effects to Environmental Justice populations in East Watertown.

Question: Are you planning to incorporate development plans that have already been approved? Ms. Castelli said she will discuss previously approved plans and how they are incorporated into this study at the third Working Group meeting. The study is using the base future year 2035. MassDOT is working closely with CTPS (Central Transportation Planning Staff) who will provide the study area's projected growth rate. The team will also meet with the Town and the study will consider other traffic studies related to proposed developments.

Comment: There are a lot of small businesses along the study area that would be good to reach out to. Ms. Castelli was thankful for the comment and said the team will take that into consideration.

Question: Is the Americans with Disabilities Act (ADA) and snow removal part of this study? Ms. Castelli said the study will not address short-term snow removal concerns. Snow removal will be included in long-term management plans. The study team will take note if any sidewalks are in bad condition during data collection.

Question: What kind of data is being collected for public transit? Mr. Ng of VHB said the project team is collecting data on bus schedules, ridership data, locations of stops, and more. Mr. Groth of the MBTA added that an automatic vehicle locator is used by the MBTA dispatcher to track locations and times of buses. Automated Passenger Counts are generated from infrared technology that counts the number of people boarding and alighting.

Comment from Joe Levendusky, WPTTF: Take into consideration that quantitative data doesn't necessarily lead to a full understanding of the conditions of the public transit. You should also ride the buses and talk to passengers to get a more complete understanding. Ms. Castelli thanked Mr. Levendusky for his comments and said members of the study team will be riding the buses and walking and biking throughout the study area. The study team will also solicit rider feedback at the public meetings.

Comment from Mr. Levendusky: The WPTTF is in the process of publicizing an incident report for public transit in the area based on user information. We can share that with you. Ms. Castelli thanked Mr. Levendusky for his offer.

Question: Will car ownership data be taken? How? Ms. Castelli said the team will use U.S. Census American Community Survey (2014) data for car ownership data and will also consider the state excise tax dataset.

Question: Will this study result in metrics for evaluating the success of the alternatives once they are implemented? Ms. Castelli said the team will try to develop metrics for use in evaluating alternatives, but evaluating long-term success is always challenging.

Mr. Castelli thanked the Working Group for attending and concluded the meeting.

ARSENAL STREET

CORRIDOR STUDY



Arsenal Street Corridor Study Working Group Meeting #2: Summary

January 26, 2016, 9:00 AM, VHB Offices, Center for Education, 101 Walnut Street, Watertown, MA

Purpose

The purpose of the second working group meeting for the Arsenal Street Corridor Study was to provide a summary of the Existing Conditions Evaluation and an overview of the ongoing development of Future No-Build Conditions.

Present

Ethan Britland and Michael Clark, Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning (OTP); Laura Castelli, Elsa Chan, and Niki Hastings, VHB; Emily Christin and Sarah Paritsky, Regina Villa Associates (RVA); and the following members of the Working Group:

Andreas Aepli, Resident

Jonathan Bockian, Watertown Public Transit Task Force (WPTTF)

Peter Centola, Town of Watertown

Pat Connolly, athenahealth

Christine Dwyer, Perkins School for the Blind

Susan Falkoff, Watertown Town Council

Lisa Feltner, Watertown Town Council

Larry Field, Massachusetts Smart Growth Alliance

Michael Garvin, City of Waltham

Philip Groth, MBTA

John Hawes, Watertown Planning Board

Rep. Jon Hecht, Massachusetts House of Representatives

Jeff Heidelberg, Boylston Properties

Coriana Hunt Swartz, WPTTF/Flat Earth Theatre

Emily Izzo, Office of Representative Lawn

Erin Kinahan, MassDOT District 6

Raj Kulen, MassDOT District 6

Chris Kuschel, MAPC

Jaimi Lard, Perkins School for the Blind

Mark MacLean, DCR

Steve Magoon, Town of Watertown

Vincent Piccirilli, Watertown Town Council

Melissa Santucci Rozzi, Watertown Zoning Board of Appeals

Gideon Schreiber, Town of Watertown

Matt Shuman, Town of Watertown

Bill York, Resident

Meeting Summary

Laura Castelli, VHB Project Manager, opened the meeting and welcomed attendees. She introduced MassDOT Project Manager Michael Clark. Mr. Clark reviewed the agenda, study background and purpose, and study schedule. He noted that the study is on schedule and this is first of two Working Group meetings regarding Future No-Build Conditions and Issues Evaluation. Mr. Clark introduced the study team and led a round of introductions.

Ms. Castelli presented the Existing Conditions Evaluation for transit. She showed a map of the existing bus routes in the study area, and a list of connections to Greater Boston that are provided by these bus routes. She noted that the study team will keep this in mind when developing alternatives.

Ms. Castelli showed a table of service times and frequencies of bus Routes 70 and 70A. Route 70 operates twice as frequently as Route 70A.

Comment: An attendee said there is a rumor that Route 70 has altered its route to accommodate new destinations like Market Basket. Philip Groth, MBTA, said that is true.

Ms. Castelli summarized the condition of bus stops along the corridor, including nine inbound and ten outbound stops. She showed maps of the inbound and outbound stops with insets of photographs of each stop. The sidewalk clearance is generally adequate for the majority of the inbound stops. There are more obstructions at the outbound stops, such as utility poles. At one outbound stop, the project team observed people waiting for the bus in the middle of the bicycle path due to the presence of a construction fence blocking the waiting area.

Ms. Castelli showed a map of the bus stops that have the highest numbers of daily boardings and alightings. The highest ridership stops are Watertown Yard, Watertown Square, Centre Street in Newton, and the Watertown and Arsenal Mall. This data may change as ongoing and proposed developments shape the corridor.

Ms. Castelli reviewed the MBTA's *Service Delivery Policy*, which defines the "acceptable levels of crowding by time period and transportation mode" for all of its services. She explained that Routes 70 and 70A bus service on Arsenal Street meet the *Service Delivery Policy*'s standards the majority of the time. A table of weekday maximum average passenger loads for Routes 70 and 70A shows that there are a few time periods in which not every passenger can have a seat.

Ms. Castelli presented a graphic of the average vehicle loads on MBTA buses along Arsenal Street by segment for inbound and outbound service. For any load beyond 39 passengers, some passengers must stand. The average vehicle loads never exceed 54 (the MBTA service limit standard) during peak hours along the corridor. Ms. Castelli also presented a table of weekday average trip on-time performance by time period of Routes 70 and 70A along the corridor.

Comment: Mr. Groth explained that as of now, buses that leave early, which is common for buses that operate in a loop, are considered "not on time." He said the *Service Delivery Policy* may change to allow buses to leave up to one minute early.

Question: Rep. Jon Hecht asked how the Route 70 and Route 70A service day averages compare to service overall in the MBTA. Mr. Groth and Ms. Castelli said that 70-75% average on-time performance is the goal, so Routes 70 and 70A are average compared to routes in surrounding communities.

Comment: Susan Falkoff, Watertown Town Council, said that buses leaving early are worse than being late. Mr. Groth said that the MBTA would not implement a change to the *Service Delivery Policy* regarding the allowance of early departures without discussing changes with riders first.

Comment: Jonathan Bockian, WPTTF, said that the averages do not show wait times. He said that the WPTTF is collecting better data that would be useful. Ms. Castelli noted that the project team is not just looking at quantitative data, but is also obtaining anecdotal data on the corridor.

Comment: Mr. Groth offered to share granular data with the Working Group.

Question: Rep. Hecht asked how the project team is considering impacts of new transit options in their projections. Ms. Castelli said the project team is looking at Central Transportation Planning Staff's (CTPS's) Transit Forecast in 2040, regional traffic studies and developer information, and demographic data. The team will make assumptions based on current transit use and population data to predict any increase in transit use.

Question: Larry Field, MA Smart Growth Alliance, asked if the project team is just going to use aggregated data. Ms. Castelli explained that the team is taking a holistic look at the corridor and will compare their observations with the sources of data mentioned.

Ms. Castelli presented the Existing Conditions Evaluation for traffic and safety. She showed a map of the 20 intersections along the study corridor from which the data was collected. The team observed vehicles avoiding an intersection on Arsenal Street by taking Taylor Street. She summarized the findings from the signal inventory taken from 14 signalized intersections along the corridor and issues were noted at all locations. The team will release a list of short-term recommendations to resolve these issues.

Ms. Castelli explained that the project team reviewed MassDOT statewide crash data and the District 6 Average Crash Rate (ACR). She showed a map of the top crash locations along the corridor. One of the state's top 200 crash intersections is in the study corridor (Galen Street/Nonantum Road/Watertown Street). There are several crash clusters within the corridor that are Highway Safety Improvement Program (HSIP) eligible, such as the unsafe pedestrian crossing in the Watertown Square area. Ms. Castelli noted that the most recent MassDOT crash data is from 2011-2013, but newer crash data from other sources (Watertown Police Department) is similar. She summarized the locations within the study corridor that exceed the District 6 ACR, and the majority of crashes appear not to be caused by speed or weather.

Ms. Castelli presented the traffic count data observed by project staff on the corridor and traffic cameras. She showed maps of turning movements and traffic volumes during AM and PM peak hours, and a table of daily traffic counts. Watertown Square has the highest traffic volumes. Ms. Castelli explained that the project team uses a VISSIM model to analyze traffic patterns. VISSIM is a simulation computer software that can track delays and show the interaction between vehicles, bicycles, and pedestrians.

Ms. Castelli reviewed the Measures of Effectiveness (MOE) for evaluating traffic. The two main MOE are delays and queues, which are not always related. Ms. Castelli showed a map of intersection operations along the corridor. Birmingham Parkway and Watertown Square are the most congested areas in the corridor with the lowest Level of Service (LOS). She provided images of sample average traffic queues in Watertown Square and Birmingham Parkway.

Question: Steve Magoon, Town of Watertown asked how cut-through traffic is measured for traffic volume data. Ms. Castelli said that there is no quantifiable data for cut-through traffic, but the project team will consider the routes that drivers are taking to avoid segments of Arsenal Street (such as using School Street, Taylor Street, Louise Street, and Beechwood Avenue) during the alternatives development. Ms. Castelli said the team's goal is not to discourage drivers from doing this, but rather to encourage them not to and to take Arsenal Street instead.

Comment: Peter Centola, Town of Watertown, said that there are many intersections with a "no turn on red" restriction that are unnecessary. Ms. Castelli thanked him for his comments.

Question: Mr. Bockian asked if it is too late for the team to include Greenough Boulevard and North Beacon Street in the study. Ms. Castelli said yes, it is too late, but the team will be able to observe traffic on these streets at a qualitative level.

Ms. Castelli presented the Existing Conditions Evaluation for bicycles and pedestrians. Most of the sidewalks in the corridor are in good condition, with some areas of deficiencies. Wheelchair ramps were inventoried along the corridor. There are many ramps that can be made ADA compliant with short-term fixes. Ms. Castelli showed a map of bicycle paths and lanes on and near the study corridor. She also showed turning movement and traffic volume data for bicycles and pedestrians during morning and evening peak hours.

Question: A participant asked what percentage of the total traffic volume data included bicycles and pedestrians. Ms. Castelli and Ms. Chan were not certain, but estimated a very low percentage, probably 1% for bicycles and 2-3% for pedestrians. Most bike and pedestrian traffic is crossing the study area.

Question: Rep. Hecht asked if bicycle and pedestrian numbers include those who use the community path. Ms. Castelli said no, but the team could place a counter on the path.

Question: Rep. Hecht asked if the crash data include accidents involving pedestrians and bicyclists. Ms. Castelli said yes. Any accident involving a vehicle reported to the police or the Registry of Motor Vehicles is included in the data. Pedestrian/bicycle crashes are often not included if they did not involve personal injury.

Comment: Mr. Magoon commented that the volume of pedestrian and bike traffic is so low because there is not much incentive for them on the corridor. The team could consider creating more opportunities for them in the alternatives development. Ms. Castelli agreed and noted that the residential and commercial development along the corridor may change these numbers as well.

Ms. Castelli reviewed ongoing improvements to bicycle and pedestrian accommodations, such as the Greenough Boulevard Riverfront Park Restoration and the Watertown Community Path.

Ms. Castelli presented the Existing Conditions Evaluation for the socioeconomics and demographics of the corridor. She reviewed population and employment data, the top locations where Watertown residents travel to work, and locations from where Watertown employees are traveling. Ms. Castelli noted that current trends indicate there will continue to be a shift in employment from manufacturing and industrial jobs to office, research & development, and service jobs. Ms. Castelli showed pie charts of the transportation modes used by Watertown residents and workers. The vast majority drive alone to work. Ms. Castelli showed a map of the current land use in the study area, which shows the boundaries for the population data used by the project team.

Ms. Castelli reviewed the limited environmental resources and constraints along the corridor, and stated that none are expected to have a significant effect on the alternatives development.

Question: Mr. Bockian asked if demographics of the corridor, including age, have an effect on the study. Ms. Castelli said yes, and explained that age tends to influence transit use.

Ms. Castelli summarized the available public health data. The data available is being used to create a baseline health profile that will be considered during alternatives development, with the goal of

improving public health. She reviewed the various public health barriers facing the study area residents based on the existing built environments.

Ms. Castelli presented the data sources that are used in the 2040 Future Conditions report, and the development projects on and near the corridor that are being considered. She explained that the next Working Group meeting will focus more on the 2040 Future Conditions.

Ms. Castelli reviewed the Next Steps for the project, and noted the upcoming public meeting to be scheduled in February. The next Working Group meeting will be in early spring.

Question & Answer Session

Comment: Gideon Schreiber, Town of Watertown, suggested adding the residential development on the corridor to the Development Projects map and slide. Ms. Castelli thanked him for his comment.

Question: Andreas Aepli asked if the study is looking at the potential for future development. Ms. Castelli said that RKG is taking a broad look at the corridor in its land use/economic analysis and will include what could happen in the future, but VHB is focused on what is already slated to happen.

Question: A participant asked if the study has the capacity for different future conditions scenarios. Ms. Castelli said there will only be one 2040 land use condition analysis.

Comment: Mr. Field said that study should definitely develop different scenarios for future conditions. Ms. Castelli said the team will be cautious and assume more will happen rather than less. VHB will take land use and zoning information into consideration. Mr. Heidelberg stated that Boylston Properties has data that he could share with Ms. Castelli.

Question: Ms. Falkoff asked what happens after the implementation of short-term recommendations, and who is accountable for implementing them. Ms. Castelli said the project will continue with alternatives analysis. Short-term recommendations can be implemented more quickly. Ms. Castelli believes the Town of Watertown would be accountable. Mr. Magoon said the Town will have these conversations with MassDOT in the near future.

Question: Mr. Magoon asked if the study is considering technology changes, such as self-driving cars. Ms. Castelli said yes, the alternatives development will consider possible effects of technology changes. Most of the alternatives will be focus on improvements to transit, bicycles, and pedestrians. The roadway capacity on Arsenal Street is limited, so expanding the road will probably not be viable.

Question: Mr. Bockian asked if the study is considering the impact on Arsenal Street if the Arsenal Street Bridge were to undergo reconstruction. Ms. Castelli said she has not heard of any plans to reconstruct the bridge, but if that were to happen it would primarily be a traffic management challenge, and would likely not change the capacity of the bridge.

Question: Rep. Hecht said the Arsenal Street Bridge is a nightmare for bicycles and pedestrians, and asked if there would be a future analysis for the Western Avenue side of the bridge. Ms. Castelli said the study team is aware of the poor bike and pedestrian conditions on the bridge. The study will be in touch with all surrounding communities to share current development plans, but will not ask each community what *might* happen in the future. She noted a representative of the Town of Waltham is present.

Comment: Rep. Hecht suggested that the study invite Harvard and the City of Cambridge to be involved in the study. Ms. Castelli thanked him for his comment.

Question: Melissa Santucci Rozzi, Watertown Zoning Board of Appeals, asked if there is background growth data available. Ms. Castelli said the study team is taking a very realistic look at growth, which is why they are using three different sources.

Question: Ms. Izzo asked if the study is considering eliminating some of the stops on Route 70 and 70A. Ms. Castelli said stop consolidation and traffic signal reconfiguration will be explored more thoroughly during alternatives development. Mr. Groth and Ms. Castelli explained that accessibility is an impediment to removing or consolidating stops.

Comment: Christine Dwyer and Jami Lard, Perkins School for the Blind, commented that there are drainage problems by the Arsenal Mall bus stop that are impeding accessibility to wheelchairs. Ms. Castelli thanked them for the comment, and said the study team has shared their findings from the wheelchair ramp inventory with the Town of Watertown on what needs to be fixed.

Question: A participant asked why 75% is the MBTA standard for on-time service. Ms. Castelli explained this is to account for unpredictability. Mr. Groth stated that this standard is measured differently for buses and rapid transit. Vincent Piccirilli, Watertown Town Council, commented that the MBTA should change their metrics and measure what the average customer would want from its service in order to enact changes in mode choice.

Question: An attendee asked what will be covered at the first public meeting. Ms. Castelli said the presentation will cover a high level existing conditions report. The team will ask the participants to decide what is important to them.

Question: Ms. Santucci-Rozzi asked if there is historic data the study can use to observe a change in different modes. Ms. Castelli said there is not much data available regarding bicycle and pedestrian growth that is older than what the team is currently using.

Comment: Mr. Field suggested that the team present counts of boardings and alightings along Arsenal Street at the public meeting. Ms. Castelli thanked him for his comment.

Ms. Castelli and Mr. Clark thanked the Working Group for attending and concluded the meeting.

ARSENAL STREET

CORRIDOR STUDY



Arsenal Street Corridor Study - Public Meeting #1: Summary

February 24, 2016, 6:00 – 8:00 PM, Watertown Middle School, 68 Waverley Avenue, Watertown, MA

Attendees

Michael Clark, Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning (OTP); Laura Castelli, Caroline Ducas, Elsa Chan, Niki Hastings, Kristine Wickham-Zimmerman, Ken Schwartz, VHB; Nancy Farrell and Sarah Paritsky, Regina Villa Associates (RVA); elected officials; and members of the public (see attendance).

Meeting Purpose

The purpose of this first public meeting on the Arsenal Street Corridor Study was to introduce the study, provide an overview of the study framework and work completed to date, and gather public feedback. The presentation from the meeting is posted on the study website at:

www.mass.gov/massdot/arsenalstreet

Meeting Summary

Introductions

Nancy Farrell, RVA, opened the meeting and welcomed attendees. She reviewed the meeting guidelines and emergency procedures. Michael Clark, MassDOT Project Manager, reviewed the meeting agenda and provided an overview of the project team, led by VHB and Project Manager Laura Castelli. RVA is managing the public involvement process and RKG Associates Inc. is providing economic development support. He noted that some members of the Working Group were in attendance.

Study Process

Ms. Castelli provided an overview of the study background and purpose. The topic of this meeting is the evaluation of existing conditions of multimodal transportation along the Arsenal Street corridor. The study is focusing on transit services, but will also propose improvements to pedestrian, bicycle, and vehicular traffic.

The study is focusing on the Arsenal Street corridor in Watertown and its connection to regional communities. Ms. Castelli described the local study area, which consists of 20 intersections along Arsenal Street between Watertown Yard and Birmingham Parkway. The regional study area includes portions of Watertown, Waltham, Cambridge, and Newton. The study team is collecting quantitative data for the local study area, and qualitative information for the regional study area. Maps of both areas are included in the meeting handout (available for download from the study website).

Ms. Castelli explained that the study is currently in the issues evaluation phase. She noted the Public Involvement Plan, from the study's framework phase, is a living document and will be continuously updated. The study began in September 2015 and will continue through March 2017. Comments are welcome throughout the process, but there will be a 30-day comment period on the final report at the end of the study.

Goals, Objectives, & Evaluation Criteria

Ms. Castelli reviewed the study goals and referred attendees to the handout for the complete set of objectives and evaluation criteria. Woven throughout the study goals are a number of public health elements.

Public Involvement

Ms. Castelli said the study includes numerous opportunities for public involvement, including six Working Group meetings and three public meetings. A project website includes a link to sign up for email updates. Ms. Castelli described the role and members of the Working Group, who include representatives from state and local agencies, elected officials, businesses, Perkins School for the Blind, and several civic and community organizations.

Existing Conditions Evaluation

Ms. Castelli said the town of Watertown has approximately 5,710 residents, 2,740 households, and 6,630 jobs. The corridor includes some residential parcels, a large number of industrial parcels, and many proposed residential developments. The employment in Watertown is shifting from industrial to commercial and office sectors. Residents and employees of Watertown primarily use a personal vehicle to commute to work; very few walk or ride a bicycle.

Ms. Castelli introduced Caroline Ducas, VHB, to describe the existing transit characteristics and infrastructure. Ms. Ducas highlighted the MBTA bus routes 70 and 70A, which travel through the corridor and connect with many MBTA bus routes at Watertown Square and Watertown Yard. Ms. Ducas said the schedules and frequency of service offered on the 70 and 70A indicate that most riders check the schedule before leaving for the bus.

Ms. Ducas summarized the condition of bus stops in the corridor. Most consist of posted signs only, but covered shelters are provided at the Watertown and Arsenal Mall stops. There are frequently narrow sidewalks and utility boxes and other obstacles in the sidewalks near the bus stops, which create accessibility problems. The busiest areas for boardings (when passengers get on the bus) and alightings (when passengers get off the bus) occur at the western and eastern ends of the corridor.

Ms. Ducas explained that passenger loading indicates how crowded the bus is, and is based on MBTA's current *Service Delivery Policy*. The MBTA defines the maximum average acceptable load as 54 passengers during peak periods, which means all seats are taken and some passengers are standing in the aisle. The maximum average acceptable load is 39 passengers, indicating the seated capacity is at 100 percent. Ms. Ducas noted Routes 70 and 70A fail the current MBTA loading standards during the early morning (inbound direction) time period. Route 70 also fails during midday school (inbound), evening (inbound and outbound), and night/sunrise (inbound) periods.

Ms. Ducas described the transit vehicle load maps for the corridor at different times of day. Key considerations for next steps include a closer look at passenger loading data, schedule adherence,

passenger hours of delay, and travel time variability, all of which assess how reliable the bus routes are currently. Ms. Castelli noted that the MBTA's *Service Delivery Policy* will be changing soon, and the MBTA will host public meetings on that topic.

Ms. Castelli stated that the existing conditions will set the baseline for the alternatives comparison and analysis. The study team has collected daily traffic volume counts during morning and afternoon peak periods. Ms. Castelli described maps showing multimodal demands and "person trips" at key locations. About 85 percent of users are in cars and 14 percent are on the bus. The buses make up less than one percent of vehicles traveling along the corridor, indicating that more bus ridership would allow more people to pass through the corridor.

The study team looked at the condition of traffic signals at each intersection along the corridor. Any issues with the signals can be included in the study's short-term improvements list and the Town may try to fix these issues soon. One issue was already resolved at Watertown Square.

Ms. Castelli described the intersections of Galen Street at Watertown Street/Nonantum Road and Watertown Square. On average, queues at one intersection cause backups at the other. A signal issue at Arsenal Street was also fixed.

The study team reviewed crash data from MassDOT's list of top 200 crash locations, the Highway Safety Improvement Program (HSIP) funding eligibility, and MassDOT's Crash Database maintained by the Registry for Motor Vehicles (RMV). Ms. Castelli explained that the bulk of crashes are not caused by geometry, but rather driver impatience at unsignalized intersections. Ms. Castelli identified some intersections that are the highest priority from a safety perspective, including Watertown Square.

Ms. Castelli described the condition of pedestrian accommodations in the corridor. While there are sidewalks on both sides of Arsenal Street, width is an issue on the outbound side, especially for people with disabilities. The study team conducted an inventory of curb ramps for their compliance with the Americans with Disabilities Act (ADA). Some ramps could be upgraded at a relatively low cost. The close vicinity of Perkins School for the Blind, a member of the Working Group, reinforces the need for safe, accessible sidewalks. Ms. Castelli said there is a fairly good network of bicycle accommodations along the Charles River, with some plans for extensions.

Ms. Castelli noted that there are limited environmental resources in the study area that are not expected to affect the development of alternatives. However, each alternative will be evaluated for its impacts to natural and historical/cultural resources and hazardous materials.

Ms. Castelli described the study's public health assessment, which Ken Schwartz of VHB, is available to discuss further after the presentation. She said the rates of obesity and inactive living are rising faster in Watertown than in the rest of the state. Ms. Castelli reviewed the primary public health contributors, including access to public transit and pedestrian and bicycle facilities, and primary public health barriers, including bus services at or over capacity and insufficient pedestrian safety features.

Next Steps

Looking ahead, Ms. Castelli said the study team will develop the 2040 future conditions and identify issues, opportunities, and constraints before it develops and analyzes alternatives. The third Working Group meeting will be scheduled in early spring and the second public meeting will be held in summer 2016.

Question & Answer Session

Ms. Farrell said the study team is taking notes and will post the presentation and summary to the website after the meeting. She opened the floor to questions from elected officials.

Aaron Dushku, Watertown Town Council, thanked MassDOT for initiating this study. He is interested in changes to the MBTA bus routes 70 and 70A, based on a Cambridge Transportation Management Association (TMA) blogger's proposal. Ms. Castelli said she is aware of this idea and understands it has morphed into a parallel project. She will coordinate with the MBTA in the spring about it. Philip Groth, MBTA Service Planner, said the MBTA is considering a split between routes 70 and 70A. He added that major service changes like this are typically only approved during a Service Plan update.

Councilor Dushku commented that the new commuter rail station at Boston Landing in Brighton is not currently directly linked to bus routes. Mr. Groth said the MBTA is looking into this and sees the value in a direct connection.

Ms. Farrell opened the floor to questions and comments from all attendees.

Joe Levendusky, Watertown Public Transit Task Force (WPTTF), expressed his concern about the sustainability of the levels of car versus transit usage. He said the low transit user numbers are a testament to the poor service of MBTA buses. He suggested that the study conduct a survey of households asking what it would take to get drivers out of their cars and onto public transit. Mr. Levendusky noted that the loading numbers are skewed since one packed bus may be followed by an empty bus, which affects the average. He personally avoids taking the 70 bus due to its poor service. Mr. Clark thanked Mr. Levendusky for his comments and suggestions, and said MassDOT would also like to encourage the use of public transit. This is consistent with statewide goals in increasing mode share and decreasing greenhouse gases. Ms. Castelli added that the data speaks to the current *Service Delivery Policy* and alternatives will speak to the study's goals and objectives, GreenDOT, and the Healthy Transportation Compact.

Steve Owens asked how the limits of the regional study area were determined, and why Allston is not included. He noted the Boston Redevelopment Authority has plans for Allston, and Watertown is a destination for Allston residents. Ms. Castelli said the study team uses the regional study area to understand developments surrounding the corridor that will impact travel mode volumes. It could be expanded to include Allston.

Maria Saiz, Watertown Bike/Ped Commission, said she was excited to learn about the study. She asked if MassDOT will consider growth in the corridor and the traffic and parking studies conducted by developers. Ms. Castelli confirmed the study team is taking developments into account and using the Central Transportation Planning Staff (CTPS) regional model for growth. These will be shared at the next public meeting. Ms. Saiz added that the corridor is bad for biking; since there is not enough room, many people ride their bikes on the sidewalk. It can be tedious to cross back and forth when there is not a bike path on the same side of the street near School Street. It is also uncomfortable to walk through the corridor due to sidewalk widths and obstacles. Ms. Saiz suggested that the corridor needs visual appeal and beauty. Ms. Castelli said she agrees and acknowledged the problems Ms. Saiz described. Ms. Castelli suggested that there may be partnership opportunities between athenahealth, Boylston Properties, and the Town to improve the bike amenities. Ms. Castelli added that aesthetics can also be tied to the public health assessment.

A participant said that Somerville is implementing 12-foot wide sidewalks and asked if this is possible on Arsenal Street. Ms. Castelli said this would tie in with MassDOT's Complete Streets policy. The study team will consider whether expanding the sidewalk within a limited right-of-way is possible.

Vincent Piccirilli, a member of Watertown Town Council reported that athenahealth is applying for a grant to improve infrastructure on Arsenal Street, Beacon Street, and Greenough Boulevard. The Town Council is studying the idea of burying the power lines with other funding (approximately \$15 to \$18 million over five to 10 years), to help improve the pedestrian experience. Ms. Castelli noted that athenahealth has offered to share data with the study team.

Rachael Sack said she lives on Frank Street, parallel to Arsenal Street and North Beacon Street. She echoed earlier comments about complete streets and shared her concerns about speeding cars and buses on Arsenal Street. Ms. Sack said her neighborhood has families with young kids and Perkins School for the Blind. Drivers use Frank Street for access between Arsenal Street and North Beacon Street. Ms. Castelli said the width of the road affects speeds, which would lower if the road is narrowed. She said the study team will investigate traffic volumes on cut-through streets. It is difficult to discourage drivers from taking cut-through streets, but there are measures MassDOT can take to make it a less desirable option.

Andre Compagne, Watertown Bike/Ped Commission, suggested the study team consider the connection to the Watertown/Cambridge Greenway once it is finished, as it will bring more bike cross-traffic. Ms. Castelli agreed the study team will take cross-traffic, and not just linear traffic, into consideration.

Ilana Mainelli explained there is no place (kiosk or station) for her to add value to her Charlie Card in Watertown. When she adds value to her card on the bus, she realizes it holds up the entire bus. Ms. Mainelli added that she does not think the bus follows the schedule. She was later informed that she can add value to her Charlie Card online. Ms. Farrell thanked her for her comments.

Mr. Dushku shared his ideas about alternative ways to pay fares, in addition to Charlie Cards. Using a cell phone to pay would make it easier and promote more ridership. Mr. Dushku supported the idea of 12-foot wide sidewalks, a bus rapid transit lane, and bike path. He also suggested MassDOT consider using North Beacon Street for transit, since space on Arsenal Street is limited. Ms. Castelli said the study team will consider these ideas but cautioned that it would be difficult to accommodate each one of the requests participants had raised over the course of the meeting. As the study moves forward and alternatives are proposed, a discussion concerning prioritization of possible improvements within the available roadway right of way may be necessary.

Kathy Martin said she lives in the Arsenal Park Condominiums, a 36-unit building with apartments that house elderly and infirm people. She said some of the residents in wheelchairs travel on the road because of the poor sidewalk condition. Ms. Martin said she rides her bike and avoids Arsenal Street at all costs because of safety concerns. Her husband was in a bicycle/car crash at Arsenal Street and Greenough Boulevard. Ms. Martin proposed the idea of a shared lane for buses and bikes only. She added that she walks instead of taking the 70 bus.

Mr. Levendusky endorsed the idea of a shared lane on Arsenal Street for buses and bikes from the Charles River to Watertown Square. He suggested MassDOT consider a small physical barrier to separate the shared lane from the rest of traffic. He added that former General Manager Bev Scott said that

Charlie Cards were a “money sink” for the MBTA. Mr. Levendusky said sometimes bus operators don’t collect cash fares because they do not want to wait and hold up the rest of the bus.

Ms. Farrell thanked participants for attending and concluded the meeting.

Attendance

Connie Brown

Gordon Brown

William N. Brownsberger, Massachusetts Senate

Bruce Coltin

Andre Compagne, Watertown Bike/Ped Commission

Bill Conroy, Boston Transportation Department

Aaron Dushku, Watertown Town Council

Susan Falkoff, Watertown Town Council

Larry Field, Massachusetts Smart Growth Alliance (MSGA)

Philip Groth, MBTA Service Planning

Nancy Hammett

Jonathan Hecht, Massachusetts House of Representatives

Coriana Hunt Swartz, Watertown Public Transit Task Force (WPTTF)

Janet Jameson

Joe Levendusky, WPTTF

Anna Mackay, Guerrilla Development

Steven Magoon, Town of Watertown, Department of Community Development and Planning (DCDP)

Ilana Mainelli

Kathy Martin

Steve Owens

Anthony Palomba, Watertown Town Council

Mark Peterson, WPTTF

Vincent Piccirilli, Watertown Town Council

Rachael Sack

Maria Saiz, Watertown Bike/Ped Commission

Melissa Santucci Rozzi, Watertown Zoning Board of Appeals

Gideon Schreiber, Watertown DCDP

Adam Sennott, Watertown Tab

Matt Shuman, Town of Watertown, Department of Public Works

Pat Sullivan, 128 Business Council

Elodia Thomas

ARSENAL STREET

CORRIDOR STUDY



Arsenal Street Corridor Study Working Group Meeting #3: Summary

June 28, 2016, 9:30 AM, Watertown Free Public Library, 123 Main Street, Watertown, MA

Purpose

The purpose of the third working group meeting for the Arsenal Street Corridor Study was to review future conditions, including traffic forecasts, and introduce existing and projected issues and opportunities.

Present

Ethan Britland and Michael Clark, Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning (OTP); Laura Castelli, Caroline Ducas, Niki Hastings, and Dan Sade, VHB; Gregory Flanigan and Sarah Paritsky, Regina Villa Associates (RVA); and the following members of the Working Group:

Andreas Aepli, Resident

Andrew Bettinelli, Senator William Brownsberger's office

Jonathan Bockian, Watertown Public Transit Task Force (WPTTF)

Ray Dupuis, Watertown Police Department

Aaron Dushku, Watertown Town Council

Christine Dwyer, Perkins School for the Blind

Susan Falkoff, Watertown Town Council

Lisa Feltner, Watertown Town Council

James Freas, City of Newton

Philip Groth, MBTA

John Hawes, Watertown Planning Board

Rep. Jon Hecht, Massachusetts House of Representatives

Coriana Hunt Swartz, WPTTF/Flat Earth Theatre

Emily Izzo, Office of Representative Lawn

Jaimi Lard, Perkins School for the Blind

Steve Magoon, Town of Watertown

Roberta Miller, Arsenal Center for the Arts

Vincent Piccirilli, Watertown Town Council

Melissa Santucci Rozzi, Watertown Zoning Board of Appeals

Gideon Schreiber, Town of Watertown

Matt Shuman, Town of Watertown

Meeting Summary

MassDOT Project Manager Michael Clark opened the meeting and provided an overview of the agenda. He introduced Laura Castelli, VHB Project Manager, and led a round of introductions.

Niki Hastings, VHB, presented the data her team received from the Central Transportation Planning Staff (CTPS) based on the regional travel demand model. Data includes land use growth in Watertown, growth of trips by all modes, transit boardings for the Massachusetts Bay Transportation Authority (MBTA) bus routes 70 and 70A, and total vehicle trips for each roadway. Ms. Hastings stated that the model shows a 22% increase in daily transit ridership and approximately 1,640 additional weekday

boardings on the 70/70A lines from 2015 to 2040. The model also showed renewed growth for walking and biking by 30 to 35% for each peak period. Vehicular growth averaged five to six percent.

Caroline Ducas, VHB, presented the 2040 transit analysis, first by reviewing the quantitative transit analysis metrics based on previous Working Group feedback on existing conditions. Ms. Ducas reminded the Working Group that the MBTA Service Delivery Policy standards are 54 riders during peak periods (which assumes some standing passengers) and 39 riders during non-peak periods (everyone has a seat). Ms. Ducas shared the results of applying the CTPS-modeled percent ridership growth for the 70/70A lines based on MBTA-provided ridership data from October 2015. Ms. Ducas compared existing and future passenger loading for:

- Entire Route 70/70A, weekday inbound
- Arsenal Street Corridor only, weekday inbound
- Entire Route 70/70A, weekday outbound
- Arsenal Street Corridor only, weekday outbound

In general, Ms. Ducas explained that a higher number of trips will exceed the current MBTA Service Delivery Policy standard by 2040. On overloaded trips, a higher percentage of stops will exceed the standard by 2040.

Before presenting the corridor travel time increases, Ms. Ducas explained that a bus route's travel time is the summation of the run time (movements from one stop to the other) and dwell time (time stopped to load and unload passengers). The study team modeled the corridor run time increase using VISSIM simulation software and modeled an increase in run time based on the MBTA-provided data. Ms. Ducas noted the MBTA is in the process of changing its fare collection policies. Proposals include all-door boarding and the elimination of cash payments, both of which would help decrease dwell times. Ms. Ducas detailed the expected corridor run time increase on inbound and outbound Route 70/70A buses by 2040 between Watertown Square and the intersection of Market Street/Western Avenue.

Question from Andreas Aeppli: Did you calculate corridor run times for buses in Central Square? Ms. Ducas explained the data is only focused on impacts to the study corridor.

Ms. Castelli presented the 2040 traffic analysis and explained that her team applied the 5% total background growth rate to existing traffic volumes throughout the corridor. She also took into account traffic expected to result from specific developments. The total resulting traffic growth rates are approximately 17% during the AM peak hour and 21% during the PM peak hour, but Ms. Castelli noted this varies throughout the corridor. These higher rates are a reflection of the growth specific to the Arsenal Street Corridor, and were incorporated into the output from the CTPS model.

Ms. Castelli noted the significant residential developments will also result in higher numbers of pedestrians, which factors into the alternatives development. If, for example, the team proposes changes to traffic signals, it needs to understand how an increase in pedestrians and bicyclists should be accommodated.

Question from Jonathan Bockian, Watertown Public Transit Task Force: Did this study incorporate origin and destination data or take into account singular versus multiple occupancy vehicular traffic? Ms. Castelli responded that there was no origin/destination study, but the team separated work trips from home trips. Philip Groth, MBTA, said he is using MBTA and Massachusetts Institute of Technology (MIT) origin and destination data for the 70 and 70A which he will share with Ms. Castelli.

Question from Jonathan Bockian, Watertown Public Transit Task Force: Are this study's growth rates consistent with the findings in the recent Northeastern University/A Better City study? Ms. Castelli said yes, that study included the same regional 5% growth rate for Middlesex County.

Question from Rep. Jon Hecht: Does transit data take into account development-specific growth? Ms. Castelli responded that yes, the run time assessment includes development-specific growth. The majority of development studies looked only at vehicular trips.

Ms. Castelli described the results of 2015 and 2040 traffic analysis maps. If there are no major improvements to the corridor, by 2040 there would be an increase in the number of intersections operating at a poor level of service, particularly in the eastern portion of the corridor. This is largely a result of inefficient operations of traffic signals that do not accommodate pedestrians well.

Ms. Castelli reviewed the map of opportunities and constraints, which was distributed to all meeting participants. She summarized corridor-wide issues, such as traffic signal deficiencies and a lack of pedestrian and bicycle amenities, and corridor-wide opportunities, such as transit signal priority (which would give buses priorities at traffic signals) and relocation of bus stops.

Ms. Castelli presented a list of all alternatives under consideration and noted that at the next meeting (later in the summer) the Working Group will discuss the screening of these alternatives:

#	Type	Alternative
1	Bicycle	Bicycle accommodations: On-road, east of School Street
2	Bicycle	Bicycle accommodations: Off road, connections to the Charles River
3	Bicycle	Bicycle accommodations: Cross connectivity between the Watertown Greenway and the Charles River
4	Bicycle	Bicycle accommodations: Separated bike lane east of School Street
5	Multi-modal	Road diet east of School Street (1 lane each direction, with transit lane/ bike facility)
6	Multi-modal	Soldiers Field Road Gateway Improvement (including placemaking)
7	Multi-modal	Watertown Square Gateway Improvement (including signal improvements)
8	Multi-modal	Traffic signal optimization
9	Multi-modal	Wayfinding (for all modes)
10	Transit	Bus Rapid Transit (BRT) along North Beacon Street
11	Transit	Transit Signal Priority (includes potential to eliminate/ relocate bus stops)

12	Transit	Watertown Square Bus Alternative
13	Transit	Evaluation of transit stop pull-out feasibility
14	Transit	Transit shelter feasibility evaluation
15	Transit	Transit service improvements to existing bus routes
16	Transit	Consolidated shuttle service along Arsenal Street
17	Vehicle	Adaptive Signal Control
18	Vehicle	Overhead lane indication signage

Ms. Castelli explained that Adaptive signal control ties multiple signals together and gives flexibility for cycle time based on congestion. She reviewed locations that need immediate improvements due to high frequencies of accidents, and do not need further planning. A safety audit could be arranged with members of the community, police and fire departments, and town officials to look at problems in these locations and brainstorm solutions.

Ms. Castelli identified intersections that have pedestrian phase or other signal deficiencies. She noted that there are 37 ramps that need only a tactile warning strip to be compliant with the Americans with Disabilities Act (ADA), which is a lower cost and level of effort for the Town. Other ramps, however, would need full reconstruction to become compliant.

Ms. Castelli reviewed the next steps for the project, which includes continued alternatives development and the first level screening. The next Working Group meeting will be scheduled in late July or early August, with a second public meeting in late September.

Question & Answer Session

Question from Steve Magoon, Town of Watertown: Is the recommendation to coordinate signals throughout the corridor or in separate groups within the corridor? Ms. Castelli said it is preferable to coordinate signals corridor-wide in the future, though the eastern half of the corridor could be coordinated today (more immediately). Adaptive signal control appears to be a good option. Mr. Magoon asked about burying utilities which is particularly challenging due to the Cambridge aqueduct. Ms. Castelli said this would need to be evaluated further and could be a challenge for that reason. At the very least, the team will recommend moving utility poles from the middle of the sidewalk.

Question from Gideon Schreiber, Town of Watertown: Is it possible to restructure the 70/70A bus routes and add more buses to help improve transit service? Ms. Castelli said alternative #15 (above) proposes changes to existing bus service to improve capacity. De-coupling the 70/70A is a separate MBTA project and will help inform this study.

Comments from Aaron Dushku, Watertown Town Council: A Master Plan is being developed in conjunction with athenahealth and other developments, so this study's recommendations should be shared with athenahealth. Mr. Dushku expressed his support for adaptive signal control and transit signal priorities. He recommended prioritizing bike safety in metro areas with on-road bike accommodations and signalized bike crossings. Ms. Castelli described some of the challenges of bike signals, including when riders don't obey the signals. She said this can be discussed at further meetings.

Comments from Mr. Groth: The MBTA is piloting transit signal prioritization in Cambridge and Brookline, so Mr. Groth will provide recommendations for equipment purchases.

Comments from Lisa Feltner, Watertown Town Council: Ms. Feltner expressed her support for pedestrian safety and concern with aesthetics of overhead signs and signals. Ms. Castelli said the team will recommend general streetscape and aesthetics for overall improvements to improve the pedestrian experience, which could include ornamental signal heads.

Question from Mr. Bockian: What is the relationship between opportunities and alternatives? Ms. Castelli explained the opportunities were used to develop the alternatives, and screening criteria (shared at the first Working Group meeting and already incorporates the Working Group's feedback) will be used to narrow down the alternatives.

Question from Susan Falkoff, Watertown Town Council: What are the advantages of an articulated bus? Ms. Castelli explained that articulated buses can seat more passengers (47 to 57 seats compared to 39 in regular buses) and bend in the middle to make turns.

Comment from Ms. Feltner: Bike share, such as Hubway, is desirable for the corridor. Ms. Castelli said the study team can recommend Hubway locations and/or propose a joint venture with athenahealth or Boylston Properties (for example). Ms. Feltner added that the intersection of Birmingham Parkway, North Beacon Street and Arsenal Street needs improvements. Ms. Castelli said the team is looking into tying these signals together and fixing broken equipment.

Question from Mr. Magoon: How can we factor autonomous vehicles into the alternatives? Ms. Castelli said there are many perspectives on autonomous vehicles and it can be difficult to plan for them.

Comments from Melissa Santucci Rozzi, Watertown Zoning Board of Appeals: Ms. Santucci Rozzi expressed her concern regarding bike conflicts and safety, and emphasized the need for an educational component to the alternatives. Ms. Castelli agreed and said this is a widespread issue. With better accommodations, bicyclists are more likely to follow signals. Ms. Santucci Rozzi also discussed gridlock and the impatience of drivers trying to avoid waiting multiple traffic signal cycles. "Don't block the box" signs and pavement markings can help educate drivers.

Comments from Vincent Piccirilli, Watertown Town Council: athenahealth is investing \$25 million into improvements at the river crossing; this effort should be taken into account by the study. Ms. Castelli said she is coordinating with athenahealth and will incorporate the mitigation program once it is finalized.

Comments from Rep. Hecht: Can the Town work with the individual developers and the study team to keep everyone coordinated? Rep. Hecht requested an emphasis on pedestrian improvements and making the corridor more welcoming to pedestrians. He noted the example of people driving across the

street in the Alewife area. Ms. Castelli said pedestrian improvements are part of the multimodal alternatives. Rep. Hecht asked about right-of-way (ROW) impacts and Ms. Castelli said after ROW impacts are identified, if the town wanted to proceed with recommendations, the Town would work directly with property owners. Rep. Hecht suggested increasing connectivity across the corridor by creating connections on private development sites. He asked if alternatives can encourage mode shift and Ms. Castelli replied that the project team can identify the alternatives that have the highest likelihood to encourage mode shift, but a complete analysis will not be covered under this study. Mr. Groth noted that mode shift is complicated, but the MBTA does have an elasticity model based on economic ridership projections.

Comment from Mr. Schreiber: The Town of Watertown is working on conversations with private property owners about easements, especially for mixed use developments.

Comment from Roberta Miller, Arsenal Center for the Arts: Safety is a priority, as well as connections to and through the corridor and to the greenway. Ms. Miller expressed her support for alternative #3 (see table above). Mr. Schreiber added that athenahealth is looking at connections to the greenway on the company's property.

Comment from Christine Dwyer and Jami Lard, Perkins School for the Blind: Alternatives should focus on pedestrians with vision impairments, including a localized shuttle to the Arsenal Mall.

Comment from Mr. Dushku: Alternative #5 is a big change and may have impacts to automotive traffic, but it could solve a lot of problems for pedestrians and bicyclists. Ms. Castelli said the project team will evaluate the benefits and drawbacks of each alternative, including impacts to traffic volumes in the neighborhood. Any major infrastructure alternatives that have Working Group and public support would move forward in a separate public process.

Question from Mr. Aepli: Will you consider more passive traffic management methodologies? Ms. Castelli said the team is considering this as an alternative, including the potential for a traffic circle at the river crossings.

Question from Mr. Bockian: If the goal is to reduce congestion, how can you evaluate alternatives without considering the effects of mode share? Ms. Castelli explained the alternatives will be evaluated based on the current distribution of modes, and will consider a 20% growth in vehicles and 30% in non-motorized modes. The town is also looking at household and employment growth. Mr. Groth noted that cost, time, safety, and comfort are all factors that play into mode choice. Mr. Clark explained that the evaluation criteria will be used to assess the alternatives, including effects on mode share. The team will qualitatively assess improvements; a quantitative assessment is burdened by the number of variables in play, given the team must use the available resources to focus on the Arsenal Street corridor.

Question from Mr. Dushku: What is the status of the MBTA service planning process, and can the evaluation of the 70/70A routes tie into the new commuter rail station process? Mr. Groth replied that the Fiscal and Management Control Board (FMCB) will discuss the service plan update at the next meeting. There is supposed to be service plan update every two years but the last one was over six years ago. Mr. Groth explained it can be difficult to add buses to the 70/70A without taking them from elsewhere. The MBTA is looking into rapid transit options at Boston Landing.

Comment from Ms. Feltner: The intersection of Walnut Street and School Street, near Arsenal Street, should be examined for new connections to Watertown Square.

Mr. Clark thanked the Working Group for attending and providing comments, and he concluded the meeting.

ARSENAL STREET

CORRIDOR STUDY



Arsenal Street Corridor Study Working Group Meeting #4: Summary

August 3, 2016, 9:30 AM, Watertown Free Public Library, 123 Main Street, Watertown, MA

Purpose

At the fourth Working Group meeting, the project team presented the results of the first level alternatives screening process, as well as short-term recommended improvements. A preview of alternatives analysis was also discussed.

Present

Ethan Britland and Michael Clark, Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning (OTP); Laura Castelli and Niki Hastings, VHB; Emily Christin and Sarah Paritsky, Regina Villa Associates (RVA); and the following members of the Working Group:

Andreas Aepli, Resident

Jonathan Bockian, Watertown Public Transit Task Force (WPTTF)

Pat Connolly, athenahealth

Aaron Dushku, Watertown Town Council

Christine Dwyer, Perkins School for the Blind

Susan Falkoff, Watertown Town Council

Lisa Feltner, Watertown Town Council

Jeff Heidelberg, Boylston Properties

Rep. Jon Hecht, Massachusetts House of Representatives

Emily Izzo, Office of Representative Lawn

Jaimi Lard, Perkins School for the Blind

Steve Magoon, Town of Watertown

Roberta Miller, Arsenal Center for the Arts

James Piccirilli, Town of Watertown

Vincent Piccirilli, Watertown Town Council

Gideon Schreiber, Town of Watertown

Matt Shuman, Town of Watertown

Meeting Summary

MassDOT Project Manager Michael Clark opened the meeting and provided an overview of the agenda. He provided a recap of the previous Working Group meeting and led a round of introductions. He introduced Laura Castelli, VHB Project Manager.

Ms. Castelli reviewed the 18 potential alternatives that were presented at the previous meeting, as well as the goals and objectives of the study. She noted that the study goals, objectives, and evaluation criteria are included on the handout. Ms. Castelli explained that each alternative was measured against the previously established goals and objectives in the preliminary screening process.

Ms. Castelli and Niki Hastings, VHB, presented the results of the preliminary screening process. Each alternative falls into one of the following categories: bicycle, multi-modal, transit, or vehicle.

Bicycle Alternatives

1. Bicycle Accommodations On-Road, East of School Street – ***advanced***
 - Ms. Castelli said this will have the least impact to private property along the corridor, and it could balance well with future and current development projects. She added that the next step of screening will identify the exact square footage of potential impacts to private properties. She said that this may be combined with Alternative 4 for a “hybrid alternative.”
2. Off-Road, Parallel Connections to Charles River – ***discarded***
 - Ms. Castelli said there would be grade issues with this option, and therefore it was discarded in favor of connections to the river to the south (Alternative 3).
3. Cross Connectivity Between Greenway and River – ***advanced***
 - Ms. Castelli showed a map of potential pathways connecting to the river. She said that a typical cross section and potential impacts to private property would be developed in the next stage of the screening.
4. Separated Bike Lanes East of School Street – ***discarded***
 - Ms. Castelli said the project team analyzed four roadway alignments for this alternative which included widening the road in different directions. Ms. Castelli presented sample impact analyses, including widening to the north only, widening to the south only, and widening to the north and south. Each alignment had significant impacts to private properties, and would require reconstruction of the Arsenal Street bridge over the Charles River. Ms. Castelli said that reconstructing the bridge would involve Massachusetts Environmental Policy Act (MEPA) permit approvals and would be a significant undertaking; therefore, all bike lanes recommended for the study will likely end at the bridge. She added that it is possible there may be room for separated bike lanes in small sections along the corridor, but would only be implemented if the sections are long enough to minimize transitions between on- and off-road locations.
 - **Question from Gideon Schreiber, Town of Watertown:** Has the project team considered narrowing the vehicle lanes along the corridor in order to accommodate bike lanes (a road diet)? Ms. Castelli said that a road diet will be evaluated as part of a separate alternative, but noted that reducing the number of travel lanes would have operational impacts to traffic and would likely induce cut-through traffic on parallel corridors.
 - **Question from Lisa Feltner, Watertown Town Council:** Are there any connections for bicycles under consideration on Arsenal Street to Watertown Square from the Walnut Street area? Ms. Castelli said this would have fallen under Alternative 2, which was discarded. She also noted that the Town is currently developing options to extend bicycle connections west. Ms. Feltner added that the Town has plans for a bike route to continue up Arsenal Street using Taylor Street.
 - **Question from Matt Shuman, Town of Watertown:** Has the project team considered shared use paths in any alternatives? Ms. Castelli said the one of the alternatives includes shared use paths, but it has the same impacts to the buildings between School

Street and Birch Road as Alternative 4. Mr. Shuman said that he would favor pedestrian needs over bicycle accommodations, and suggested looking at North Beacon Street and Greenough Boulevard as alternative bicycle routes because they do not have as many traffic lights. He added that the Greenough Boulevard and Arsenal Street intersection is unsafe for pedestrians. Ms. Castelli said that all of the sidewalks have been looked at in this study, and that even though sidewalks line both sides of Arsenal Street, they are not always functional or compliant with the Americans with Disabilities Act (ADA) due to tree pits and utility poles. She said that the study team will identify any utility poles recommended for relocating.

- **Comment from Mr. Schreiber:** There are restrictions to relocating many of the utility poles along Arsenal Street because of the Cambridge waterline. Ms. Castelli thanked him for sharing that information.
- There was a discussion about the possibility of other bicycle connections to the Charles River from the 311 Arsenal Street building. Jeff Heidelberg, Boylston Properties, added that DCR did not like the plans for bicycle paths through the middle of the Boylston Properties property because of steep slopes. He added that DCR indicated that they would prefer a bicycle and vehicle connection from the Arlington Street intersection to Greenough Boulevard. Mr. Schreiber added that there is an existing connection through Arsenal Park that the Town is looking to improve. He also discussed several connections that athenahealth is considering.

Multimodal Alternatives

5. Road Diet East of School Street – **advanced**
 - Ms. Castelli said that this would reduce the roadway from four to two lanes. She explained that while this would improve the public health along the corridor in general, it could result in traffic diversions to other local neighborhood roads, which may negatively impact the public health of residents.
6. Soldiers Field Road Gateway Improvements – **advanced**
 - Ms. Castelli said the study team has observed inefficiencies and safety hazards at this intersection and extending west to the intersection of Arlington Street/Coolidge Street. Potential improvements for this extended gateway include pedestrian accommodations, lane striping, and signal timing/phasing.
7. Watertown Square Gateway Improvements – **advanced**
 - Ms. Castelli said improvements could include signal timing/phasing, intersection geometry (lane usage), and eliminating or rerouting legs of the Square.
 - Bus operational changes will also be considered.
8. Traffic Signal Optimization – **discarded**
 - Ms. Castelli said that signal timing improvements are being progressed independently as part of development projects, so it is redundant for this alternative to remain.
9. Wayfinding – **discarded**

- Ms. Castelli said this will be incorporated into the bicycle recommendation, as it is ineffective in meeting the study goals on its own.
- **Question from Aaron Dushku, Watertown Town Council:** If bike/bus lanes are added, would they offer travel in each direction? Ms. Castelli said yes, there would be one in each direction.
- **Question from Mr. Dushku:** Transit Signal Priority (TSP) is being considered for the Mount Auburn Street corridor. At this last meeting, didn't the study team indicate that TSP was infeasible? Ms. Castelli explained that TSP is a challenge for the MBTA at the moment because the agency would have to add the capability on all buses, but one of the alternatives includes assisting the community in implementing TSP once the MBTA is ready. She clarified that "signal optimization" just includes timing/phasing of traffic signals.
- **Question from Steve Magoon, Town of Watertown:** Has the study team looked at the impact to the traffic capacity of Arsenal Street if TSP is implemented? Ms. Castelli said TSP might hold a green light longer to allow a bus to pass through, which might delay the vehicles on the side streets at the red light, but the system can recover fairly quickly. She clarified that TSP may be able to assist buses that are behind schedule. She said this discussion can be continued at the next Working Group meeting with Philip Groth, the MBTA representative for the Working Group.
- **Question from Jonathan Bockian, Watertown Public Transit Task Force:** Is better signage being considered for Watertown Square? Ms. Castelli said yes. Mr. Bockian asked how lane capacity is calculated with buses if the ideal capacity is 900 passenger cars per lane, per hour. Ms. Castelli said the lane capacity converts buses to passenger cars when determining the ideal capacity.

Transit Alternatives

10. Bus Rapid Transit (BRT) along North Beacon Street – **advanced**

- Ms. Hastings said further analysis will be done to see if sufficient ridership would warrant BRT, and that connections to commuter rail will be considered.

11. Transit Signal Priority (TSP) – **advanced**

- Ms. Hastings said further analysis would include changes that would be required to accommodate TSP, including queue bypass lanes and bus stop consolidation.

12. Watertown Square Bus Alternative – **discarded**

- Ms. Hastings said this was discarded to be incorporated into the Watertown Gateway Improvements alternative.

13. Transit Stop Pull-Out Feasibility – **advanced**

- Ms. Hastings said further analysis would be done to qualitatively assess impacts to travel time, as well as identify spatial constraints for pull-outs.

- **Comment from Mr. Magoon:** Will the buses actually use a pull-out, as not all bus drivers do? Ms. Castelli said the study team will need to consider the effectiveness of pull-outs and consult the MBTA.

14. Transit Shelter Feasibility – *advanced*

- Ms. Hastings said further analysis would consider the impacts of adding shelters to 11 stops along the corridor. She showed the screening summary that was completed on the 11 potential bus stops.

15. Transit Service Improvements to Existing Bus Routes – *advanced*

- Ms. Hastings said this alternative will look into splitting the current routes into three smaller, separate routes, and combining Route 70A with other existing routes. Further analysis would include a qualitative assessment of improvements to travel time and on-time performance.

16. Arsenal Street Consolidated Shuttle Service – *discarded*

- Ms. Hastings said this alternative was discarded due to a lack of data to determine whether a shuttle service would be operational along the corridor. She noted that this alternative could be considered at a later date once several shuttles are operational.
- **Question from Mr. Dushku:** Are off-board fare collection stations being considered? Mr. Clark explained that is not being advanced at this time because the MBTA is working towards a system-wide strategy.
- **Question from Mr. Schreiber:** How is the physical space being determined for shelters? Is it in the study's right-of-way? Mr. Clark said the study team will be looking at individual capacity for a shelter at each stop, but it is ultimately the MBTA's decision regarding the space and design of the shelters.
- **Comment from Ms. Feltner:** Bus shelters and off-board fare collections stations would be a good amenity to add close to the new housing developments being constructed. Mr. Schreiber added that the existing bus stops are not necessarily where they should be located long-term, so if off-board fare collection stations are being considered, the Working Group should think about where bus stops should be located in the long-term. Mr. Clark said the team will consider this when determining if pull-outs and shelters should be implemented.
- **Comment from Mr. Bockian:** A connection to the Green Line/Packards Corner should be considered if BRT is to be looked into further. Ms. Hastings thanked him and said the team will look into this possibility, and that Brighton Avenue is constrained.
- **Comment from Mr. Schreiber:** The lack of connection to the Longwood Medical Area is a huge issue for Watertown residents. It currently takes about an hour and a half to get there via public transit, so a possible connection to Longwood from Watertown Square would be extremely beneficial as it is a large employment center.
- **Question from Representative Jon Hecht:** How does the study team measure how much more volume of traffic could be moved with BRT compared to existing service? Ms. Hastings said the next steps of analysis would help the team understand this better,

and it would include measuring the local population and the potential draw/attraction that a BRT would have. She noted that this study will not be evaluating the impacts to traffic operations and that a more detailed analysis would need to be studied further.

- **Question from Andreas Aeppli, Watertown resident:** Would the BRT line be able to exist just in Watertown, or would it have to be extended to be a complete BRT service? Ms. Hastings said that the length of the route will be determined in the next step of the analysis. Mr. Aeppli asked if there is currently bus service in Brighton to Packard's Corner. Mr. Clark mentioned Route 57, and noted that Route 65 terminates in Brighton Center, which could be a potential connection at Boston Landing.

Vehicles Alternatives

17. Adaptive Signal Control – *advanced*

- Ms. Hastings said further analysis would include studying the fluctuations in traffic flow, and if adaptive signal control is a good candidate for the corridor. There was a discussion of the safety improvements proposed by athenahealth.

18. Overhead Lane Indication Signage – *discarded*

- Ms. Hastings said this could be incorporated into the Watertown Square Gateway Improvements alternative.

Ms. Hastings presented a list of expedited (short-term) recommendations, which are low-cost and can be advanced immediately. The recommendations include road safety audits based on the Highway Safety Improvement Program (HSIP) locations, traffic signal improvements, and curb ramp improvements such as tactile warning strips for ADA compliance.

Ms. Hastings presented a preview of how the alternatives that were recommended for advancement will be evaluated. Next steps include assessing the level of support from the public and Working Group and identifying potential funding sources. She referred to the handout, which includes a blank alternatives evaluation matrix. She explained that the alternatives will be assigned as having a positive, neutral, or negative impact to each criteria.

Mr. Clark reviewed the next steps for the project, such as the analysis of the advanced alternatives. There are two Working Group meetings left, including one in late fall after the next public meeting in late September. The Working Group will also have an opportunity to comment on the final report when it is released in the late winter or spring of 2017.

Question & Answer Session

Comment from Vincent Piccirilli, Watertown Town Council: It is important for the MBTA to see the results of this study and understand that Watertown needs better public transit service. Mr. Dushku added that the study should take a holistic approach in improving accessibility and mobility for all transportation modes, and there needs to be increased reliability as well as enhancements for pedestrians around the bus stops. Mr. Clark said the study team will evaluate the alternatives based on better transit service.

Question from Mr. Dushku: Will the study be looking into pedestrian enhancements in the Watertown Square bus stop area, such as new public space? Ms. Castelli said the study will identify those spaces for potential public use but will not develop specific plans.

Question from Mr. Bockian: How will this study proceed after it is complete? Who is responsible for implementing the alternatives? Ms. Castelli said the study team will present the final analysis, but it is ultimately up to the Working Group and the community to decide what to move forward with. The study team will lay out the technical information and next steps for environmental permitting processes if necessary. She added that in her previous experience, the best options usually rise to the top based on financial constraints, and what is most popular with the Working Group and the public. Mr. Clark added that it is largely a consensus decision with the Town, as it is the primary owner of the corridor right-of-way. Ms. Castelli said the team will help identify timelines for alternatives, such as what can be done in the next three to five years versus what can be done in the next 10 years.

Comment from Rep. Hecht: It would be useful to identify packages of alternatives that should be grouped together. Ms. Castelli said she hopes that will become clear as the analysis proceeds. The group may choose which alternatives are most attractive first, then decide to group some of those ones together.

A discussion followed regarding the possibility of coordinating with Transportation Management Associations (TMAs) and express buses to high transit priority locations such as South Boston and the Waterfront. Rep. Hecht said the new developments along the corridor may be interested in funding TMAs, and that the MBTA should not be relied upon solely for improving transit service.

Mr. Clark thanked the Working Group for attending and providing comments, and he concluded the meeting.

ARSENAL STREET

CORRIDOR STUDY



Arsenal Street Corridor Study - Public Meeting #2: Summary

October 4, 2016, 6:00 – 8:00 PM

Watertown Middle School, 68 Waverley Avenue, Watertown, MA

Attendees

Michael Clark, Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning (OTP); Laura Castelli, Caroline Ducas, Elsa Chan, Niki Hastings, Kristine Wickham-Zimmerman, VHB; Nancy Farrell and Sarah Paritsky, Regina Villa Associates (RVA); elected officials; and members of the public (see attendance).

Meeting Purpose

The purpose of the second public meeting on the Arsenal Street Corridor Study was to present future year transportation conditions, issues and opportunities identified along the Arsenal Street corridor, and selected alternatives to be analyzed further, and to gather public feedback. The presentation from the meeting is posted on the study website at: www.mass.gov/massdot/arsenalstreet

Meeting Summary

Introductions

Nancy Farrell, RVA, opened the meeting and welcomed attendees. She reviewed the meeting guidelines and emergency procedures. Ms. Farrell noted that immediately following the presentation, the project team will move to the cafeteria to discuss the alternatives with attendees in more details, answer questions, and ask for their input. Michael Clark, MassDOT Project Manager, reviewed the meeting agenda and introduced Niki Hastings, VHB, who presented the development of 2040 Future Conditions.

2040 Future Conditions

Ms. Hastings explained that the study team collected data on future conditions for the year 2040 to ensure anything the study recommends will address future needs.

Regional Travel Demand Model

The study team worked with the Central Transportation Planning Staff (CTPS), an arm of the Boston Regional Metropolitan Planning Organization (MPO), which maintains a regional travel demand model. Ms. Hastings explained that the CTPS model is based on assumptions for 2040 household and employment growth, and enables the team to develop land use growth data in Watertown, growth of trips by all modes, transit boardings for the Massachusetts Bay Transportation Authority (MBTA) bus routes 70 and 70A, and total vehicle trips for each roadway.

Ms. Hastings stated that the model shows a 22% increase in daily transit ridership and approximately 1,640 additional weekday boardings on the 70/70A lines from 2015 to 2040. Vehicular growth averaged 5% during morning (AM) and afternoon (PM) peak periods.

Transit Analysis

Caroline Ducas, VHB, presented the 2040 transit analysis. She explained that the study team took feedback from the first public meeting and from the Working Group to develop quantitative transit analysis metrics: one to indicate the number of trips with crowding and one to understand the congestion and impact of delays on bus travel times. Ms. Ducas shared the results of applying the CTPS-modeled ridership growth for the 70/70A lines based on MBTA-provided ridership data. Ms. Ducas compared existing and future passenger loading for:

- Entire Route 70/70A, weekday inbound
- Arsenal Street Corridor only, weekday inbound
- Entire Route 70/70A, weekday outbound
- Arsenal Street Corridor only, weekday outbound

In general, Ms. Ducas explained that there are overcrowded conditions on the bus routes today, but the project area will worsen if no improvements are made to the corridor.

Ms. Ducas defined a bus route's travel time as the summation of the run time (movements from one stop to the other) and dwell time (time stopped to load and unload passengers). She noted that the MBTA is studying approaches for fare payment and the potential for an all-door boarding policy, both of which could affect corridor run times. The study team modeled the corridor run time increase using VISSIM simulation software and modeled an increase in run time based on MBTA-provided data from 2015. Ms. Ducas shared an example of the corridor run time increase for the Route 70/70A between Watertown Square and Market Street/Western Avenue. A substantial increase is anticipated due to congestion and intersection signal delays.

Traffic Analysis

Ms. Castelli presented the 2040 traffic analysis and explained that her team applied the 5% total background growth rate to existing traffic volumes throughout the corridor. She also took into account traffic expected to result from specific developments. The total resulting traffic growth rates are approximately 17% during the AM peak hour and 21% during the PM peak hour. Ms. Castelli referenced other improvements planned by proponents of some of the developments in the corridor, including a two-way bike path being added to the north side of Arsenal Street.

Ms. Castelli then described the results of 2015 and 2040 traffic analysis maps. She said there are currently intersections with a level of service (LOS) E or F at each end of the corridor. If there are no major improvements to the corridor, by 2040 there would be an increase in the number of intersections operating at a poor level of service, particularly in the eastern portion of the corridor.

Issues, Opportunities & Constraints

Ms. Castelli reviewed the map of issues, opportunities, and constraints. She noted this map can be reviewed in more detail during the Open House portion of the meeting.

Alternatives Development

Ms. Castelli presented a list of 18 alternatives that were considered and noted that some of them have been discarded from further analysis for various reasons. She continued to explain which alternatives were discarded and the reasons they failed to advance. The alternatives that are moving forward were discussed in further detail during the Open House. Each alternative falls into one of four categories: bicycle, multi-modal, transit, or vehicle.

Bicycle Alternatives

1. Bicycle Accommodations On-Road, East of School Street – **advanced**
 - Ms. Castelli said this alternative involves an on-road bike lane.
2. Off-Road, Parallel Connections to Charles River – **discarded**
 - Ms. Castelli said there are opportunities for cross-connections with bicycle accommodations along the Charles River to the south (Alternative 3).
3. Cross Connectivity between Greenway and River – **advanced**
 - Ms. Castelli showed a map of potential pathways connecting to the river and welcomed suggestions on where the cross connections should be explored further.
4. Separated Bike Lanes East of School Street – **discarded**
 - Ms. Castelli said the project team analyzed four roadway alignments for this alternative, which included widening the road in different directions.
 - Ms. Castelli presented a sample impact analysis that has significant impacts to properties including historic buildings, which are very close to the street.
 - The study team is exploring opportunities to fit bicycle accommodations onto the existing roadway, but it is possible there may be room for separated bike lanes in small sections along the corridor. This would only be implemented if the sections are long enough to minimize transitions between on- and off-road locations.

Multimodal Alternatives

5. Road Diet East of School Street – **advanced**
 - Ms. Castelli said that this would reduce the roadway from four to two vehicular lanes (one in each direction). The other lanes would be dedicated to bikes or buses, or both.
 - This has benefits for non-motorized travelers and transit, but the team is still studying what kinds of impacts a road diet would have to traffic on neighborhood roads.
6. Soldiers Field Road Gateway Improvements – **advanced**
 - Ms. Castelli said the study team is considering some ideas that will be shared during the open house portion of the meeting.
 - She mentioned that the Department of Conservation and Recreation (DCR) owns a lot of the land near the intersection, so the Town would coordinate with DCR to alleviate traffic in this location.
7. Watertown Square Gateway Improvements – **advanced**

- Ms. Castelli said the study team has some ideas for signage to help with lane management. This could reduce the number of last minute merges that currently complicate travel at this intersection.
8. Traffic Signal Optimization – **discarded**
- Ms. Castelli said that signal timing improvements are being progressed independently as part of development projects, so it is redundant for this alternative to remain.
9. Wayfinding – **discarded**
- Ms. Castelli said this will be incorporated into other alternatives, as it is ineffective in meeting the study goals on its own.

Transit Alternatives

10. Bus Rapid Transit (BRT) along North Beacon Street – **advanced**
- Ms. Castelli explained that BRT or express transit service along multiple routes, with connections to Commuter Rail or the Red Line, is being considered. She described some potential challenges with this alternative due to width restrictions.
11. Transit Signal Priority (TSP) – **advanced**
- Ms. Castelli said TSP involves programming signals to adjust for buses by holding the traffic signal green phase if the signal detects a bus within a certain distance of the intersection.
12. Watertown Square Bus Alternative – **discarded**
- Ms. Castelli said this was discarded to be incorporated into the Watertown Gateway Improvements alternative.
13. Transit Stop Pull-Out Feasibility – **advanced**
- Ms. Castelli said this alternative addresses how the bus meets the curb. Either the bus leaves the travel lane or the curb comes into the roadway to decrease the time buses take to merge with traffic.
14. Transit Shelter Feasibility – **advanced**
- Ms. Castelli said the study team is considering the impacts of adding shelters to 11 stops along the corridor. There are locations where adding a shelter may not be possible due to the limited width of the sidewalk.
15. Transit Service Improvements to Existing Bus Routes – **advanced**
- Ms. Castelli explained that this alternative will explore the possibility of combining services and changing transit service in the corridor. The study team would hope that any recommended changes could be implemented at a low cost and on a short timeline.
16. Arsenal Street Consolidated Shuttle Service – **discarded**

- Ms. Castelli said this alternative was discarded because the developments are currently providing separate services. A transportation management association (TMA) could consolidate these services, but it is too premature to do so now.

Vehicles Alternatives

17. Adaptive Signal Control – **advanced**

- Ms. Castelli said this alternative involves the use of “smart” traffic signals to help manage the crossings of pedestrians and bicyclists, while improving the efficiency of travel for vehicles.

18. Overhead Lane Indication Signage – **discarded**

- Ms. Castelli said this could be incorporated into the Watertown Square Gateway Improvements alternative.

Ms. Castelli presented a list of expedited recommendations, which are low-cost and can be advanced immediately. The recommendations include road safety audits based on the Highway Safety Improvement Program (HSIP) locations, traffic signal improvements, and curb ramp improvements such as tactile warning strips for ADA compliance.

Next Steps

Ms. Castelli explained that the study team will continue the alternatives analysis this fall and will have draft recommendations ready by early next year. The next Working Group meeting will be scheduled this winter, with the next public meeting in spring 2017.

Question & Answer Session

Ms. Farrell opened the floor to questions.

Nicholas Anastasiades asked how the traffic forecasting was done. Ms. Castelli said the study team did traffic counts during the fall of 2015 but there are no permanent count stations. Forecasts were calculated by hand. Mr. Anastasiades expressed concerns with trucks traveling very fast along Arsenal Street, particularly near the Perkins School for the Blind. He suggested installing speed bumps to remind buses and trucks to slow down in that area. He also recommended installing a signal at the intersection of Louise Street and Arsenal Street.

Dorothea Hass, Walk Boston, commented about increasing time for bus trips that could be improved with traffic signal priority. Ms. Castelli responded that traffic signal priority is not included in the study’s no build alternative, but it is an improvement alternative that the study team is evaluating. Ms. Hass said that pedestrians cross through the corridor throughout the day, sometimes to access bus stops across the street. Ms. Castelli said that a pedestrian phase will be included in each cycle at signalized intersections. It is most challenging to accommodate pedestrian crossings during peak hours. Ms. Hass commented that safety audits should include pedestrian wait times at intersections. She noted that Boston is building more protected bike lanes, including one on Massachusetts Avenue. Ms. Castelli explained that this is typically done by absorbing on-street parking, but there is no on-street parking on Arsenal Street east of School Street. In the future, bike accommodations will connect to an off-road bike path.

Lisa Feltner, Watertown Town Council, stated that the corridor can be thought of as a pedestrian/bicycle boulevard or a high-traffic vehicular throughway. She asked how the road diet would affect neighborhoods and stated Montreal has a successful model that protects residential streets from absorbing heavy traffic. Ms. Castelli said the study team does not have enough information yet, but the analysis will look at where traffic diverts if Arsenal is congested.

Aaron Dushku, Watertown Town Council, expressed his support for the BRT idea. He encouraged the study team to consider the new residences along the corridor and think about where the stops should be. Ms. Castelli said the analysis won't specify stops for the BRT, but the new residences are included in the ridership analysis. She noted the BRT alternative may evolve into an "express transit service."

A resident of Watertown commented that Arsenal Street is reduced to one lane due to ongoing construction. She said that the new mall is expecting 10,000 cars on a Saturday and mentioned other new developments, whose residents may choose to use their cars. Ms. Castelli agreed that the road is narrower near the current construction, but she said the four-lane section of Arsenal Street is also included in the analysis. Ms. Castelli noted that the study team will have more information about the road diet at the next public meeting in the spring. There will be a 30-day comment period once the draft Final Report is released, so residents will have another opportunity to provide feedback on the analysis then. Ms. Castelli explained that since the Town has jurisdiction over the road and decision-making, MassDOT would not construct something the Town does not support.

Anthony Palomba, Watertown Town Council, asked how the alternatives will help reduce the congestion on Arsenal Street today, not just in 20 years. Ms. Castelli said the study team is looking at the current situation but considers a date far off in the future to ensure the Town and State have a good return on their investments.

Mark Sideris, Watertown Town Council President, asked how to get the MBTA on board to increase capacity. Ms. Castelli explained that the MBTA is part of our Working Group. The study scope tells the team to ignore funding constraints, but the study team will take a realistic look and develop short and longer term options.

Rachael Sack asked for clarification about the growth projections. Ms. Hastings replied that corridor wide growth is projected at 20%. The team started with 5% based on employment and household growth for the region, but layered on the developments in the corridor and adjusted the results.

Ms. Farrell thanked everyone for attending and asked participants to move to the cafeteria for the open house portion of the meeting.

Open House

The study team staffed various tables around the room and described the alternatives in more details to participants. Attendees provided written comments on sticky notes that were placed on several boards at each table. A transcription of the comments is below. Additional participants recorded their feedback on comment forms and submitted them to the project team for consideration.

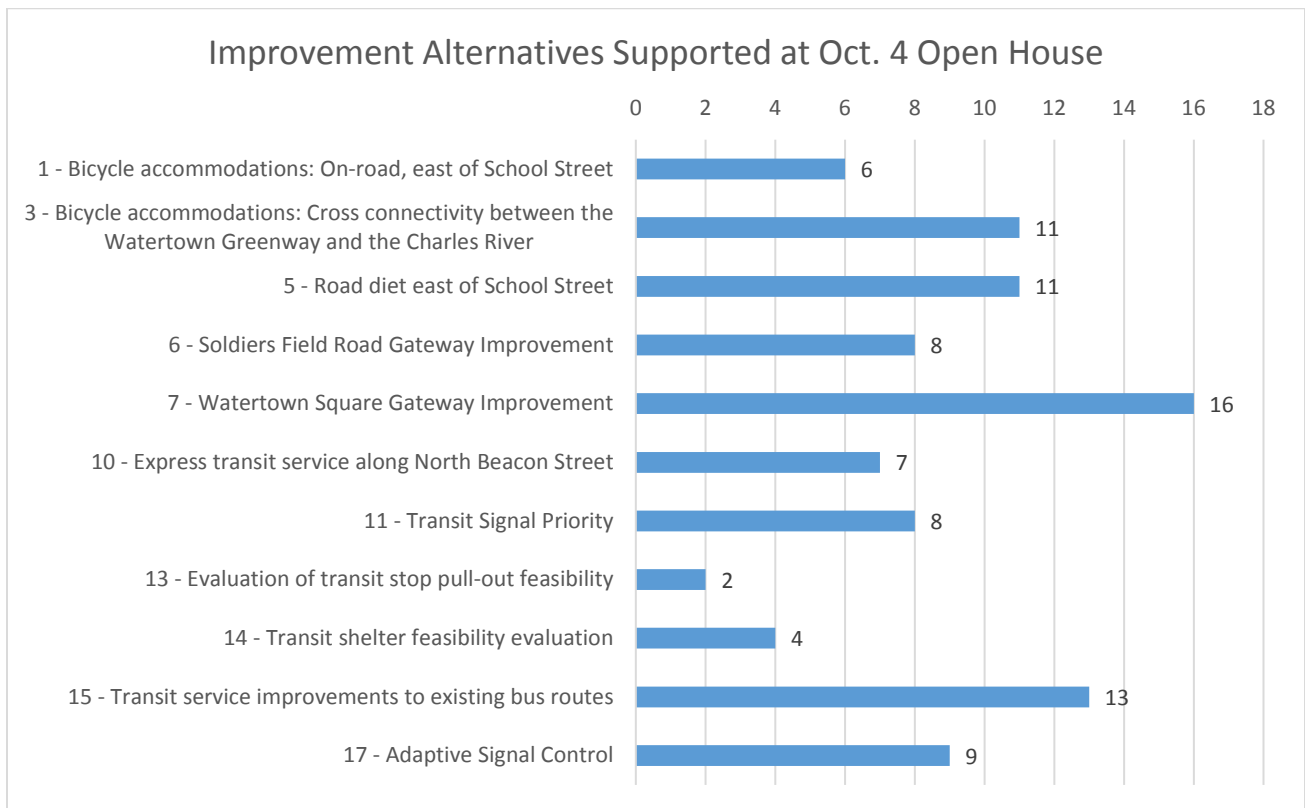
Table 1 – Comments from Open House

BOARD	COMMENTS
Existing MBTA Transit Routes	<ul style="list-style-type: none"> I don't believe the traffic volumes. Too low, especially over 20 years. Need public transit; get out of cars.

BOARD	COMMENTS
	<ul style="list-style-type: none"> • Where is bike pedestrian connection <u>IN</u> to square? To river? • Not enough buses; already crowded; Watertown Square is messy, poles in the way; signage needed; bikes need signs too. • Slow traffic on Arsenal so cars yield to pedestrians. • Bus down North Beacon St as an alternative to the 70/70A → Market → Western Ave.
Issues and Opportunities Map	<ul style="list-style-type: none"> • Get OFF Arsenal; Taylor a problem for many reasons (where is bold thinking). • Bike <u>path</u> not just another lane not just “moving through.” • If road diet reduces to 1 lane, then what happens if there is an automobile accident? • North Beacon is a beautiful residential street with bike lanes... just saying.
Watertown Square Gateway Map	<ul style="list-style-type: none"> • Change Elm St 5-way. • Need bus shelters BIG TIME. • Reduce turning lanes in Watertown Square. Improve level of service for bikes and pedestrian and buses to reduce single occupancy vehicle trips. Inconveniencing motorists is <u>okay</u>. • Hooray for more green space! • Combine taxi/bus/bike lanes if can't make nice paths. • Detailed studies of Watertown Square are great. Bold thinking would be welcome. • Alternatives, many alternatives would help. How about a rotary? Don't forget the bikes.
Soldiers Field Road Gateway Map	<ul style="list-style-type: none"> • Smart lights at pedestrian crossings – lights that “see pedestrians.” • Arsenal to Western Ave is scary, trying to walk feels like SE Expressway. Dangerous. Pedestrians are vulnerable. • Difficult pedestrian crossing from Arsenal to Western, • Bike pedestrian convenience needs to be priority at Soldiers Field Rd; shorten crossings; “sharrows” and bike boxes at crossings reduce refuge islands and push buttons. • Why keep greenway “bifurcated” with roads. Realign Greenough-Arsenal-North Beacon.
2015 Traffic Analysis Results	<ul style="list-style-type: none"> • Slow traffic on Arsenal Street to 25 mph. • Want concurrent signalization with LPI (leading pedestrian interval). • Provide frequent safe pedestrian crossings on Arsenal. • Off-road bicycle lanes. • Why not Irving and Mount Auburn included? Irving is connection!
MBTA Routes 70/70A Arsenal Street Inbound Bus Stop Locus Map	<ul style="list-style-type: none"> • PLEASE do not have pedestrian crossing at same time traffic can turn – this slows traffic to a crawl and is very dangerous for pedestrians.

BOARD	COMMENTS
	<ul style="list-style-type: none"> • Get rid of 4-way pedestrian crossings! Worse for everyone involved. • Build real sidewalks wider so that two people can walk side-by-side. • Which cross connection makes it possible to walk to/from Arsenal N-S? • Drop utilities into the ground; get transformers and poles out of sidewalks. • Corridor should prioritize bus/bike lanes and easy pedestrian crossings in order to reduce demand for car travel. • Agree with above comment.
MBTA Routes 70/70A Arsenal Street Outbound Bus Stop Locus Map	<ul style="list-style-type: none"> • Get rid of light poles in way – stagger them differently? • Disappointed in bike path decisions, only looks School → east. Should be true off-road and/or connect to North Beacon.

After participants reviewed the improvement alternatives, they were encouraged to place up to four dots on a board listing the 11 options to express their support or indicate interest. A chart showing the results of the dot exercise is below.



Attendance

Nicholas Anastasiades
 Charles Anastasiades
 Chris Anastasiades
 William Anastasiades
 Ann Asnes
 Jeff Bennett, 128 Business Council
 Jon Bockian, Watertown Public Transit Task Force (WPTTF)
 Charlie Breitrose, Watertown News
 Jake Carmody, Vanasse & Associates Inc.
 Anne Ciretta
 Marcia Ciro
 Anni Clark
 Michelle Cokonougher
 Joanna Duffy
 Sandra Duran, Perkins School for the Blind
 Aaron Dushku, Watertown Town Council
 Mona Elou
 Roger & Joanna Erickson
 Wendy Etkind
 Susan G. Falkoff, Watertown Town Council
 Lisa Feltner, Watertown Town Council
 Maureen Foley
 Elliot Friedman, WPTTF
 Philip Groth, MBTA Service Planning
 Nancy Hammett
 Dorothea Hass, Walk Boston
 Jonathan Hecht, Massachusetts House of Representatives
 Jeffrey Heidelberg, Boylston Properties
 Carrie Huff Souto
 Coriana Hunt Swartz, Flat Earth Theatre Company/WPTTF
 Emily Izzo, Office of Rep. John J. Lawn, Jr.
 Janet Jameson
 Steve Kalmanides
 Barbara Kim
 Judith Kohler, WPTTF
 Angeline Kounelis, Watertown Town Council
 Kevin MacDonald
 Steven Magoon, Town of Watertown, Department of Community Development and Planning (DCDP)

Kathy Martin
 Karen McClosky
 Gregory Mcfay
 Bridger McGaw, athenahealth
 Christopher McKenzie
 Beth Miller
 Anthony Palomba, Watertown Town Council
 Deborah Peterman
 Vincent Piccirilli, Watertown Town Council
 Daniel Pryor
 Sarah Ryan
 Rachael Sack
 Trey Sasser
 Gideon Schreiber, Town of Watertown, DCDP
 Sam Scoppettone, Watertown Bicycle and Pedestrian Committee
 Libby Shaw
 Mark Sideris, Watertown Town Council
 Maryann Skahan
 E. Jane Smith
 Dave Sprogis, WPTTF
 Susan
 Elodia Thomas
 Rav Trial
 Eric Wlodyka

ARSENAL STREET

CORRIDOR STUDY



Arsenal Street Corridor Study Working Group Meeting #5: Summary

January 24, 2017, 9:30 AM, Watertown Free Public Library, 123 Main Street, Watertown, MA

Purpose

At the fifth Working Group meeting, the project team reviewed the October 2016 public meeting and presented the results of the alternatives analysis and preliminary recommendations.

Present

Michael Clark, Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning (OTP); Laura Castelli, Caroline Ducas, and Michael Gordon, VHB; Kate Barrett and Sarah Paritsky, Regina Villa Associates (RVA); and the following members of the Working Group:

Andreas Aepli, Resident

Andrew Bettinelli, Senator Brownsberger's office

Jonathan Bockian, Watertown Public Transit Task Force (WPTTF)

Craig Cashman, Representative Moran's office

Peter Centola, Town of Watertown

Ray Dupuis, Watertown Police Department

Aaron Dushku, Watertown Town Council

Courtney Dwyer, MassDOT

Lisa Feltner, Watertown Town Council

Larry Field, Massachusetts Smart Growth Alliance (MSGA)

James Fitzgerald, City of Boston

Tim Goodin, Office of Councilor Mark Ciommo, City of Boston

Philip Groth, Massachusetts Bay Transportation Authority (MBTA) Service Planning

John B. Hawes, Jr., Town of Watertown Planning Board

Rep. Jon Hecht, Massachusetts House of Representatives

Jeffrey Heidelberg, Boylston Properties

Coriana Hunt Swartz, WPTTF

Emily Izzo, Office of Representative Lawn

Shawn Kelly, athenahealth

Amitai Lipton, MassDOT

Bridger McGaw, athenahealth

Steve Magoon, Town of Watertown

Roberta Miller, Mosesian Center for the Arts (formerly the Arsenal Center for the Arts)

Vincent Piccirilli, Watertown Town Council

Melissa Santucci Rozzi, Watertown Zoning Board of Appeals

Gideon Schreiber, Town of Watertown

Matt Shuman, Town of Watertown

The following members of the public also attended: Doug Brown, Friends of the Greenway; Don Giller, New Red Theater; Michael Pompili, Worldtech Engineering; Sophie Schmitt, Livable Streets.

Meeting Summary

Kate Barrett, RVA, opened the meeting and stated that she will help keep the meeting on schedule, given the abundance of information that needs to be presented and discussed. MassDOT Project Manager Michael Clark provided an overview of the agenda and led a round of introductions. He introduced Laura Castelli, VHB Project Manager.

Ms. Castelli provided a brief recap of the October 2016 public meeting and open house. She described the results of a dot exercise conducted during the open house and noted that the transit stop pull-out and bus shelter alternatives received the least amount of interest. Ms. Castelli described the alternatives analysis methodology, which is based on the established study goals and objectives. The study team developed preliminary order-of-magnitude construction cost estimates; however, they will be discussed at the next (and final) Working Group meeting. Ms. Castelli added that this meeting will include a discussion of the alternatives analysis and preliminary recommendations for which alternatives should advance as short-, mid- and long-term recommendations.

Alternative 1: Bike Lanes East of School Street

Ms. Castelli explained that the project team originally considered bike, travel, and turn lanes that meet current minimum design standards, but they do not fit within the existing right-of-way (ROW) and would require widening the roadway. Due to existing constraints, narrowing sidewalks is not an option. Therefore, the team considered maintaining the existing curbs and narrowing the outside travel and turn lanes, with MassDOT's minimum bike lane width of 5 feet on the south side and a 4-foot bike shoulder on the north side. The alternative would cover School Street to Greenough Boulevard and meet up with the improvements required for athenahealth's mitigation. The second option would involve 5-foot bike lanes with a slight narrowing of the travel lanes between Talcott Avenue and Greenough Boulevard. Ms. Castelli presented several plans and welcomed questions and comments from the Working Group.

Comments from Matt Shuman, Town of Watertown: From a public works perspective, the lanes are wide now and he would not support anything less than 11 feet. In another part of town, the lanes were recently narrowed to 11 feet and the Town has received some push back from the public. The road carries a lot of truck traffic and oversized loads. Mr. Shuman supported providing a 4-foot shoulder for bicycles with minimum 11-foot travel lanes. He later added that the 4-foot bike shoulder is consistent with the improvements discussed with athenahealth.

Question from Aaron Dushku, Watertown Town Council: Has the team considered bike lanes with pylons to protect bicyclists from vehicles? Ms. Castelli said that would require additional space outside of the existing right-of-way. She also mentioned the related seasonal maintenance challenges.

Question and comment from Roberta Miller, Mosesian Center for the Arts: Is there data comparing the safety benefits of widening bike lanes versus vehicle lanes? Ms. Castelli agreed to look into the research on delineating travel spaces. Ms. Miller also suggested installing a rumble strip along the inner edge of the bike lane. Ms. Castelli said she will explore this but is aware of potential ice and noise issues.

Alternative 3: Cross Connectivity between the Watertown Greenway and Charles River

Ms. Castelli explained that the Town is in the process of identifying a preferred route connecting the Greenway and Charles River. She said the team could explore changing travel direction to northbound or southbound only for Louise Street, Beechwood Avenue, and Irving Street, but these decisions would

require a separate public process with the Town and neighbors. Ms. Castelli noted the Fire Department prefers at least 18 feet to accommodate its vehicles. She explained that the public meeting feedback requested the consideration of cross-connectivity, and asked for feedback from the Working Group on which connections should be prioritized.

Comments from Lisa Feltner, Watertown Town Council: Changes to neighborhood streets need to be carefully discussed with residents. These streets are very important connections.

Comments from Mr. Dushku: One-ways could help improve connections in the area.

Comments from Gideon Schreiber, Town of Watertown: This could also create traffic issues and circling traffic on adjacent streets. Ms. Castelli said the project team has count data but she suggested the Town do an origin/destination study to look at traffic effects.

Question from Ms. Feltner: Will the study look at effects to side streets? Ms. Castelli replied yes, the study will examine effects to side streets.

Alternative 5: Road Diet East of School Street

Ms. Castelli presented two options for the road diet:

- One general travel lane and one shared bus-bike lane in each direction
- One general travel lane westbound and two general purpose and one bus-bike lanes eastbound

Ms. Castelli reviewed the roadway capacity threshold analysis which would result in 50% diverted traffic east of School Street, 23% diverted traffic east of the Arsenal Project main driveway, and 46% diverted traffic east of Arlington Street during the morning peak hour (in the future year of 2040). While some traffic would be diverted to other roads, a lot of traffic is destined for the corridor itself and there is a limited ability to divert regional trips. Ms. Castelli believes this would create congestion with safety implications and would result in complaints to the Town. She described a map with some potential parallel routes, which could create significant concerns for neighborhood streets.

Comments from Peter Centola, Town of Watertown: I support bike paths, but safety should be prioritized. I'm not sold on the road diet. Ms. Castelli advised him to consider the transit improvements as compared to the road diet improvements.

Questions from Ms. Feltner: What is the narrowest width for sidewalks? Ms. Castelli explained that the Americans with Disabilities Act (ADA) requirements are 5.5 feet (which includes curb and with 3 feet around obstructions) or 4-foot sidewalks with a 5-foot square every 100 feet. The existing sidewalks are substandard in a number of locations. Ms. Feltner asked why the year 2040 was considered. Ms. Castelli explained that the 2040 is within the typical planning period. She added that traffic estimates consider known redevelopments in the area for this timeframe.

Comments from Mr. Schreiber: The results show the reality of the road today. Many residents and employees are destined for Arsenal Street and a road diet could be a major issue for all of Watertown. Mr. Schreiber added that he has heard a shared transit/bike lane is not always a preferred option. Philip Groth, MBTA, said the MBTA prefers separate facilities but would not say no to a shared bus/bike lane.

Question from Representative Jon Hecht: How would the results be impacted by other alternatives?

Ms. Castelli said though other alternatives could help reduce volumes and affect mode shift, each alternative is examined individually and none would fully ease the burden of the road diet.

Alternative 6: Soldiers Field Road Gateway Improvements

Ms. Castelli explained that the team began looking at potential intersection improvements and bypass roads to accommodate bicycles and pedestrians where Arsenal Street intersects with Soldiers Field Road. Such ideas include signal timing and phasing changes to allow for pedestrian crossings and repairs to signal equipment. MassDOT is coordinating separately with the City of Boston on private site developments at Western Avenue, and therefore the team has refocused on the Arsenal Street intersection with Arlington Street and Coolidge Avenue. Ms. Castelli described some existing problems at the intersection, which is confusing regarding who has the green light and lacks bicycle accommodations, and described two potential improvement options:

- Option 1: Signal phasing remains the same but ROW confusion is resolved; a new 40-foot wide road connects Arlington Street to Coolidge Avenue and accommodates all modes; Coolidge Avenue would be closed at Arsenal and Arlington Streets and Coolidge Avenue traffic would shift to Arlington Street. There are potential wetlands impacts so environmental permitting would be required.
- Option 2: Similar to Option 1, Coolidge Avenue would be closed at Arsenal and Arlington Streets; a new road connects Coolidge Avenue to Arsenal Street, providing better access for UPS but impacting private property. This would remove some traffic from the signal and would likely result in operational improvements.
 - **Comment from Mr. Schreiber:** There are wetlands in this area and therefore environmental permitting would be required.

Question from Vincent Piccirilli, Watertown Town Council: How much traffic in this area is related to UPS and Aggregate Industries? Ms. Castelli expects that a significant amount of traffic is related to these two businesses. There are times with high levels of truck traffic, but this varies by time of day. Ms. Castelli added that the team has count data for this location, but no specific counts related to UPS and Aggregate.

Alternative 7: Watertown Square Gateway Improvements

Ms. Castelli said the team has evaluated signal timing and phasing, signal coordination between the two intersections, lane use modification, pedestrian accommodation enhancements and the potential relocation of Charles River Road at Watertown Square eastward towards Riverside Street. The Route 70/70A eastbound bus stop could also be relocated closer to Watertown Yard and/or consolidated with another bus stop to improve operations. Ms. Castelli said the team considered the findings of MassDOT's recently completed Roadway Safety Audit (RSA), which suggested phasing and geometric changes at the Galen Street/Nonantum Road/Watertown Street intersection south of the bridge.

Ms. Castelli outlined the anticipated results of the proposed improvements to Watertown Square:

- Enhanced safety by eliminating an approach, improving approach/movement alignments, and modifying north/south phasing
- Improved queues, but possible increase in delay
- Improved pedestrian accommodations

- Does not fully address bike connectivity or mobility (not enough room for a dedicated space for bikes)

Comments from Mr. Dushku: More updates are needed to the Watertown Yard bus stop and driveway. Ms. Castelli replied that this is part of the RSA project and this project could only support those improvements or suggest further study. Mr. Schreiber encouraged Mr. Dushku to read the RSA report regarding pedestrian safety issues at Watertown Yard.

Comments from Mr. Centola: Orientation on the map is difficult. Where is the statue? Ms. Castelli helped Mr. Centola understand the map, noted the statue will not be impacted, and said she will add landmarks to the maps for the next meeting.

Comments from Ms. Feltner: Pedestrian safety is good, and bikes should be accommodated to the extent possible. Ms. Castelli noted the details will be fleshed out with community input.

Comments from Jonathan Bockian, WPTTF: Charles River Road changes would impact neighborhood cut-throughs. The new development at Irving Street has affected neighborhood traffic, particularly during peak periods. Please consider these types of impacts carefully. Ms. Castelli said the team is considering some of these impacts and encouraged the Town to consider these impacts during the design phase.

Comments from Mr. Groth: Drivers of Route 71 have issues with the catenary wires when turning right onto Main Street and left onto Mount Auburn Street. Alternatives should consider ways to improve this issue.

Alternative 10: Express Bus along North Beacon Street

Ms. Castelli explained this alternative is more of a hybrid of bus rapid transit (BRT) and an express bus. Routes from Watertown Square to Boston Landing (commuter rail connection) and further, to Packard's Corner (MBTA Green Line connection), were explored in coordination with Mr. Groth, MBTA, regarding service requirements. Ms. Castelli said that the preliminary ridership estimates generally support express service for the peak periods. She noted service between Watertown Square and Boston Landing could be a pilot program of the Watertown Transportation Management Association (TMA) and would likely require two buses to run. Ms. Castelli explained that the extension of service from Boston Landing to Packard's Corner adds about 1.6 miles and up to 22 minutes in both directions, which would require an additional one to two buses. At this time, the team is likely to recommend only pursuing service to Boston Landing. Particularly if private entities may step in to fund such service, the cost benefits of running to Packard's Corner may not be sustainable.

Question from Mr. Schreiber: Does an existing bus provide service from Boston Landing to Packard's Corner? Mr. Groth said Route 57 serves Packard's Corner and is about a three to five-minute walk from Boston Landing to the south.

A discussion of routing options followed with comments from various Working Group members. Ms. Castelli described that the reason for examining service to Watertown Square was primarily due to the potential ridership that route variation offered.

Question from Larry Field, MSGA: How many Watertown residents are commuting to South Boston? Ms. Castelli will follow up with the numbers and time to South Station. She estimated up to 20 percent

of commuters could be headed to South Boston based on development there over the past 10 years. She will review whether American Commuter Survey data from 2010 shows any trends related to the increase in development. Mr. Dushku asked a similar question about commuter patterns to Boston University and the Longwood Medical area. Ms. Castelli agreed these are also hotspots for commuters.

Alternative 11: Transit Signal Priority (TSP)

Ms. Castelli said the team evaluated TSP using the VISSIM microsimulation model and highlighted some potential adjustments to bus stops to maximize its effectiveness. TSP would require bus transponders on all MBTA buses because the buses are switched throughout the MBTA system and not used solely for certain routes.

Comments from Mr. Groth: All buses are currently compatible with transponders. The MBTA is pursuing a pilot TSP project in Cambridge.

Ms. Castelli presented results of the model, which show that as much as 12 minutes could be saved during the peak hour in the outbound/westbound direction. TSP could result in additional travel time for vehicles that are held on side streets by lights or traffic queues. The team cannot recommend if TSP should include the Watertown Square and Soldiers Field Road gateways at this time due to the complexity of the model.

Comments from Mr. Dushku: Do the results consider the number of people (versus vehicle) per intersection? Ms. Castelli said the model focuses on bus operations (how a bus gets through the intersection) in order to determine the feasibility of the alternative. This includes the amount of time it takes to clear vehicle traffic in front of the bus. The alternative did not focus on throughput of one service versus another. Mr. Groth noted that studies show mixed benefits of TSP.

Comment from Mr. Schreiber: Each leg of Watertown Square has transit, so TSP for Route 70/70A could prioritize that service over the 71.

Comment from Ms. Feltner: Side street congestion is concerning.

Alternative 13: Transit Stop Turnouts/Curb Extensions

Caroline Ducas, VHB, explained spatial requirements and operational considerations for bus stop turnouts and curb extensions. Bus stop turnouts require the bus to exit the travel lanes, which benefits general traffic but negatively impacts transit operations due to the re-entry delay that can be caused by the need for the bus to merge back into the general travel lane. Because bus stop turnouts also require more physical width than is available at most stop locations on the corridor, no suitable locations were identified. Transit stop curb extensions are preferred for transit operations but would require the elimination of on-street parking or bike lanes and could negatively impact general traffic. For these reasons, Ms. Ducas said the team does not recommend transit stop curb extensions at any locations on the corridor.

Question from Mr. Bockian: How are the impacts of a curb extension different from the status quo? Ms. Ducas said currently the bus stops are in-line curbside stops, within the existing parking lane area in some locations on the corridor. Incorporation of curb extensions would further reduce on-street parking and limit the potential continuity of bike lanes along the corridor. Ms. Castelli and Mr. Groth described the concept of a floating bus stop, where a bike lane is routed around the bus stop.

Comment from Mr. Dushku: Fare collection at the bus stop, instead of onboard the bus, could help reduce dwell times but there is no guidance from the MBTA on this. Ms. Ducas described the MBTA's next generation of automated fare collection (AFC 2.0) which will allow all-door boarding. Mr. Groth said off-bus fare collection has very high costs for maintenance and installation. He said AFC 2.0 will also not accept cash, so boardings will be faster. Ms. Castelli said off-bus fare collection will not be included in the study while the MBTA is developing AFC 2.0.

Alternative 14: Transit Shelters

Ms. Castelli explained that for the 8 locations that meet the MBTA eligibility for transit shelters, 3 are not feasible due to potential conflicts with building faces, foundations, or underground utilities, and 5 would have minor to moderate property impacts (primarily to landscaping) that could be negotiated with the property owner.

Question from Mr. Piccirilli: Could we consider installing an awning over the sidewalk instead of a standard shelter where a shelter structure isn't feasible? Ms. Castelli said this would be possible if the property owner is willing to hang an awning off its building.

Alternative 15: Existing Transit Service Improvements

Ms. Ducas presented various potential transit service improvements, including routing adjustments and service frequency/schedule adjustments. The team considered adjustments to the termini of Route 70/70A and identified key ridership locations at Waltham Center, Watertown Square, the Watertown & Arsenal Malls, and Central Square. She stated that approximately 10 to 20 percent of passengers on any given trip would experience reduced service with a termini change to Waltham Center, with a greater number affected by a termini change further inbound.

Ms. Ducas described a route splitting option that includes a loop circulator that would operate between Waltham Center and North Waltham, and a trunk route that would operate between Waltham Center and Central Square. This option would also continue to run the existing Route 70. The team performed a trip chaining analysis to determine that the MBTA would need two additional buses in order to split the Route 70A into the loop circulator and trunk route, while maintaining existing Route 70A service frequencies.

Question from Mr. Groth: Did you consider deadheads? Ms. Ducas said the team considered existing turn times and additional trips but did not look at crew shifts or contract issues. She said she would follow up with Mr. Groth to coordinate.

Ms. Ducas said the team performed an origin-destination analysis to determine that passengers on the loop circulator could benefit from a coordinated transfer to express service at Waltham Center to Central Square. Potential benefits of route splitting include improved reliability and on-time performance, more evenly distributed trunk service, reduced crowding, and reduced travel times with a transfer to express service.

Ms. Ducas described express service, which had support at the public meeting in October 2016 as an added service on top of existing local service. This additional express service would have far fewer stops than the existing service to reduce travel times (up to 9-10 minutes for some trips), improve reliability and on-time performance, increase capacity, and potentially induce new transit demand.

Ms. Ducas said the team explored modification of other transit routes and found that improving the connection to the Red Line via express service to Central Square can benefit substantially more riders than modifying other bus routes. There were no suitable changes identified to other routes due to crowding issues, increases in travel times if other routes were modified, and substantial infrastructure requirements and costs to extend other routes.

Finally, Ms. Ducas described service frequency and schedule changes that could benefit the 70/70A bus based on future 2040 conditions. She said the team recommends additional express (peak period) and local (off-peak) trips, as well as schedule shifts to improve headway consistency.

Question from Mr. Field: How many additional buses would be required to implement these changes? Ms. Ducas said this would depend on the number of additional trips. The initial schedule prepared for analysis purposes would require four additional buses to implement express service and the route splitting to accommodate future 2040 demands, but it will depend on the final package of improvements that are recommended.

Comments from Andreas Aeppli: The MBTA's long-term strategy could include changing the current bus style (2-door) to add additional doors and longer, articulated vehicles.

Question from Mr. Piccirilli: Could the express service be privatized, and if so, how many vehicles would be needed? Ms. Ducas said this would depend on the number of express trips, but at least two vehicles would likely be needed to operate express service during the peak hours. Mr. Groth said a timed transfer would benefit from the same operator and splitting the 70/70A would be the largest bus to bus transfer in the system; he would rather find a way for the MBTA to do it. Mr. Aeppli said privatizing express service would be a poor use of capital funds.

Comments from Mr. Schreiber: The express service would have a lot of riders from Watertown Square traveling to Central; perhaps it could eliminate an extension to Waltham. Mr. Schreiber suggested adding a stop at Perkins School for the Blind or at larger residential developments. Ms. Ducas described the balance of serving as many riders as possible without slowing down the service.

Alternative 17: Adaptive Signal Control (ASC)

Ms. Castelli considered various ASC technologies and discussed feasibility with Watertown staff. The primary infrastructure is generally in place. The system would have benefits along congested corridors and could help maintain traffic between the gateways.

Question from Mr. Schreiber: If the gateways do not benefit from ASC, what are the benefits? Ms. Castelli explained that it would still improve traffic flow throughout the corridor and benefit trips within the corridor. The equipment can also be used to manage traffic during special events. System components are separate, so it's easy to update when new technology is available.

Preliminary Recommendations

Ms. Castelli reported that the team may recommend dropping Alternatives 5 (Road Diet East of School Street) and 13 (Transit Stop Turnouts/Curb Extensions) from the recommendations. She explained that the alternatives can be packaged as short-, mid-, and/or long-term recommendations. This will be discussed further at the next meeting.

Next Steps

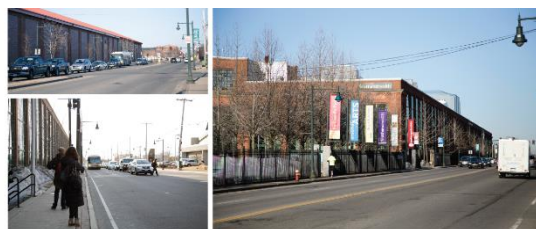
Ms. Castelli said one more Working Group meeting will be held (likely in late February) to discuss the final recommendations, costs, funding sources, and permitting, prior to the last public meeting (in Spring 2017). Once the Final Report is released, there will be a 30-day comment period.

Question from Mr. Dushku: Can the next Working Group meeting begin at 6:00 PM? Ms. Castelli said a poll was distributed at the start of the study and the morning timeframe was preferred. The team will see if a 6:00 PM meeting is feasible and will work for other Working Group members.

Mr. Clark encouraged attendees to contact him and Ms. Castelli if they did not have time to ask a question during the meeting. Mr. Clark thanked the Working Group for attending and providing comments, and he concluded the meeting.

ARSENAL STREET

CORRIDOR STUDY



Arsenal Street Corridor Study Working Group Meeting #6: Summary

March 2, 2017, 9:00 AM, Mosesian Center for the Arts, 321 Arsenal Street, Watertown, MA

Purpose

At the sixth and final Working Group meeting, the project team presented the draft study recommendations, costs, funding sources, and permitting that will be included in the Draft Final Report.

Present

Michael Clark, Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning (OTP); Laura Castelli, Caroline Ducas, Michael Gordon, Niki Hastings, and Mike Regan, VHB; Emily Christin and Sarah Paritsky, Regina Villa Associates (RVA); and the following members of the Working Group:

Jonathan Bockian, Watertown Public Transit Task Force (WPTTF)

Sen. William Brownsberger, Massachusetts Senate

Aaron Dushku, Watertown Town Council

Lisa Feltner, Watertown Town Council

Larry Field, Massachusetts Smart Growth Alliance (MSGA)

Tim Goodin, Office of Councilor Mark Ciommo, City of Boston

Philip Groth, Massachusetts Bay Transportation Authority (MBTA) Service Planning

Michael Hailu, MassDOT

Rep. Jon Hecht, Massachusetts House of Representatives

Coriana Hunt Swartz, WPTTF

Emily Izzo, Office of Representative Lawn

Shawn Kelly, athenahealth

Joe Levendusky, WPTTF

Amitai Lipton, MassDOT

Steve Magoon, Town of Watertown

Bridger McGaw, athenahealth

Vincent Piccirilli, Watertown Town Council

Nick Renaud, MassDOT

Gideon Schreiber, Town of Watertown

Matt Shuman, Town of Watertown

Mike Smith, athenahealth

Eliana Lopez, Mosesian Center for the Arts, also attended the meeting.

Meeting Summary

Eliana Lopez, Director of Development for the Mosesian Center for the Arts, welcomed attendees to the newly named “Mosesian Center for the Arts” (formerly Arsenal Center for the Arts).

MassDOT Project Manager Michael Clark provided an overview of the agenda and noted that this is the sixth and last Working Group meeting for the Arsenal Street Corridor Study. He reviewed the study background and purpose along with the four primary goals of the study, to provide some context.

Mr. Clark summarized the study organization and past Working Group meetings. He noted that the previous meeting was held during the Alternatives Analysis phase, and this meeting will focus on the Recommendations. He said the Draft Report is anticipated to be ready for a 30-day public comment period in late April or early May. The final public meeting will be held either just before the comment period or during the comment period.

Mr. Clark led a round of introductions and handed the presentation to Laura Castelli, VHB Project Manager. Ms. Castelli explained how the project team categorized the alternatives as Short Term (0-5 years), Medium Term (5-10 years), and Long Term (over 10 years). She said a lot of factors played into this, such as capital, availability of funding, and existing Town of Watertown projects. The alternatives that are categorized as Short Term require minimal capital and the design is streamlined. The Medium- and Long Term alternatives require environmental permitting and design review.

Ms. Castelli explained that the cost estimates of the alternatives only account for construction costs and do not include further steps such as survey. As each alternative is further developed, the cost will likely rise and a more detailed cost estimate can be developed.

Short Term Recommendations

Alternative 1: Bike Lanes East of School Street

Ms. Castelli reviewed this alternative and recommended that the bike lanes pick up at the limits of athenahealth, continue through Department of Conservation and Recreation (DCR) property, and end at Greenough Blvd. She noted there are existing constraints which were reviewed at the previous meeting, which require the design to be more of a bike shoulder than a bike lane in the northern section. The corridor widens as you move eastward providing more opportunity for 5-foot bike lanes. She said it may be possible to take from the median and the project team would recommend looking for opportunities for a 5-foot bike lane wherever possible.

Ms. Castelli reviewed the construction costs which would vary depending on whether the road receives cold planing (milling and removal/replacement of the top layer of pavement) before restriping. (The construction costs and other details of each alternative can be found on the presentation on the study website, www.mass.gov/massdot/arsenalstreet.)

Ms. Castelli reviewed the action items to help advance this alternative, which include some for the Town of Watertown and some for the MBTA. She noted this is not a complete list, but rather early action items to help the alternative move forward. She also suggested coordinating the project limits and potential construction schedule with the planned improvements being constructed by athenahealth.

Alternative 11: Transit Signal Priority (TSP)

Ms. Castelli summarized this alternative, explaining that TSP enables traffic signals to hold a green light for MBTA buses to get through an intersection. There are ten signalized locations where TSP is recommended along the corridor between North Beacon Street and Arlington Street.

Ms. Castelli explained this would involve relocating some bus stops from a “nearside” location to a “farside” location, which means the stop is relocated after the intersection so it does not interfere with

the TSP system when loading passengers. TSP is currently not recommended in either of the Gateway Improvements alternatives, but it should be reevaluated in the future for these locations (Watertown Square and Soldiers Field Road).

Ms. Castelli reviewed the cost estimate, which is \$250,000 (\$25,000 per location) plus \$40,000 per location if a new signal cabinet is required. The team will coordinate evaluating the signal cabinets with the Town of Watertown.

Question from Steve Magoon, Town of Watertown: Does the cost estimate include equipment for the MBTA buses? Philip Groth, MBTA, said MBTA buses are already equipped for TSP.

Ms. Castelli listed the recommended action items for the Town and the MBTA, including evaluating which signal cabinets require upgrades. She added that upon implementation of TSP, there will need to be allowance for maintenance of the equipment.

Alternative 14: Transit Shelters

Ms. Castelli reviewed the locations where transit shelters are recommended. The locations were selected based on their ability to be built alongside an ADA-accessible path. The Town of Watertown may need to get easements from property owners for constructing shelters at certain locations. She noted that the opposite School Street (eastbound) location would only work if it is relocated with Alternative 11: TSP. The cost for shelters is approximately \$30,000 per location (excluding property easements, utility relocations, and other considerations).

Ms. Castelli reviewed the action items for the Town of Watertown and MBTA: determining who will be responsible for maintenance and installation, as well as reaching out to property owners and acquiring easements.

Alternative 15: Transit Service Improvements to Existing Routes

Caroline Ducas, VHB, noted that at the previous meeting the Working Group discussed how this alternative is constrained in the short term by the existing MBTA peak vehicle requirements. This alternative would improve off-peak service frequency, and would include schedule adjustments to provide more even headways. She reviewed the estimated incremental operating cost (\$200,000 per year, above and beyond the existing Route 70/70A operating cost) and noted that the final cost is dependent upon the MBTA's final service schedule and operating decisions made through the MBTA service planning process.

Ms. Ducas noted the action items for the MBTA to undertake while further analyzing and refining the schedule as part of the bus service planning process.

Alternative 17: Adaptive Signal Control (ASC)

Niki Hastings, VHB, said there are ten locations east of Watertown Square that are recommended for ASC (excluding the Square). She said the cost estimate is \$250,000 to \$500,000 (depending on the type of communication and server selected), and an additional \$40,000 per signal cabinet assembly. Ms. Hastings reviewed the action items, including continuing to evaluate if Watertown Square is suitable for ASC in the future.

Question from Sen. William Brownsberger, Massachusetts Senate: What is ASC? Ms. Hastings explained that ASC would involve installing a sensor in signal cabinets to respond to real time traffic

demands and fluctuations, which is more advanced than a preset program, and it would improve traffic flow through the corridor.

Question from Aaron Dushku, Watertown Town Council: Is there a person watching the ASC signals and adjusting them or are they automatic? Ms. Hastings said they automatically detect the real-time traffic information and make self-adjustments. Occasional maintenance is needed.

Question: Are the ASC signals equipped with motion detective loops in the roadway or video camera equipment? Ms. Hastings said video detection is used.

Question: Is this a new technology? Has it been implemented in other towns in Massachusetts? Mike Regan, VHB, said several corridors in the state already have ASC, and the technology has taken a big jump in the last 4-5 years. He confirmed that it is a very successful system if implemented correctly.

Question from Lisa Feltner, Watertown Town Council: Are you recommending ASC for Watertown Square? Ms. Hastings said no, but the project team recommends that the Town evaluate Watertown Square further to determine if it is a good location.

Medium Term Recommendations

Alternative 3: Cross Connectivity between the Greenway and Charles River

Ms. Hastings showed a map of various cross connections from Arsenal Street to the Charles River. She noted that the yellow paths are being progressed by other organizations like athenahealth and the Town, and potentially Boylston Properties. She said there is a potential for a shared use path behind the Hanover property as well. The orange paths are recommended for the Town to consider Complete Streets elements, such as shared-lane markings.

Comment from Gideon Schreiber, Town of Watertown: Arsenal Court is incorrectly labeled on the map and the street that is labeled has no name (Arsenal Court is the next street over). Ms. Hastings thanked him for his comment and said she will correct the map accordingly.

Ms. Hastings said the project team recommends that the Town should continue to support independent paths and reach out to the community regarding the Complete Streets elements. The recommended action items include the Town hosting community meetings to gauge support for this alternative.

Comment from Ms. Feltner: I am concerned there are no connections from Arsenal to Western Avenue, nor any connections to adjacent neighborhoods and towns, including Waltham and Cambridge. Ms. Hastings said the project team understands there are opportunities for connections to other communities, but it is not part of the scope of this study. Ms. Hastings added that the Town is continuing to plan bike connections west on Arsenal Street, along Taylor Street, across Mount Auburn Street and to Saltonstall Park; and an extension of the Watertown Greenway to Alewife. These independent connections will be acknowledged in the Draft Report.

Question from Aaron Dushku, Watertown Town Council: Is there a multiuse path behind the Hanover property? Mr. Schreiber said yes and it is all approved, and there is already a bike and pedestrian connection behind Hanover but it is not open yet as it is under construction.

Question from Larry Field, MSGA: Why is this alternative categorized as Medium Term? Ms. Hastings said it is Medium Term because there has not been any community outreach yet. Mr. Magoon said some elements should be able to start before seven years from now.

Alternative 7: Watertown Square Gateway Improvements

Ms. Hastings reviewed the improvements of this alternative and noted that they were discussed at the previous meeting. Some of the improvements include relocating Charles River Road eastward towards Riverside Street, signal improvements, lane assignment and lane usage improvements, and adding two left turn lanes from Arsenal Street over the bridge. The Route 70/70A bus stop would be relocated closer to Watertown Square.

Ms. Hastings reviewed the recommendations which include evaluating traffic circulation pertaining to Charles River Road and how it will impact neighborhoods.

Comment from Mr. Dushku: The neighborhood there is not thrilled with this alternative, as increased traffic trying to make a left turn from Irving Street to North Beacon Street may cause a backup. Also, is there an opportunity to allow two-way traffic on Riverside Street; perhaps there is a way traffic can turn right. Ms. Hastings said that neighborhood traffic circulation and potential traffic increases and options for Riverside Street would be evaluated from this concept level design if the alternative is progressed.

Question from Joe Levendusky, WPTTF: If Charles River Road is diverted what happens to the bicyclists? Ms. Hastings said they would continue to the bike connection through a shared-use path in the park, with design details determined in a later step. Mr. Levendusky said this option is not helpful without a signalized crossing at the bridge, because no one bikes on Galen Street. He added that what bicyclists do in reality is often not what the planners recommended. Ms. Hastings said the project team will recommend that this be further evaluated.

Ms. Hastings reviewed the lane usage details of the alternative.

Comment from Ms. Feltner: It seems there was no thought given to bicyclists beyond the riverside. Ms. Hastings said incorporating bike lanes here is very challenging given the limited right-of-way. Formal bicycle accommodations were considered and incorporated where right-of-way was available, primarily in the eastbound direction. The team did decide not to consider a reduction in vehicle capacity thought the square as a means of creating space for bicycles, given the limited number of river crossings available to motorists and the effects additional congestion can have on adjacent neighborhoods.

Question/Comment from Mr. Levendusky: The Riverside Google Group is concerned with this plan, so you will need to allow for community involvement. Does this alternative include improvements to signage? Ms. Hastings said there would be improvements to signage in the Draft Report, particularly to alert drivers about lane usage. Mr. Magoon said the Town is working independently to improve signage in the short term.

Question from Vincent Piccirilli, Watertown Town Council: Are there four traffic phases in this alternative? Ms. Hastings said yes, the phases would be reduced from five to four.

Question from Mr. Groth: What happens to the Route 70/70A buses? Ms. Hastings said the Church Street stop would be relocated closer to Watertown Square. This relocation would not require buses to

loop. Mr. Schreiber said drivers may end up blocking the bus stop where it is located currently if it is not moved.

Question from Amitai Lipton, MassDOT: Was a Roadway Safety Audit (RSA) conducted? Ms. Hastings said an RSA was conducted at the intersection on the other side of the river, and the project team will coordinate those findings with this alternative. Some of the findings included sign recommendations which could be implemented in the short term.

Question/Comment from Mr. Levendusky: Are the slices of park land where the Founders Monument is located owned by the Town? Mr. Magoon said no, that area is owned by DCR and the Founders Monument is nowhere near here. Mr. Levendusky said this needs to be looked at in terms of Watertown Square, because there seems to be conflicting goals and underutilized green spaces. Ms. Hastings noted that as the concept plan is developed landscaping opportunities will be reviewed and additional public outreach conducted. Mr. Clark added that design and placemaking would be a future step after the planning process. He said the project team is not pushing it aside. Mr. Levendusky said he thinks another study should be done to examine Watertown Square.

Question from Jonathan Bockian, WPTTF: What are the funding sources for these alternatives? Ms. Hastings said that funding sources are being touched upon as each alternative is presented. She clarified there are no funds allocated for any alternatives at the moment.

Ms. Hastings presented the cost estimate for the alternative, and noted that it is only for construction and will increase with other system upgrades and design elements.

Question from Sen. Brownsberger: Why is the Office of Energy and Environmental Affairs (EEA) involved? Ms. Hastings said that is indicative of DCR's involvement, and perhaps an Environmental Impact Report (EIR) would be required because of impacts to DCR property.

Ms. Hastings reviewed the action items recommended for the Town to advance the alternative.

Alternative 10: Express Bus along North Beacon Street

Ms. Hastings said this alternative was discussed at the previous meetings, and said the bus would start at Watertown Square and run along North Beacon Street to the future Boston Landing Station. She explained that that this alternative is recommended to begin as a pilot program from Watertown Square to Boston Landing (which is opening in May). She reviewed potential funding sources and action items, and noted that the cost would vary depending on the type of service.

Question from Mr. Dushku: When did this change from a Bus Rapid Transit (BRT) to an express bus? Can't North Beacon Street fit dedicated lanes? Ms. Hastings explained that the length of the route is not long enough for there to be an obvious market benefit for a BRT. Mr. Clark added that there are certain elements associated with a BRT service (such as off-board fare collection) that the MBTA cannot accommodate at this time, and the project team would like to honestly depict potential service. Ms. Hastings clarified that the service would stop in Watertown Square and Boston Landing, with intermittent stops being worked out by the Town and the MBTA.

Question from Mr. Bockian: Does the MBTA have a policy for the length of pilot programs? Mr. Groth summarized the MBTA's pilot program policy, which he said is evolving but may limit the length to less than one year.

There was a discussion about where stops could be located and the involvement of the Transportation Management Association (TMA). Ms. Feltner said this service could provide options for residents and not just employees. Mr. Magoon said the Town is coordinating with the TMA.

Question from Sen. Brownsberger: Has there been a study on what the demand for this service would be? Ms. Hastings said yes, the project team analyzed journey-to-work census data from 2006 to 2010, as well as the estimated percentage of Watertown commuters who travel to South Station, and established that there is a constituency that would use this service. Sen. Brownsberger asked about the anticipated volume of ridership. Ms. Hastings said there is anticipated to be enough for at least one shuttle bus (approximately 30-40 people) during peak hours, and it is important to keep in mind that trains at Boston Landing will run on a limited schedule which this bus would have to connect to for transferring riders. Mr. Schreiber added that there are way more people traveling to the Seaport now than when the 2006-2010 data was collected. Mr. Groth added that the MBTA has new data available to study commuter movements through CharlieCard taps, which may also help predict potential volume. Ms. Hastings confirmed that a potential future West Station connection was looked at, as well as Packard's Corner.

Comment from Mr. Dushku: The previous meeting had information on estimated times for this service, which would be helpful to add in the Draft Report. Ms. Hastings confirmed the times will be in the Report.

Comment from Rep. Jon Hecht, Massachusetts House of Representatives: It would be helpful to have explicit statements of benefits for each alternative in quantifiable terms, especially for the public meeting.

Alternative 15: Transit Service Improvements to Existing Routes

Caroline Ducas, VHB, explained that the short-term recommendations for this alternative were limited based on the existing fleet size. For the medium term, the project team looked at opportunities to improve service with an expanded fleet, which would help to alleviate crowding. She noted one of the key hindrances of reliability today is the long length of the Route 70/70A bus routes. This alternative recommends splitting Routes 70/70A into the existing Route 70, a loop circulator that would operate between Waltham Center and North Waltham, and a trunk route that would operate between Waltham Center and Central Square. In addition, the project team would recommend as part of this alternative: implementing an express service along the trunk route scheduled to allow for coordinated transfers, increasing peak and off-peak service frequency, and adjusting the schedule for targeted trips to provide more consistent headways.

Ms. Ducas reviewed the capital cost estimate, which includes \$900,000 per bus with an estimated four additional buses required. She explained that the peak vehicle requirement is a system-wide issue, and there may be opportunities to reallocate some buses to Routes 70/70A. An increase in facility capacity would be required in order to accommodate an increase in the MBTA's system-wide fleet. She noted that the capital cost estimate of \$3.6 million is for the vehicles alone, and does not include the costs required to expand storage facility capacity. Ms. Ducas added that the capital cost estimate does not account for the possibility of articulated buses, which would have a higher cost per bus. She reviewed the estimated incremental operating cost (\$800,000 per year, above and beyond the existing Route

70/70A operating cost) and noted that the final cost is dependent upon the MBTA's final service schedule and operating decisions made through the MBTA service planning process.

She reviewed the action items for this alternative, including a further look at system-wide vehicle scheduling and potential tweaks to routing as part of the MBTA's service planning process. The public involvement for the more substantial medium term alternative recommendations would also be more extensive than for the short-term alternative.

Question: How long is the life expectancy of these buses? Mr. Groth said approximately 12 years.

Question from Mr. Magoon: Is the addition of the four buses to accommodate the route splitting or for adding capacity? Ms. Ducas said it is for the entire package. The recommended package would meet demand by using two additional buses for route splitting and two additional buses for increased service frequency, including express service.

Comment from Mr. Lipton: The Route 128 Business Council might be able to privately operate part of the loop.

Question from Rep. Hecht: Do you have estimates of the time savings from the express service? Ms. Ducas said the project team estimated up to 9-10 minutes of time savings from Waltham Center to Central Square, but that depends on the future policies of the MBTA. She noted that with Automated Fare Collection (AFC) 2.0, the MBTA would accept new fare media types and allow for all-door boarding, which would result in additional time savings. She said these time estimates assume the local bus stops at every stop along the route (which often they do not).

Question: Does the 9-10 minute estimate account for TSP? Ms. Ducas said that it does not. A discussion followed regarding how the MBTA is trying to improve service for inbound passengers on Route 70/70A, and is updating its Service Delivery Policy. Ms. Ducas confirmed that the service improvements would meet projected user demand.

Question: How many buses are currently serving Route 70/70A? Mr. Groth estimated about 13 to 15.

Question from Mr. Bockian: Does the plan to privatize maintenance facilities open up the possibility of additional maintenance capacity? Mr. Groth said he is not the best person to answer that question, but he believes so.

Question from Mr. Levendusky: How does the length of Route 70/70A compare to other routes? Mr. Groth said it is one of the longest routes in the MBTA system.

Question from Mr. Schreiber: There is a lot of demand to use the Route 70/70A bus currently, but does the model account for potential future ridership who are not riding it now? Ms. Ducas said the model accounts for projected growth, and noted that the new route would also affect transfers north of Waltham.

Question from Mr. Levendusky: Has there been any discussion about possibly having a starter on the route to allow for real time management of the bus? Mr. Groth said that he agrees that starters are often helpful, but the length of Route 70/70A is a greater factor in its reliability. The MBTA does not have enough manpower to add starters to as many routes as they would like.

Long Term Recommendations

Alternative 6: Soldiers Field Road Gateway Improvements

Ms. Hastings summarized the improvements with this alternative, including intersection improvements with signal timing and re-striping and relocating a portion of Coolidge Avenue. There are two alternatives for relocating Coolidge Avenue:

- Alternative 1: Signal phasing remains the same but right-of-way (ROW) confusion is resolved; a new 40-foot wide road connects Arlington Street to Coolidge Avenue and accommodates all modes; Coolidge Avenue would be closed at Arsenal and Arlington Streets and Coolidge Avenue traffic would shift to Arlington Street. There are potential wetlands impacts so environmental permitting would be required, as well as property impacts.
- Alternative 2: Similar to Alternative 1, Coolidge Avenue would be closed at Arsenal and Arlington Streets; a new road connects Coolidge Avenue to Arsenal Street, providing better access for UPS but impacting private property. This would remove some traffic from the signal and would likely result in operational improvements.

Ms. Hastings explained that both alternatives are long term because of the extensive permitting that would be required. She reviewed the construction costs and action items for the alternatives, including further research on permitting needs. Ms. Hastings reviewed the implementation timeline for each alternative.

Comment from Mr. Field: The implementation slide in the presentation is much clearer than the handout. I recommend using the slide for the public meeting.

Comment from Ms. Feltner: Ms. Feltner said there needs to be more short term benefits for residents to get excited about, and aesthetics of what Arsenal Street will look like should be discussed. Ms. Hastings said that design of aesthetics is not part of the study, but the Draft Report will include discussion of improving the public realm.

Comment from Mr. Levendusky: I agree with Ms. Feltner. It is important to incentivize community support early on to get people onboard.

Comment from Mr. Magoon: The study can categorize Alternative 3 as Short Term.

Comment from Mr. Lipton: A lot of work in Alternative 7 can be completed in the Short Term. For Alternative 6, did you look at Elm Street as a way to divert traffic from Arlington Street? Ms. Hastings said no because it is too narrow.

Question from Emily Izzo, Office of Representative Lawn: I take the Route 70 bus every day, and I often see two buses come at one time. Will these improvements help space the buses out more evenly? Mr. Groth acknowledged the issue, and said outbound buses are easier to coordinate than inbound. Mr. Lipton added that TSP will help that issue as well.

There was a discussion about signal upgrades the Town is negotiating with athenahealth. Mr. Magoon confirmed that the consultants on the various projects are coordinating and sharing information.

Next Steps

Mr. Clark reviewed the study schedule, and noted that the last Working Group and public meetings have been switched on the presentation slide. The final public meeting will be held in late April or early May.

Comment from Rep. Hecht: It would be better to schedule the public meeting after the Draft Report is released, rather than before, so the public has an opportunity to review it and provide more feedback.

Mr. Clark thanked the Working Group for attending and providing comments, and he concluded the meeting.

ARSENAL STREET

CORRIDOR STUDY



Arsenal Street Corridor Study - Public Meeting #3: Summary

June 22, 2017, 6:00 – 8:00 PM, Watertown Free Public Library, 123 Main Street, Watertown, MA

Attendees

Michael Clark, Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning (OTP); Laura Castelli, Caroline Ducas, Michael Gordon, Niki Hastings, Albert Ng, VHB; Nancy Farrell and Sarah Paritsky, Regina Villa Associates (RVA); elected officials; and members of the public (see attendance).

Meeting Purpose

The purpose of this third and final public meeting on the Arsenal Street Corridor Study was to present the recommendations outlined in the Draft Final Report and gather public feedback. The presentation from the meeting is posted on the study website at: www.mass.gov/massdot/arsenalstreet

Meeting Summary

Introductions

Nancy Farrell, RVA, opened the meeting, welcomed attendees, and reviewed the meeting guidelines. Michael Clark, MassDOT Project Manager, reviewed the meeting agenda and provided an overview of the study background and purpose. He said this is the last of three public meetings on the project and six Working Group meetings were held.

Study Background

Mr. Clark provided an overview of the study process, which involved five key steps: framework, issues evaluation, alternatives development, alternatives analysis, and recommendations. He said the release of the Draft Final Report initiated a 30-day comment period. The team will be accepting public comments on the Draft Final Report and recommendations through July 5. He encouraged attendees to complete the comment form that was distributed at the meeting and said he is also accepting emails and letters. Mr. Clark said the comments will be included in the Final Report.

Mr. Clark explained that the Working Group is composed of municipal officials, elected officials, and community representatives. Between 25 and 40 members attended each meeting and provided feedback on the recommendations as they were developed.

Laura Castelli, VHB, introduced herself and explained the meeting's goal to present fairly detailed information about the recommendations. She and her staff will be available to discuss the details one-on-one with attendees following the presentation during the open house. She said she will present the

alternatives methodology, provide an overview of each recommendation and its benefits to the community, and first steps for the Town of Watertown for implementation.

Alternative Analysis Methodology¹

Ms. Castelli explained that the recommendations were categorized into three buckets based on the amount of permitting that will likely be required, anticipated costs, and level of design: short term (0 to 5 years), medium term (5 to 10 years), and long term (over 10 years). She said the anticipated timeframes will depend on the Town's priorities, environmental permitting, and funding availability. Ms. Castelli said the construction cost estimates should be used for planning purposes and were developed based on available information. Costs do not include survey, design, right-of-way (ROW) acquisition, and permitting. She said more detailed cost estimates would be developed should projects advance.

Recommendations

Ms. Castelli noted that two alternatives shared at the October 2016 public meeting are no longer being considered. The analysis and findings that led to their dismissal are part of the Draft Final Report and will be part of the open house discussion if community members are interested.

Short Term: 1 – Bicycle Lanes East of School Street

Niki Hastings, VHB, described the recommendation to extend bicycle lanes from Talcott Avenue to Greenough Boulevard in the eastbound and westbound directions. She reviewed the conceptual layout and said travel lanes would be narrowed to 11' to accommodate the bike lanes, which would be 4.3' to 5' depending on available ROW space. This recommendation supports active transportation initiatives and would close a big gap in the bicycle network. The project could be accomplished without impacts to private property or environmental permitting. The next steps to implement this proposal would be for the Town to progress to final design and seek funding.

Short Term: 3 – Cross Connectivity between the Greenway and Charles River

This recommendation involves creating connections between neighborhoods adjacent to Arsenal Street and the River, via pathways that are being progressed by nearby developments (many of which are concentrated in the eastern portion of the corridor) or local streets. This recommendation is for the Town to consider adding complete streets elements (which may range from shared lane markings to the possibility of one-way roadway pairs) on Irving Street, Beechwood Avenue, Louise/Paul Street, and near the Arsenal Mall. Making these connections would have benefits similar to the first recommendation. To progress this project, the Town could organize community outreach and discussions with neighbors.

Short Term: 11 – Transit Signal Priority (TSP)

Ms. Castelli said the team recommends TSP at eight locations along the corridor. TSP is a technology that reduces dwell time at traffic signals for transit vehicles by holding green lights longer when a bus is approaching. The communication helps reduce bus travel time along the corridor at key intersections, can assist with progression for vehicles, and may help relieve cut-through traffic on local streets. The next steps for this recommendation would be for the Town to consult with the Massachusetts Bay Transportation Authority (MBTA) and install software in the traffic signal controller that would be

¹ Note: The project team understands that the I-Cubed funding (passed by Town Council one week after this public meeting) may dramatically change funding and schedule opportunities for the town. While the project could not assume this funding in place for the purposes of the Final Report, the recommendations contained herein can be accomplished on the accelerated schedule needs of the I-Cubed grant. Next steps for the Town may differ accordingly.

compatible with TSP equipment on buses. There would be cost-benefit increases if TSP is combined with other improvements. Some bus stops that are just before the signal would need to be relocated to the far side of the intersection for TSP to work efficiently; otherwise, the signal would hold a green while buses are loading and impact side street operations.

Short Term: 14 – Transit Shelters

Ms. Castelli said the team looked at all bus stops in the corridor and recommends shelters in four locations to help improve bus riders' experience, particularly on a bad-weather day. She said the four locations each have slight property impacts, so the Town would need to work with property owners to secure easements. The bus stop across from School Street (adjacent to 311 Arsenal where the cannons are located) could only be installed if the stop were to move to the other side of the intersection.

Short Term: 17 – Adaptive Signal Control

Ms. Castelli described the recommendation for Adaptive Signal Control at 10 locations, eight of which are the same locations where TSP is recommended. Adaptive Signal Control technology is a traffic management strategy in which traffic signal timing changes, or adapts, based on actual traffic demand. It helps control signal coordination while factoring in pedestrians and bicycles. It can help alleviate congestion and reduce cut-through traffic on local streets and it would provide a coordinated "green band" to improve mobility along the corridor. To implement this recommendation, the Town would need to develop an implementation strategy and select the appropriate equipment.

Short Term: 15 – Transit Service Improvements to Existing Routes

Caroline Ducas, VHB, said this recommendation involves using the MBTA's existing resources to improve bus routes 70 and 70A. She referred to the existing and future conditions chapters of the Draft Final Report that summarize crowding during peak and off-peak periods that is projected to increase over time as ridership grows. She said improvements to the routes could help reduce overcrowding. Due to fleet constraints during the peak period, increased service frequency during off-peak hours could be explored. In the short term, the Town can work with MBTA Service Planning on quarterly schedule updates.

Medium Term: 15 – Transit Service Improvements to Existing Routes

Ms. Ducas described a medium-term package of recommendations to improve transit in the corridor, including splitting the 70/70A into three routes: (1) the existing route between Central Square in Cambridge and Marketplace Drive/Cedarwood in Waltham; (2) a proposed loop circulator between Waltham Center and North Waltham; and (3) a trunk route that would operate between Waltham Center and Central Square. She said the changes would allow for targeted service increases and improved reliability, as the very long length of the routes is a major reason for current delays. She noted that the splitting of routes would create a very large bus-to-bus transfer location at Waltham Center. She described potential measures that could be explored by the MBTA to mitigate the Waltham Center transfer for riders on the proposed loop circulator route, including the creation of timed transfers at Waltham Center with express service to Cambridge, or improved loop circulator route service (such as an increased span of service). Ms. Ducas described operational constraints of express service (bus bunching, passenger confusion regarding which bus to board) and said an alternative to express service would be the consolidation of bus stops along the route to help reduce travel times. In addition, schedule and service frequency adjustments could help to accommodate the more than 20% expected increase in ridership by 2040. The medium-term package of improvements would require the use of four

additional buses. To move these recommendations forward, the Town would need to discuss them further with the MBTA.

Medium Term: 10 – North Beacon Street Express Bus

Ms. Castelli explained that a new express bus service could connect Watertown Square with the new Boston Landing commuter rail station in Brighton. The bus would be timed to align with the commuter rail schedule to facilitate transfers to that service, possibly with one interim stop at a location (along North Beacon Street in Watertown) to be determined. She said this recommendation helps address job growth in and the lack of transit options to the South Boston Waterfront. She said it could also help alleviate congestion on Route 70/70A and potentially other MBTA express bus routes. The team recommends the Town coordinate with the MBTA on a pilot service. Ultimately, the express bus could be sponsored by the planned Watertown Transportation Management Association (TMA) or a public-private partnership.

Medium Term: 7 – Watertown Square Gateway Improvements

Ms. Castelli explained that this recommendation doesn't fully fix Watertown Square, but tries to address issues with lane changes that are causing safety deficiencies. The recommendation restripes lanes at the intersection to better facilitate the desire lines of vehicular traffic and reduce congestion. She described lane marking changes at each leg of the intersection, as well as modified signal phasing. One key change would be a discontinuance of westbound Charles River Road, which would require the houses in an adjacent neighborhood (primarily those located between Wheeler Lane and Irving Street south of Riverside Street) to use Irving Street instead to access Watertown Square. The alternative would eliminate westbound cut-through traffic that currently uses Charles River Road to avoid congestion on North Beacon Street and Arsenal Street. Eastbound access to Charles River Road from the Square would still be provided via Riverside Street, with a connection back to Charles River Road. The existing Charles River Road would remain two-way between North Beacon Street and Wheeler Lane for local access. These improvements would shorten pedestrian crossings, improve bicycle mobility, and improve wayfinding for vehicles. The bus stop in front of the fire station would be relocated to allow riders to see when the bus is coming and reintroduce transit to Watertown Square proper. Ms. Castelli said that to move this forward, the Town would need to begin public outreach (including to potentially affected residents and businesses) specific to this project and begin permitting.

Long Term: 6 – Soldier's Field Road Gateway Improvements

Ms. Castelli said this improvement would require closing Coolidge Avenue to through-traffic to help with sight distances and safety for all modes. Access to Coolidge Avenue would change, thereby improving traffic flow at the intersection. Ms. Castelli said this is a very long-term recommendation because it would require substantial environmental permitting. To move forward with this project, the Town would need to start outreach to businesses, gather public input, and work with the Department of Conservation and Recreation (DCR) about permitting.

Key Takeaways

Ms. Castelli shared some key takeaways from the presentation:

- Recommendations complement each other but can be implemented individually, depending on available funding.

- Improvements to transit services can improve service reliability and potentially encourage mode shift, representing the greatest opportunity of all recommendations to alleviate “cut through” traffic adjacent to the corridor.
- The town, and its residents, will need to “champion” and lead recommendations with state agency involvement.
- Recommendations at Watertown Square and Arlington Street have the most potential for landscape/ streetscape elements that can change the defining character of the corridor.

Ms. Castelli described the implementation plan and referred to the recommendations handout.

Next Steps

Ms. Castelli said the 30-day comment period on the Draft Final Report will close on July 5. Next, the project team will review comments and incorporate them into the Final Report. She encouraged attendees to provide comments, both written and verbal, to her or Mr. Clark.

Questions & Answers

An attendee asked about maintaining space on the road for vehicles and bicycles when snow is plowed. Ms. Castelli said the team did consider maintenance when proposing bicycle lanes. The City of Cambridge makes property owners responsible for snow removal, which is an option for Watertown. When snow is plowed to the curb, the space for bike lanes is also cleared, but realistically, there may be winters where bike lanes cannot be in service due to snow storage requirements. In that case, the bike lane could provide extra storage area, even though that is not the intent.

Ms. Farrell opened the floor to questions from elected officials and noted that a summary of this meeting will be posted to the project website.

Representative Jon Hecht thanked the audience for attending and said the great turnout is an indication of the strong interest in this project and the importance to the Town. He thanked MassDOT for investing state resources and responding to the community’s request for the study. Rep. Hecht said he thinks the recommendations balance vehicular, pedestrian, and transit improvements. He said the community is responsible for making sure the recommendations are implemented and referenced the Town’s transportation demand management work and TMA development. He said the Town is working with developers. He also referenced the state’s recent funding of a bike path through Fresh Pond, to Arsenal Street and the Charles River.

Joe Levendusky, Watertown Public Transit Task Force (WPTTF), said a 4.3’ bike lane is not very wide and would likely not be fully plowed during snowstorms. He asked if the curbs could be moved to widen the bike lane. Ms. Castelli said the team considered this adjustment, but the sidewalks are currently the minimum width to meet the Americans with Disabilities Act (ADA) requirements. Buildings along the corridor are right up against the sidewalk. If a 5’ bike lane were to be designed, there would be significant impacts to buildings. She referred to the presentation from Working Group #5, available on the study website. Ms. Castelli explained that closer to the Arsenal Mall the right-of-way can accommodate a 4.9’ bike lane.

An attendee said the various projects and public meetings can be confusing. She asked how this study, mitigation funding, and the Infrastructure Investment Incentive Program (I-Cubed) all fit together. She also asked if I-Cubed could fund these recommendations. She also requested a longer question and answer session. Steve Magoon, Watertown Department of Community Development and Planning

(DCDP), said I-Cubed provides an opportunity to fund a lot of projects. Mr. Magoon later explained that I-Cubed is a program that uses tax from development projects combined with state backing to pay for public infrastructure improvements. He said a total of \$25 million will be used in this corridor and adjacent areas. Mr. Magoon said the Town is coordinating with various developers and this study's recommendations to create a single project. He noted not all of the study recommendations qualify for I-Cubed funding and also emphasized that I-Cubed will be implemented in a short timeframe. He encouraged everyone to attend a Council hearing on I-Cubed on June 29.

Councilor Lisa Feltner said as transit demand continues to increase, she hopes that the transit improvements will be a given. She said public transit is her priority. Ms. Farrell thanked her for her comments.

Jon Bockian, WPTTF, asked how realistic it would be to implement the Watertown Square improvements in six years. Ms. Castelli said it is not unrealistically long, but will depend on funding. She said the program should be well-positioned for state Transportation Improvement Program (TIP) funds, which would begin in 2022. Mr. Magoon said these improvements were proposed as part of the I-Cubed program, but would be fast-tracked to happen within a 3-year period of public outreach, design, and construction. Mr. Bockian expressed his support to extend the question and answer session. Ms. Farrell polled the room and all agreed to extend the question and answer session and reduce the open house time.

A resident of the western part of Watertown described large amounts of ridership on transit along Pleasant Street heading to Boston. He said the express bus could stop on Pleasant Street to pick up riders there. Ms. Castelli said the stops have not been planned in such detail at this point and encouraged him to speak with Ms. Ducas and Michael Gordon during the open house to learn more.

An attendee asked why bicycle routes are proposed on Arsenal Street when there are bike lanes and paths on North Beacon Street and elsewhere. Ms. Castelli explained that four of the top six employers in Watertown are located on Arsenal Street. While there are a lot of connections to the corridor, there are none along the eastern portion of the corridor. She said the feedback from previous public and Working Group outreach indicated a need for bike access to companies and housing on Arsenal Street. In addition, bicycle lanes are an element of the town's Complete Streets program.

Angie Kounelis, East End Town Councilor, said the good turnout at the meeting shows the community's interest in the study. She requested additional detail on the Arlington Street intersection and realignments of Coolidge Avenue. Ms. Castelli described how the first alternative alleviates some of the permitting issues but does run along a stream with impacts to wetlands and private property. She said it does not remove traffic from the intersection, but moves it to a different approach. The second alternative has greater operational benefits by removing Boston-bound traffic from the intersection. However, the alignment would go through the Mount Auburn Athletic Club parking lot and a property owned by DCR. She described the lengthy environmental permitting required. Councilor Kounelis asked Mr. Magoon about traffic signals on Lower Greenough Boulevard. He said the intersection will be realigned and signalized, and might fit better with Alternative 6's option 2 than option 1. He added that I-Cubed will let the Town coordinate these adjacent projects into one effort and redirect some of the mitigation funds from developers.

An attendee asked what would happen to the existing locations where there are transit shelters. Ms. Castelli said one might be relocated if the bus stop itself is relocated (part of the TSP recommendation), but there are no recommended changes to other existing shelters.

An attendee asked how many cars use Arsenal Street and how much that number will grow after the developments. Ms. Castelli estimated approximately 20,000 cars use the street per day now. She said the regional study area includes adjacent towns, while the local study area focuses on the corridor and adjacent areas. The study team took baseline counts in Fall 2015, worked with the Central Transportation Planning Staff (CTPS) on economic projections, and considered projects in the neighborhood to establish a 20% growth rate. She said the data is in the third Working Group and second Public Meeting presentations on the project website. The attendee asked if Lower Greenough Boulevard would be closed and Ms. Castelli said it will not.

An attendee said she does not own a car and is transit-dependent. She asked about the local and express bus service on North Beacon Street. Ms. Castelli said the team did not look at expanding local service along North Beacon Street because there are no local connections or origin/destination points to support service. For local ridership purposes, it is likely the route would be located too close to Arsenal Street to support independent service. She said there would be an interim express bus stop at a location along North Beacon Street to be determined. The attendee added that there is a group home on Irving Street, so she does not think this is a safe place for a bike path.

An attendee asked how many lanes there will be on Arsenal Street. Ms. Castelli said Arsenal Street would remain two lanes in each direction.

An attendee referred to the new bike lanes near construction on Arsenal Street between Irving Street and School Street. He said the on-street bike lane begins at School Street and disappears near the Auto Zone. He asked if the bike lane could be continued at sidewalk level along the north side of Arsenal Street. Ms. Castelli said the team looked into this option but due to the impacts to buildings, there would be no space to continue a separated bike lane in that location. Gideon Schreiber, Watertown DCDP, said there is a plan for dedicated bicycle accommodations headed towards Watertown Square.

An attendee asked about improvements at Soldiers Field Road. Ms. Castelli said this was originally part of the study but is now part of a City of Boston project. Mr. Clark said the project was recently initiated as mitigation for the 530 Western Avenue development. He said he believes there will be a public meeting this fall on the project.

Mr. Bockian said many community members wished the study happened earlier and is very helpful. He thanked Rep. Hecht for being instrumental in making the study happen.

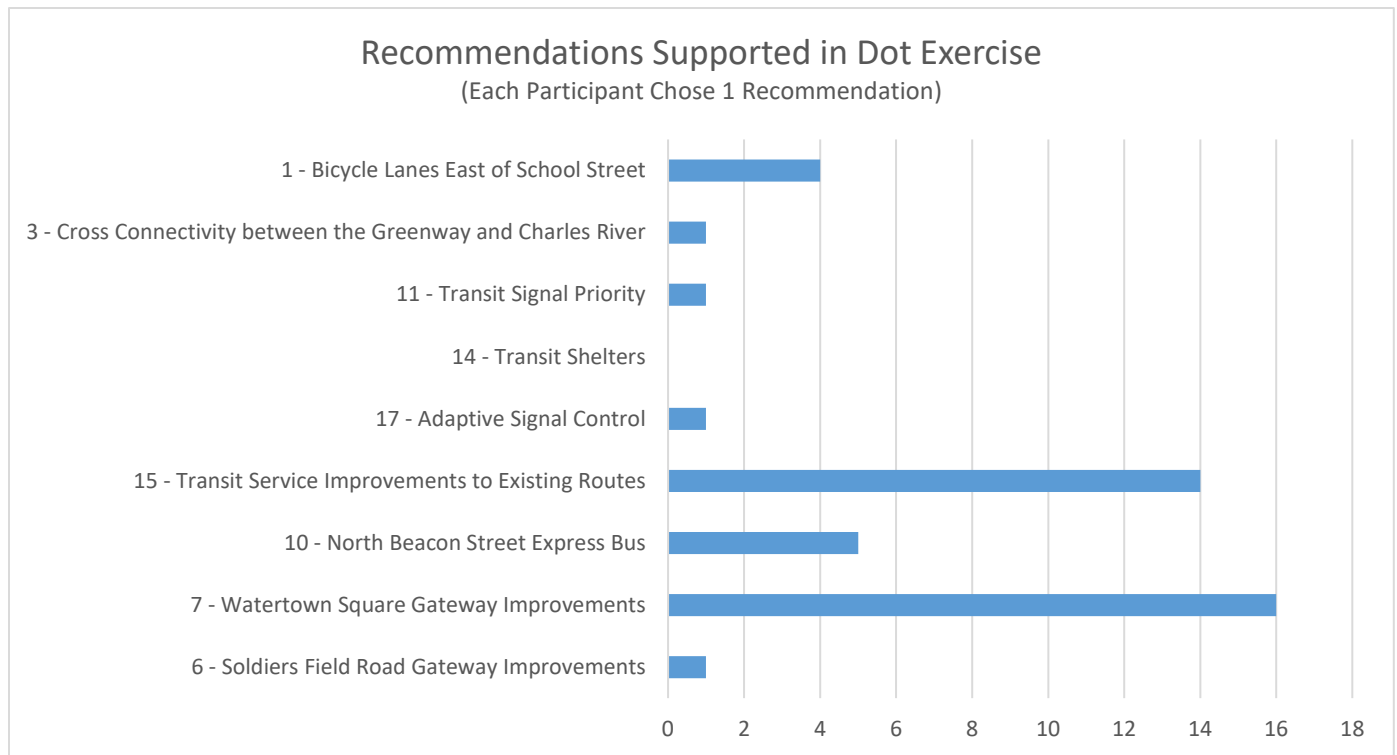
As there were no further questions, Ms. Farrell thanked everyone for attending and asked participants to move to the other side of the room for the open house.

Open House

The study team staffed various tables around the room, described the recommendations and the analysis used to develop them in more details, and answered participants' questions.

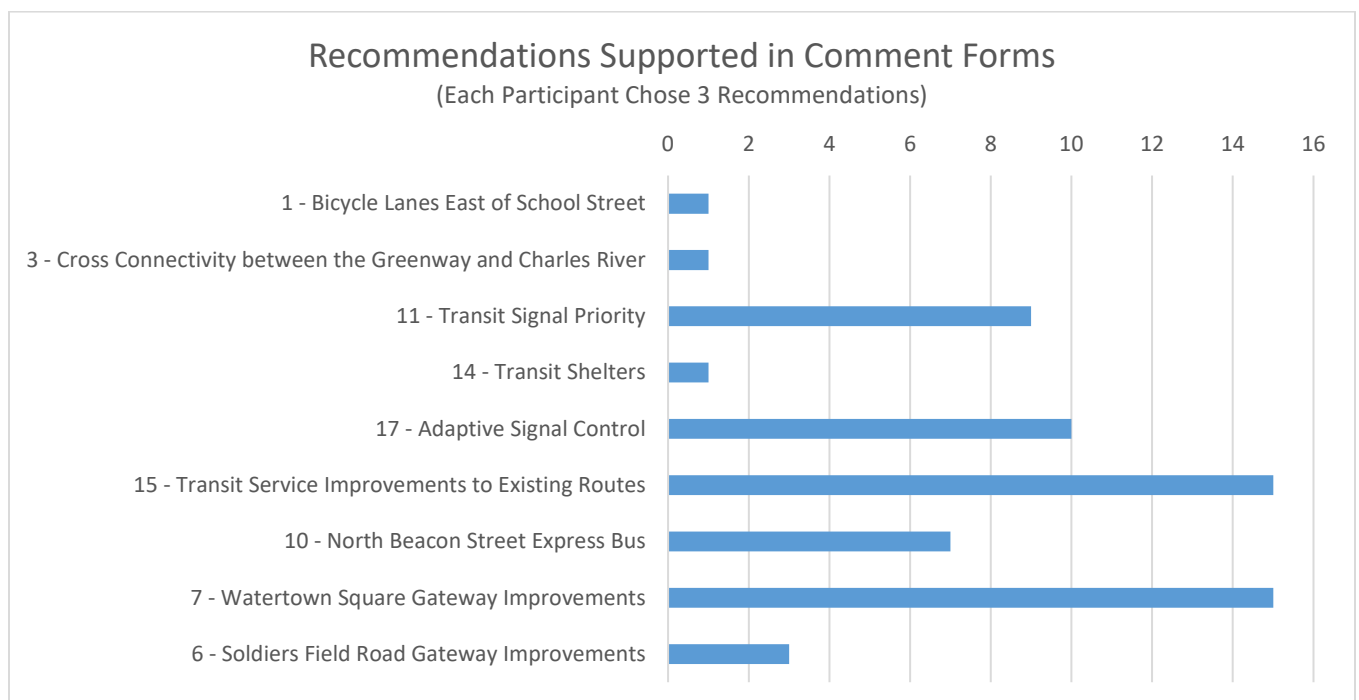
Each participant was offered a dot to place next to the single recommendation he or she felt should be prioritized. A total of 43 attendees participated in the dot exercise, the results of which can be found below:

Table 1 – Dot Exercise Results



A total of 22 attendees completed written comment forms that asked three questions. Question 1 asked the commenter to select up to 3 alternatives they think should be prioritized. The results are below.

Table 2 – Question 1 Results



Transcribed responses to Question 2: Why do you think these alternatives should be prioritized?

- Untangling the limitations that currently make public transit in Watertown ineffective, unreliable, and unappealing to large segments of the population, especially in terms of changing the 70/70A routes to solve the scheduling issues and resulting bus bunching, could significantly shift the mode share distribution and therefore reduce SOV use and therefore traffic problems! (As well as making Watertown more accessible to public transit users of course.)
- 1) Improving existing service. 2) Watertown Square Gateway Improvements. 3) North Beacon St. Express Bus - Express & Local from Watertown Sq. which could connect w/ the 70/70A or 71 buses and have a local bus from the square for the back end of Athena and perhaps the Arsenal Yard Apartments.
- I believe they would be the most effective at promoting walking, biking, and transit as an alternative to driving.
- Make Public Transit more efficient and more attractive to commuters. Make traffic move more safely and sensibly.
- I feel that the existing service pattern of the 70/70A bus route is an impediment to increased transit usage, which could have an outsized impact by reducing the volume of vehicles. Both adaptive signal control signal and improvements to Watertown Sq. could ease the flow of traffic, which is one of my personal pain points.
- Will have big impact on many travelers. Watertown Sq could be a lot better!
- Affect a greater number of people.
- Important for our business, New Repertory Theatre on the Arsenal Campus to have public transportation for our employees, artists and patrons. The potential of bringing a younger audience to Watertown depends on public transportation that runs more frequently and later at night.
- This is where the heaviest congestion occurs.
- 17 + 7 are needed long term and we need to get them started. 15 transit service improvements are key to addressing significant growth and traffic on corridor. Bike lanes and connectors are desirable and hopefully will continue to progress.
- 15, 10, 7, + 17!
- Favoring people moving in transit vehicles is the best way to get those transit riders moved faster and more reliably - to support mode shift and emissions reductions.
- Mass Transit is the best all - weather approach to reducing single occupancy vehicle trips. I am a bicyclist and feel that North Beacon St. is an inherently safer cycling corridor than Arsenal St.
- Making Mass Transit more reliable and frequent and affordable is the best way to get people out of their cars (to get THE MOST people out of cars).
- If the slope isn't changed on Arsenal St. it will continue to cause water damage to numerous homes. Who pays that bill for damage to the home that was & is preventable. WAKE UP PEOPLE.
- Highest impact in short/medium term but long-term benefits
- I support improved transit. Gateway improvement - gateways are where bottle necks happen.
- Realigning Watertown Sq. would be a big help in making traffic move smoothly. Eliminating Charles River Road connection will take getting used to, but would help with the flow. A new bus connecting to Boston Landing would be great for commuters. It would be nice to have it start

further west maybe at Waverly and Main or Pleasant and Myrtle. I like the idea of traffic signals that change with traffic conditions.

- The current lighting system is antiquated and inefficient, creating air quality issues by having cars get stuck at lights that are not sequenced properly. Hopefully, also implementing TSP will also improve traffic flow as well. I am concerned with bike traffic and hope that the WPD would be tasked with enforcing bicyclists following the rules of the road, which I do see frequently ignored. The potential for hazards caused by bikers would need to be managed.

Transcribed responses to Question 3: Would you like to share any other comments with MassDOT regarding the Arsenal Street Corridor Study Draft Final Report?

- I'm praying for implementation. These are a lot of good ideas; I'm hoping we can see more follow-through and less shelving than sometimes happens.
- Have you considered the safety of pedestrians when crossing over main streets, N. Beacon, Greenough Blvd. & Charles River Rd? Could raised, over-street archways for pedestrians be considered? 2) Irving St. should not be considered for a bike path since adults with physical (cerebral palsy) and cognitive disabilities live there and increased traffic in terms of cars and bike paths would be dangerous for these people. 3) Too much [illegible] on bike paths. We should have a bus lane on Arsenal St. and improve the existing bike paths on N. Beacon and Charles River Rd.
- A concern about Watertown Sq. improvements - making traffic flow through Riverside to Charles River Rd. The eastbound (sic) traffic on Charles River Rd. would be channeled up through Irving St. This is the Perkins neighborhood and the Perkins people are already nervous about the Riverside/Irving Intersection. It is very residential and there is a park. People already drive way too fast between Riverside and N Beacon. Also with the new light configuration at N Beacon and Arsenal, the residents of Irving Park neighborhood are having trouble getting through the N Beacon intersection, mostly because of the westbound traffic on N Beacon turning right on Irving. This has gotten much worse since Beacon Park closed access to Arsenal. The Irving Park neighborhood will not want increased traffic on Irving. Those huge apartment complexes on Arsenal are not even finished yet. The traffic will be MUCH worse for us. I am hopeful that the lane reconfigurations for Watertown sq. will be enough and Charles River Rd can be left alone.
- As a long-time resident who commutes to Cambridge, there is little that can be done to improve the 70 service enough for me to consider using it on a regular basis. Overcrowding of buses by the time they reach the square is only one factor. Lack of comfort (temps too cold in summer, so one is forced to bring a jacket) uncomfortable seating is another issue. Add in families with SUVs for strollers and there is even less room for someone to ride. So I'll continue to drive up Arsenal Street, and hope the improvements help more than hinder car traffic over time.

Attendance

Connie Brown

Gordon Brown

William N. Brownsberger, Massachusetts

Senate

Bruce Coltin

Andre Compagne, Watertown Bike/Ped
Commission

Bill Conroy, Boston Transportation Department

Aaron Dushku, Watertown Town Council

Susan Falkoff, Watertown Town Council

Larry Field, Massachusetts Smart Growth
Alliance (MSGa)
Philip Groth, MBTA Service Planning
Nancy Hammett
Jonathan Hecht, Massachusetts House of
Representatives
Coriana Hunt Swartz, WPTTF
Janet Jameson
Angie Kounelis, Town Councilor
Joe Levendusky, WPTTF
Anna Mackay, Guerrilla Development
Steven Magoon, Watertown DCDP
Ilana Mainelli
Kathy Martin
Bridger McGaw, athenahealth
Elodia Thomas

Steve Owens
Anthony Palomba, Watertown Town Council
Mark Peterson, WPTTF
Vincent Piccirilli, Watertown Town Council
Rachael Sack
Maria Saiz, Watertown Bike/Ped Commission
Melissa Santucci Rozzi, Watertown Zoning
Board of Appeals
Gideon Schreiber, Watertown DCDP
Adam Sennott, Watertown Tab
Matt Shuman, Town of Watertown,
Department of Public Works
Pat Sullivan, 128 Business Council

ARSENAL STREET

CORRIDOR STUDY



[Comments Received on Draft Final Report](#)

[Log of Comments](#)

[Original Comments and Responses](#)

Comments Received on Draft Final Report - Arsenal Street Corridor Study

ID No.	Date Received	Name	Affiliation (if any)	Source	Primary Topic/Theme (vehicles/traffic, bike, ped, bus, etc.)	Response/Action
2017-06-10_1	6/10/2017	Larry Stabile		Email to Michael Clark	bike	M. Clark sent response
2017-06-23_1	6/23/2017	WM		Email to Michael Clark	bike	M. Clark sent response
2017-06-25_1	6/25/2017	Teddy Kokoros		Email to Michael Clark	bike, transit	M. Clark sent response
2017-06-29_1	6/29/2017	Marcia Ciro	Watertown resident	Email to Michael Clark	vehicles, traffic	M. Clark sent response
2017-07-09_1	7/9/2017	Jonathan Bockian		Email to Michael Clark	bus, traffic, other	M. Clark sent response
2017-07-08_1	7/8/2017	Gordon Brown		Email to Michael Clark	traffic	M. Clark sent response
2017-07-10_1	7/10/2017	Betty and Alan Gordon		Email to Michael Clark	traffic	M. Clark sent response
2017-07-04_1	7/4/2017	Mary McGreal		Email to Michael Clark	safety	M. Clark sent response
2017-07-05_1	7/5/2017	Virginia Hecker	Watertown resident	Email to Michael Clark	traffic	M. Clark sent response
2017-07-05_2	7/5/2017	Kevin MacDonald	Watertown resident	Email to Michael Clark	traffic, bike	M. Clark sent response
2017-07-05_3	7/5/2017	Susan Kananovich	Watertown resident	Email to Michael Clark	traffic	M. Clark sent response
2017-07-06_1	7/6/2017	Sarah Ryan	Watertown resident	Email to Michael Clark	traffic	M. Clark sent response
2017-07-07_1	7/7/2017	David & Alice Martin	Watertown resident	Email to Michael Clark	bike	M. Clark sent response
2017-07-10_2	7/10/2017	Dorothea Hass	WalkBoston	Email to Michael Clark	pedestrians	M. Clark sent response
2017-07-10_3	7/10/2017	Joseph Levendusky	Watertown resident	Email to Michael Clark	bus, traffic, other	M. Clark sent response
2017-07-10_4	7/10/2017	David Wong	Mt. Auburn Club	Email to Michael Clark	business parking	M. Clark sent response
2017-7-10_5	7/10/2017	Aaron Dushku	Watertown Town Councilor At Large	Email to Michael Clark	bus, public transit	M. Clark sent response
2017-7-10_6	7/10/2017	Nancy Kay		Email to Michael Clark	traffic, safety	M. Clark sent response
2017-7-10_7	7/10/2017	Carol Wilson-Braun	Watertown resident	Email to Michael Clark	safety	M. Clark sent response
2017-7-10_8	7/10/2017	Jeff Wilson-Braun	Watertown resident	Email to Michael Clark	traffic, safety	M. Clark sent response
2017-07-24_1	7/24/2017	Robert Lauricella	Board member, Trees for Watertown	Mailed to Michael Clark	transit, design	No response necessary

From: Larry Stabile
Sent: Saturday, June 10, 2017 12:38 PM
To: Clark, Michael (DOT); Laura Castelli
Subject: Arsenal Street Corridor Study Working Group, Meeting 6

I read with interest the presentation of the Arsenal Street Corridor Study Working Group, Meeting 6, and have a couple of comments. I live in Cambridge, and I frequently bicycle out to Watertown Square or beyond, often looping around from the "Boston" side to the Watertown side, continuing down Charles River Road, thence to Greenough Blvd. The rides along these boulevard-like roads are usually very pleasant. The latter part of Greenough, nearer to Harvard, has recently been redone -- a superb job, by the way -- and with the end of the drought, is nicely grown out.

With respect to Charles River Road, as noted in slide 21 of http://www.massdot.state.ma.us/Portals/17/docs/ArsenalStreet/MtngPres_3217.PDF, if I understand "complete streets" correctly, then it's likely a project whose goal is to make modern improvements to a street to accommodate the range of uses from auto to pedestrian to bike. This is laudable, however please be wary of introducing changes which would siphon off more traffic from Arsenal Street. Note that Charles River Road has a nice bike lane, so changes there are not needed. Traffic there is normally very light, which makes for a nice atmosphere, although it's not far from Watertown Square and the Arsenal Mall.

The bike paths and boulevards along the Charles are among the gems of the greater Boston area. When riding along the river, one can feel a bit of open countryside, when in fact the city is very close by. Corridor projects and related work should always remember to account for this ambience.

Thanks for all the public involvement and I hope the project is a success.

Larry Stabile
Cambridge

-----Original Message-----

From: Bill

Sent: Friday, June 23, 2017 8:02 PM

To: Clark, Michael (DOT)

Subject: Watertown bike lanes

Let's see if I have this right? Benefit of being on the river allows for bikes and walkers aka people/citizens ...PLUS a community path among old rail tracks . 5 main thoroughfares out of and into Watertown Square! All 5 need room for bike lanes?? and most thoroughfares reduced to single lanes in and out of square??? I'll never be confused with what a traffic engineer has to say. But we don't need 8+lanes for bikes.. A biker has pick of Charles River Road, N Beacon, Main st, Arsenal, Mt Auburn and finally Belmont street-with no worry about gridlock. How many miles north to south is it from Belmont to Charles River Road plus the river and community path! Bikers pick one or two, not all 6 or 8! My goodness we've lost our way. Cars get 5, one lane ways out of town from the square while bikes get 8+ routes does that seem fair. How many bikes go in and out of town daily. How many cars go in and out of town daily. A survey must of been done right???? I would like some answers to the questions provided. Thank you for your time in this matter.

WM

-----Original Message-----

From: Kokoros, Theodore

Sent: Sunday, June 25, 2017 3:01 PM

To: Clark, Michael (DOT)

Subject: Arsenal St Corridor Study

Hello,

I am a Watertown resident who does not own a car. I usually ride my bike or take the bus to get around. I wanted to comment on the Arsenal St Corridor study I wholeheartedly support Alternative 3 in chapter 4 of the final draft report. Having complete streets on Irving and Beachwood would make it easier and more obvious for less experienced cyclists to go from the Charles River bike path the Watertown greenway. I also think alternative 14 to improve and add transit shelters would be very helpful. Boston area weather can be terrible and having more shelters while waiting for the bus would make taking the bus a lot more easier. I have older family who live in the area and I know for them having a place to safely sit while waiting for the bus would be a great benefit.

Thanks for the hard work that was put into the study and asking for residents feedback.

Teddy Kokoros

Sent from my iPhone

From: mciro _____
Sent: Thursday, June 29, 2017 11:31 AM
To: Clark, Michael (DOT)
Cc: nbeacon.neighbors@gmail.com; lfeltner@watertown-ma.gov; msideris@watertown-ma.gov; _____
apalomba@watertown-ma.gov; adushku@watertown-ma.gov
Subject: Comment to the Arsenal St Corridor Study

Dear Mr. Clark,

I am very worried about the consequences of the rerouting of Charles River Road. I feel this is all about traffic flow without considering the impacts to neighborhoods, pedestrians or bicyclists.

I noticed that there was a bullet point to do further research on cut-through impacts that would occur from this change. This should be done before you submit a drawing or suggestion, not afterwards. Put viable, vetted ideas on the table, not something that has not been thought through completely.

- Because of the intense development along the Arsenal Corridor, Charles River Road will have to bear the brunt of some of the traffic with N. Beacon Street. No one will want to go along Arsenal St with its zillion traffic lights and constant stopping for turns unless they have to. **The point of any change should be to slow down traffic and discourage commuter speeding.**

- I see moving around will become harder for ALL (residents and visitors) both west and east of Perkins.

- With this plan to reroute CRR, I believe that all our streets will suffer **a lot** of cut-through traffic. How do I know this? Because I know I will want to avoid N. Beacon St (I do now) and go west on CRR. I will end up cutting through myself, and if I do this, you can be sure frustrated commuters trying to get out of the tie-ups on N. Beacon will too. This will not make the great amenity of the CRR riverfront safer to access and will make residents' lives worse.

Whenever traffic backs up from the CRR/N. Beacon intersection now, I see a lot more cars barrel down Bay St (where I live) trying to get away. U-turns at the end of our streets are a specialty of this crowd too. Then what do we do—make our streets one way? Make thruways of Beech and Irving Sts? Planning should require thinking about consequences.

- The tiny bit of extra green space near the dock is not worth making a big mess of this road. The cars are not going away whatever we do.

AGAIN, this CRR plan routs traffic east from Watertown Sq, while making it difficult to go west. It turns this simple grid of streets into a maze full of frustrated drivers trying to get away from the resulting gridlock on North Beacon St. and makes it more difficult for residents to get around by car. Irving and Beechwood Sts, as well as the streets east of Perkins will see much greater volume of cut-through traffic.

If the issue is traffic volume and speed, why you don't just put raised crosswalks at most or every intersection on CRR? This would slow traffic AND would discourage use of this road for commuting, but still allow it for those willing to go slower AND make it safer for pedestrians and bicyclists AND prevent cut-through issues AND keep neighborhood flow intact AND be cheaper. We need traffic calming, not road redesign. Is this just too easy?

Thank you,

Marcia Ciro
Watertown, MA

From: Mary McGreal
Sent: Tuesday, July 04, 2017 8:10 AM
To: Clark, Michael (DOT)
Subject: Arsenal Street Corridor Transportation Study

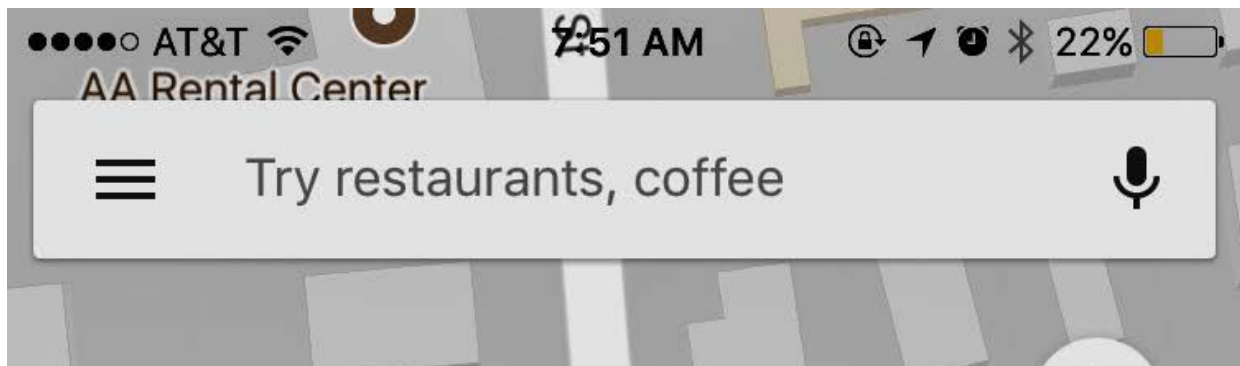
Hi Michael,

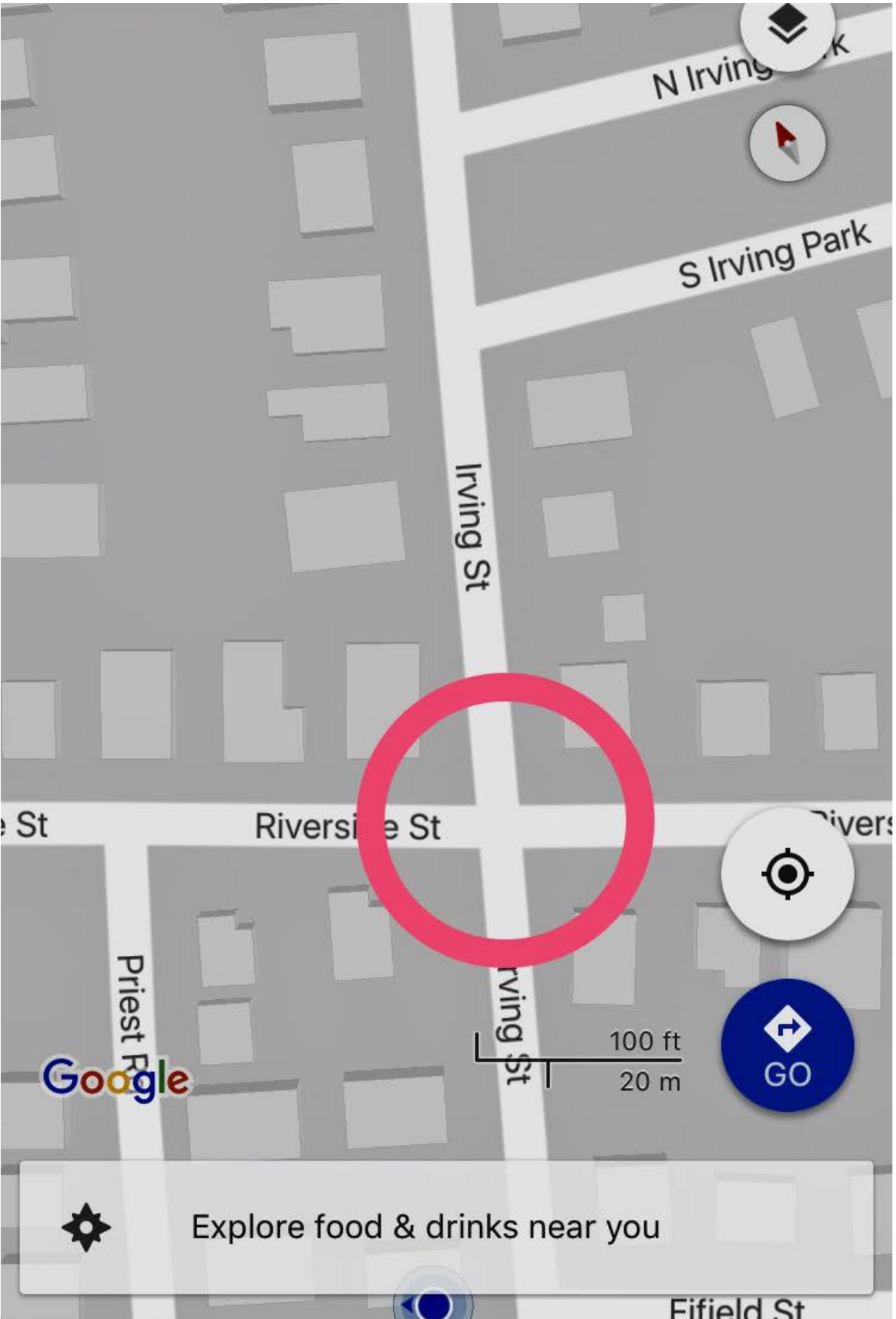
I'm writing with comments in regards to the Arsenal Street Corridor Transportation Study, hopefully you are the correct contact or you could direct me towards the proper channel. I'd like to express my concern about a particular intersection on Irving Street (and Riverside) and the potential for accidents should there be increased vehicular traffic. In the past year, there have been two accidents that I know of at the intersection in the screenshot below.

Two accidents may be statistically insignificant, but it's emotionally significant to see and hear a car flip over in front of your house. The other one occurred when someone blew through the stop sign. It needs to be a four way stop before the state or town starts sending overflow traffic through. Obviously, the driver makes his or her own choices, but I don't believe it prudent to tempt fate, especially so close to a school that serves many students who are deaf and blind (as well as having a number of independent adult staff members who are blind who use these roads and sidewalks to get to work).

I would like to hope that any planning and rearranging of traffic flow considers this, and takes the appropriate measures to ensure the safety of Watertown residents. **I say "hope" since my expectations are set very, very low--I was almost hit from the side by someone running a red light last year on Arsenal Street while I was on Irving, since the light was not visible in the direction they were going (I had the green light).** This was remedied and they added another light (I probably was not the only one who reported this), but oversights and shortcuts like these will eventually cause someone his or her life.

Thank you,
Mary





-----Original Message-----

From: Virginia Hecker

Sent: Wednesday, July 05, 2017 10:02 AM

To: Clark, Michael (DOT)

Subject: Arsenal St. Corridor Study

Dear Mr. Clark,

I am writing to express some concerns about the re-routing of traffic on Charles River Road.

If I understand correctly, there will no longer be access to Watertown Square via that route, only via Mt. Auburn and Arsenal.

Both of those routes are chronically congested already at certain times of the day, and Charles River Road is such a great alternative for residents to drive to the Square, particularly for those living in my particular neighborhood off of Irving Street, which will become more and more congested as new apartments are occupied.

I understand that traffic patterns will change as part of the plan, but I do not see how congestion will be relieved if this alternate route is eliminated.

Perhaps I need a further and clearer explanation, but at the moment I find this new option distressing.

Thank you.

Virginia Hecker

Watertown

Sent from my iPhone

From: Kevin MacDonald
Sent: Wednesday, July 05, 2017 12:27 PM
To: Clark, Michael (DOT)
Subject: Arsenal Corridor Concerns

I live on Beechwood Avenue and the possibility of closing down Charles River Rd into the square and funneling traffic onto the already overloaded Irving St will destroy the entire neighborhood. Also, enough with the bike nonsense. Making Beechwood and Pequossette/Paul St's 1 way would be a disaster for the residents here. Have the path go from school st, thru Athena Health, connecting then to the ALREADY BUILT bike path along the Charles River that goes to the square.

Respectfully,

Kevin MacDonald
Watertown, MA

From: Kananovich, Susan
Sent: Wednesday, July 05, 2017 4:14 PM
To: Clark, Michael (DOT)
Subject: Arsenal Street Corridor Study

As a resident of Horizon East and member of the Mount Auburn Tennis Club, both on Coolidge Avenue, I am in total disagreement with the proposal to close Coolidge Avenue at the corners of Arsenal and Arlington Streets. The morning traffic with UPS trucks and the lineup of trucks by Aggregate Industries will only intensify.

I am a long time Watertown resident and am dismayed by the enormous development in what once was a small residential town.

Susan Kananovich

Susan Kananovich, MPH
Watertown, MA

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From: Sarah and John Ryan
Sent: Thursday, July 06, 2017 9:23 PM
To: Clark, Michael (DOT)
Subject: Fwd: A few reminders

Dear Mr. Clark,

Reviewing the MassDOT Arsenal St Corridor study, I am very encouraged about all aspects of this proposal which focus on public transportation:

- Transit Service Improvements to Existing Routes - my first choice
- Transit Shelters
- Transit Signal Priority - also good ideas

N, Beacon Express bus. maybe a good idea, but we MA should focus on improving the bus lines that we already have first.

I am concerned about the cross connectivity between the Greenway and the Charles River. There are residential neighborhoods between Charles River Road and the entire length of Arsenal St. These areas are already impacted by increased traffic with new construction developments, so I would be cautious about any changes to this area that would further inconvenience neighbors in this community. One way streets are not a great solution, though multiple traffic calming options and increased pedestrian and bikeway access would certainly be welcome.

thank you,
Sarah Ryan
Paul St.
Watertown

From: Dave Martin
Sent: Friday, July 07, 2017 2:56 PM
To: Clark, Michael (DOT)
Subject: Mass DOT North Beacon / Arsenal Streets Proposal

Dear Sir,

I live on North Beacon St (1 1/2 blocks east of Perkins) and am heavily impacted by any plans made that affect North Beacon and the adjacent side streets. I cannot fathom where this manufactured concern of bicycle access to the Charles River being a problem originated from. Please enlighten me.

I am a weekend biker and find no difficulties with North Beacon St as it exists as well as the surrounding side streets. I loathe these asphalt bike speedways that have been set up. I find them offensive to the eye and invasive to our neighborhood and community. There are painted bike lanes that already exist on North Beacon St and they suffice quite well. Please let them be.

The idea of making Irving, Beechwood, and Louise / Paul St one way just for the convenience of a hand full of bikers is outrageous. It will greatly inconvenience the residents for a no hard proven reasons.

We live here because we enjoy the peace and tranquility of our area as it exists. The idea of bike highways being a necessity is a false one. Creating an artificial demand results in poorly thought, out artificial solutions that create real problems instead of solving the imaginary ones.

There are many of us that feel this way. The I Cubed plan porposed by Athena is wrought with major problems. We will be vocal about that plan as well so I Cubed as proposed is not a done deal.

Please leave our street markings alone. Please do not destroy our neighborhoods....

Thank You,

David Martin
Alice Martin
Watertown

From: [Gordon Brown](#)
Sent: Saturday, July 08, 2017 3:14 PM
To: Clark, Michael (DOT)
Subject: Arsema Street + + +

I see more buildings going up for both residential and retail use along with parking garages to accommodate the extra traffic that will be generated and I see Arsenal Street already being reduced in lanes. You want to generate more bicycle usage I believe, but many of we seniors cannot use them.

So more traffic and reduced lanes is a solution? I don't think so. We have way too many narrow streets in town as it is.

And I would hope that in this computerized age, traffic lights could be much better timed to allow a freer flow of traffic. It is really dumb to have to stop at every light, on Arsenal Street, especially at 11 or 11:30 at night when malls are closed, and traffic is often times non-existent.

Years ago, when visiting relatives in Conn. there was a 10 mile stretch of highway, Routes 5 and 15, I believe, from New Britain similar to our Route 1 with

lots of cross streets and businesses leading to the Conn. parkways. Once you entered and left a traffic light, anywhere on this stretch of highway, and maintained speed at 45 MPH, you did not have to stop for light at all. And this was long before computerized controls.

Other long stretches in Watertown such as Mnt. Auburn, Maine and Pleasant Streets. could also be controlled in this way. AND YOU DON'T NEED TO SPEND MILLIONS OF DOLLARS ON A STUDY. Just use some common sense and someone who knows how to program.

Just my opinions.

Gordon Brown
Quirk St. R

From: Jonathan Bockian
Sent: Sunday, July 09, 2017 11:47 AM
To: Clark, Michael (DOT)
Subject: Comment on Arsenal Street Corridor Study Draft Final Report

Thank you to the DOT and our state legislative delegation for requesting this Study and inviting public comment, and thanks to VHB for their work. The good news is that attention and resources are being focused on a serious problem that intensive development is making worse, namely transportation in Watertown generally and the Arsenal St. corridor in particular. The Study offers some good ideas but the proposed improvements are not enough for the scale of the problem or not sufficiently thought out.

The Study intentionally put on a pair of seriously limiting blinders: the limitation of the study area and the decision to leave out significant MBTA improvements. Both of these self-limitations are understandable: a boundary has to be drawn somewhere despite how interrelated each part of our area is with every other part, and the MBTA's Watertown problems reflect the systemic problems of the entire MBTA. Still, meaningful change to transportation on the Arsenal corridor cannot be achieved without more attention to the relationship with other adjacent transportation corridors and neighborhood streets or without dramatic improvement to the MBTA's Watertown services. A route change to the 70/70A bus line will help, and every bit of help is welcome, but it is nowhere near enough. These subjects must be addressed immediately if East Watertown's success isn't to be strangled in its cradle by traffic woes.

Another omission from the Study is that while DOT properly needs to know what government can do, solutions to public transportation problems worsened by intensive private development need substantial help from those developers to be effective. More of the Study could have focused on what money and in-kind contributions these sources can make in addition to what the Town already requires of them. If there are legal or policy obstacles to how these private

resources could contribute to the MBTA to improve local services, these obstacles should have been identified and solutions proposed. The real estate and corporate developers would benefit from collective solutions at least as much as the general public would.

The question raised by these criticisms is who will now take up the burden of filling in the gaps in this DOT Study?

Of the proposals that the Study offers, one that particularly needs more study and public input is Alternative 7, Watertown Square Gateway Improvements. This alternative proposes a realignment of Charles River Road (CRR) where it meets Watertown Square. This proposal was made without sufficient existing traffic conditions data. It is regrettable that although the Study's geographic local area purported to include North Beacon down to Charles River Road, the Study did not report any data about current conditions or future impacts of this proposal on North Beacon Street, Charles River Road and the cross streets. We need a thorough, credible traffic analysis of the entire area from North Beacon to CRR, from Little Greenough to Watertown Square, including the cross streets, before we can begin to understand what price the neighborhoods will pay, and what benefits the neighborhoods may get, for a possible improvement to the flow of traffic through Watertown Square. Despite calling itself a "study," the Report has not seriously studied this option before proposing it.

Thank you for considering these comments.

Jonathan Bockian
Watertown

From: Al Gordon
Sent: Monday, July 10, 2017 10:02 AM
To: Clark, Michael (DOT)
Cc: Betty Gordon
Subject: Comment: Arsenal Street Corridor Study

We are residents of the Horizon East Condominium at 125 Coolidge Avenue in Watertown, and we are writing to strongly object to the proposals in your latest report that would close off Coolidge Avenue at Arsenal.

In particular, we oppose the “Alternative 6: Soldiers Field Road Gateway Improvement” plans – and further protect the failure to conduct proper outreach to residents on the avenue, we are clearly relevant stakeholders. The public hearings were not an adequate substitute for direct contact – especially since the scope of the study project was generally regarded to be traffic patterns on Arsenal Street, but not other streets.

This proposal (beginning at page 161 of the report) includes two options -- Arlington Street Relocation (see figure 5-6) and Arsenal Street Relocation (5-7) – both of which would cut off access to Arsenal Street from Coolidge Avenue. Residents of our condominium (and three adjacent ones) would be able to drive only as far as the back end of the Dunkin Donuts property and then would be blocked. A major consequence would be to divert gravel and UPS trucks away from the Arsenal project – and back toward us.

Instead, the “Arlington” option calls for building a new road that would start on Coolidge Ave. across the street from the Mt. Auburn Club (which is to say a few hundred feet from our

driveway) and cut around the UPS lot and pop out onto Arlington Street about where the UPS dropoff location is. We then would reach Arsenal Street at the current intersection with Arlington. Essentially moving the traffic into the same intersection that you are supposedly trying to “fix.”

The “Arsenal” option appears to run from just past the Mt. Auburn Club’s parking lot (the one furthest from Horizon East) and pops out on Arsenal Street between the Dunkin and Greenough Boulevard, which would pretty much be no-man’s land for merging into Arsenal Street. We see a high level of danger in the resulting traffic flow.

Under either plan, first responders would be unable to access our street directly from Arsenal. Particular the police, which surely will have move units positioned in the vicinity of the Arsenal project,

Additionally the plans appear to be expensive to execute – we think the cost estimates are woefully low – and would require various environmental permits that, if granted, might adversely affect groundwater flow. Also, there is the potential to further complicate the decontamination issues at the so-called “GSA Site.”

While we look forward to the new amenities that “Arsenal Yards” might bring to Watertown’s East End, we find it troublesome that our street would be cut off from direct access to the project

We ask that you drop the Alternative 6 proposals.

Sincerely,

Betty and Alan Gordon

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From: Dorothea Hass
Sent: Monday, July 10, 2017 1:25 PM
To: Clark, Michael (DOT)
Cc: Lisa Feltner; Schreiber, Gideon; Watertown.BikePed@gmail.com; Charlie Denison; Wendy Landman
Subject: Arsenal Street Corridor Comment Letter

Attached please see WalkBoston's comments on the Draft Report of the Arsenal Street Corridor. As we indicate in our letter, there is very mention of the Corridor's impact, positive or negative on pedestrians.

WalkBoston requests that the Final Report address the vision for walking along and across the Corridor as well as provide specifics necessary to implement the vision.

--

Dorothea Hass
WalkBoston

Click here to join or renew your membership: [Donate Now!](#)



July 10, 2017

Michael Clark
MassDOT Office of Transportation Planning
10 Park Plaza, Suite 4150
Boston, MA 02116

RE: Arsenal Street Corridor Study

Dear Mr. Clark:

WalkBoston has reviewed the Draft Report on the Arsenal Street Corridor. We found the report very thorough in addressing the vehicle impacts – auto, bus and bicycle - of the various alternatives. However, we were surprised that there was hardly any mention of the impacts upon walkers.

WalkBoston would like to know specifically how the alternatives will increase pedestrian safety, facilitate comfortable movement along and across the corridor. For example, will traffic signals be concurrent? Will the WALK phase be automatic? Approximately, how long will pedestrians need to wait to receive a WALK to safely cross the street?

The omission of the alternatives' impacts upon pedestrians is particularly surprising given that a bus ridership is already high on the corridor and projected to increase. The vast majority of riders walk to bus stops. The most specific pedestrian benefit was cited in Alternative 12: Watertown Square Bus Alternative which indicated that closer proximity of ending/starting points for the buses would increase pedestrian safety because it would "reduce the number of pedestrians running to catch buses."

WalkBoston as a promoter of alternative transportation modes is supportive of many of the recommendations such as: transit signal overrides for buses, bus shelters, and safer bicycle accommodations as well as improved bicycle connections between Arsenal Street and the Charles River. However, again, the Draft Report does not address pedestrian accommodations or routes.

WalkBoston looks forward to a Final Report that specifically describes how the pedestrian experience along the Corridor will be safer, pleasanter and more convenient.

Sincerely,

Dorothea Hass
Sr. Project Manager

cc: Watertown Bicycle and Pedestrian Committee
Lisa Feltner, Councilor
G. Schreiber, Town Planner

From: Joseph Levendusky
Sent: Monday, July 10, 2017 2:03 PM
To: Clark, Michael (DOT)
Cc: towncouncil@watertown-ma.gov; Steve Magoon; Michael Driscoll
Subject: Arsenal Corridor Draft Report

Dear Mr. Clark—

I am writing in response to the Arsenal Corridor Study Draft Report.

Most of the ideas suggested in the report are of high merit and movement toward implementation should begin at the soonest possible moment. Items 1 and 3 have obvious utility. So do items 11, 14 and 17. We should begin tomorrow on these.

Item 15 is not only worthy, but is critical. If the timeline to implementation could be shortened, the impact on those who live, work and do business in the vicinity of the Arsenal Corridor will be extremely positive.

Item 7, the Watertown Gateway improvements, deserves further study and public input.

While the goal is sound—easing a traffic choke point that impacts the number 70 bus—the idea of re-routing the west end of Charles River Road may be controversial. And I am not sure that it is the best solution to the problem. It might also have unintended consequences, as Charles River Road is now the safest way for bicycles to reach the Watertown Square intersection.

Item 10 seems as if it could use further thought and planning. It seems apparent that an expedited or express bus route along North Beacon Street could take considerable pressure off the number 70 line. But as proposed, I do not believe that it is a bold enough stroke. First of

all, it should be a full time route. Secondly, the route, as proposed, does not accomplish enough.

I would propose that North Beacon Street line originate in Waltham using River and Pleasant Streets as its route to Watertown Square. This would provide additional service to the West End of Watertown, which is currently underserved. It would also provide service to the Pleasant Street Corridor of Watertown which is experiencing a boom in residential development and currently lacks transit service. The route, by providing a service alternative in the West End, could take considerable passenger load off the number 70 line.

Pleasant/North Beacon service would provide a connection to the 70 and 71 buses (and presumably also the Watertown TMA shuttle) at Watertown Square and would then proceed down North Beacon to a destination as yet undetermined, perhaps the future West Street Station. I would like to point out that this proposal would provide additional service and capacity without adding additional bus traffic to the Arsenal Corridor.

I would also suggest that these measures represent a great start toward ameliorating the problems we face today, and will face in the near term future. But I do believe that ongoing study and further measures will be necessary to meet challenges posed in the longer term.

Thank you for your time and attention to these comments.

And also a big thank you to all involved in Arsenal Corridor Study. I appreciate the attention that has been paid to the transportation problems we face in Watertown.

Joe Levendusky

From: Donald Wong
Sent: Monday, July 10, 2017 3:14 PM
To: Clark, Michael (DOT)
Cc: 'Bill Crowley'
Subject: Arsenal Street Corridor Plan

Dear Mr. Clark,

I am emailing on behalf of William Crowley, owner of the Mount Auburn Club in Watertown, MA and we are writing you to firmly oppose the proposed relocation of Coolidge Avenue in the "Alternative 6: Soldiers Field Road Gateway Improvement" of the Arsenal Street Corridor Study prepared by VHB and released in June 2017.

The relocation of Coolidge Avenue, depicted in both figures 4-5 (page 132) and 5-7 (page 163) of the study, is shown to run all the way through the Mount Auburn Club parking lot and would cause irreparable damage to Mount Auburn Club by causing our business to lose at least 60-80 valuable parking spaces which are used daily by our community of over 3000 members and guests. By eliminating such a significant percentage of our available parking spaces, Mount Auburn Club would suffer significant loss of business and damage to our reputation built over 43 years as MAC members would terminate their memberships due to the very real inconvenience and lack of service that the loss of parking spaces would cause to our paying members and guests.

In conclusion we are not in favor of the proposed relocation of Coolidge Avenue, however we are in favor of the overall plan to help improve traffic flow in the Arsenal Street corridor.

Thank you for your efforts and work on the Arsenal Street Corridor Project.

Donald Wong
Executive Manager
Mount Auburn Club
57 Coolidge Ave.
Watertown, MA 02472

From: Aaron Dushku
Sent: Monday, July 10, 2017 4:55 PM
To: Clark, Michael (DOT)
Subject: Arsenal Corridor Study final comments

Dear Mr. Clark,

Thanks for the opportunity to comment on the Arsenal Corridor Study report.

First, a minor matter, there were several typos in the maps or text under the discussion of the proposed 'trunk' route of the route 70 bus where it mistakenly labeled it as the 'truck' route and this is misleading.

Second and more substantive, I bring to question the matter of the proposed express bus along N. Beacon Street. While I applaud the project team for taking this idea to heart and producing some recommendations for a pilot program, the imaginative forces behind the idea seemed lacking in the face of a cruel 'reality'.

With 33,000 students and almost 14,000 employees, BU is a magnet destination for Watertown residents while the greater Longwood Medical area boasts an impressive list of hospitals, research and educational institutions. Beth Israel Deaconess Medical Center, Boston Children's Hospital, Brigham and Women's Hospital, Dana-Farber Cancer Institute, Joslin Diabetes Center, Boston Latin School, Emmanuel College, Harvard Medical School, Harvard School of Dental Medicine, Harvard Chan School of Public Health, Mass College of Art and Design, Mass College of Pharmacy and Health Sciences, Northeastern University, Simmons College, Wentworth Institute of Technology and Wheelock College are just a handful of these places. They represents thousands of potential employment opportunities and current destinations for discontent Watertown SOV commuters. Not to mention, the opportunity for Watertown residents to connect directly to the Green line on Commonwealth

Avenue could have opened up a whole new entryway to the Back Bay, downtown Boston and even BC in the outbound direction. Such a vision seemed all-to-quickly dismissed and a game-changing scenario of a real BRT line never had a chance.

I can't help but wonder why alternative routes to the Green Line from North Beacon street such as Gordon Street-to-Warren Street and back by way of Sparhawk and Parsons Streets were discarded or not considered. Such routes could have created more right-turn opportunities and avoided the gridlock of Brighton Ave's narrow passing and major intersections. The speed gained through implementing a real BRT system in Watertown could make up for delays in the denser streets of Allston/Brighton while taking pressure off or even replacing the 57 (or the eastern half of it). With stretches of single ownership ripe for eminent domain takings along the narrowest sections of North Beacon Street and public lands leading up to and through the Soldiers Field Road intersections, a truly transformative system isn't hard to envision. Even a route that went up Birmingham Parkway and along Lincoln Street or parallel to it on the Turnpike ROW could have avoided North Beacon Street in Brighton altogether and yielded conflict-free access to the Everett Street pedestrian overpass and be factored into the design of the future West Station as a turnaround.

Lastly, the assumption that the fledgling Watertown TMA could be the one to implement this pilot route felt like a very convenient way to deflect any potential responsibility from the state and onto the municipal and the private sector. MassDOT leadership could have instead rallied us behind an inspirational goal and really interconnect our two cities in a way that everyone could support. The Watertown TMA is in its infancy and it feels unfair and unrealistic to drop this expectation on this institution if you really supported it as a viable idea.

On to the positive. I am grateful for the dedicated work of VHB, Regina Villa, the MBTA, MassDOT and the working group throughout this process. Many Watertownians are very excited to see the proposed changes to the 70/70A bus routes which has been largely un-usable to many residents due to its undependable nature, crowding and unbearable wait times. In reading the report, one can really see the effects of a lot of work and data analysis in the justifications for this and that is greatly appreciated. Optimistically, we look forward to the potential addition of 4 new buses and the headway regularity that the proposed reconfiguration could someday bring and hopefully this will be in time to help us weather the storm of the growing number of new residents and businesses on Arsenal Street. It is encouraging that the MBTA is ramping up for some service delivery planning and this report comes at a perfect time to play a part in that process and has built a great case for us to argue for service improvements.

The enhancements to the cyclist experience on Arsenal Street are helpful as is the redesign plan for Watertown Square which I think will create a safer passage for cyclists and pedestrians while reducing the wait-time for buses traveling through on the 70/70A. I look forward to further discussion of the Watertown Square planning so that the relocated bus stop from Main Street can be appropriately sited. This will also lead to greater efficiency for transit riders who want to transfer to the services at Watertown Yard.

Thank you to our legislators who brought state investments to this effort and for their time spent to make that happen as well as throughout the process.

Sincerely,
Aaron Dushku
Watertown Town Councilor At Large

From: Nancy Kay
Sent: Monday, July 10, 2017 8:01 PM
To: Clark, Michael (DOT)
Subject: Arsenal Street Corridor Study

Dear Mr. Clark –

As a resident of Watertown for over 25 years and as a homeowner in Irving Street/Park neighborhood, thank you for the excellent summary you provided regarding the Arsenal Street Corridor.

I was not able to attend the meeting regarding this project directly, but have been following all of the recent articles and have read the entirety of your final draft. Many of my neighbors did attend the recent meeting and have shared the information.

We live the traffic issues in Watertown every day. I am an independent financial contractor that works with small businesses and using public transportation to my clients is difficult at best. I love my town and my neighborhood. We are all deeply concerned about the overall issues facing Watertown, but in particular the proposed rerouting of Charles River Road traffic through Riverside Street as well as Irving Street.

Irving Street currently (and at many times in the day) becomes gridlocked between Arsenal and North Beacon. That stretch is not long enough to accommodate many cars and sometimes it takes several light cycles to make it through, whether cars are going straight or turning, they are blocking the intersections. And this is without the new development on Arsenal and Irving adding additional traffic.

Our vibrant neighborhood is filled with families. Although my own child is 23 and has moved away, there is a new resurgence in the neighborhood and we currently have 4 new babies in purchased homes in a two block radius. There are many toddlers and young children who play in the park and ride their bikes on these streets. In addition, we have a growing number of dogs that bring together all types of people, single, married, families, retirees from the many different streets. We've had block parties and many of us have lived here for over 20 years. And these factors don't even take into account the impact this could have on Perkins School for the Blind, where students and staff routinely walk these streets.

I'm concerned that pushing traffic through our neighborhood will cause us to lose many of these wonderful attributes which might not seem like much in the scope of the many changes planned, but it could be debilitating to us. Cars that cut through now often speed down the street, sometimes not even slowing down for the stop sign. We acknowledge that we live near two very busy streets and a commercial part of Watertown, but is it necessary for us to possibly forfeit our neighborhood that we love to accommodate traffic issues that were not considered when all of these developments were approved.

I respectfully ask that our neighborhood's concerns are taken into account as we all progress to the many changes that are coming our way. The work that MassDOT has done on our Watertown's behalf is truly amazing. And I believe will make a difference in the everyday quality of our town.

Thank you for your time and attention to this matter.

Best regards,

Nancy Kay Demick

Watertown, MA

From: Carol Wilson-Braun
Sent: Monday, July 10, 2017 10:05 PM
To: Clark, Michael (DOT)
Subject:

Hi Mr Clark, I am a resident and home owner on Irving St. and I attended the meeting on the Arsenal St corridor at the Watertown Public Library last week. I wrote some comments then but wanted to elaborate a little more now. I am on the Watertown Commission on Disabilities and have heard reports of Perkins students feeling fearful of the intersection of Riverside and Irving streets. There was a bad accident there in late May. If the westbound traffic on Charles River Rd is funnelled up Irving St, this will be much worse. I think it is a very bad idea. There are also families with young children and dog walkers around Riverside and Irving and Irving Park and a school bus stop. Irving St has been a relatively quiet neighborhood. As a driver, the traffic on Irving going north has gotten much worse, especially with the closure of Louise St and the restriction on Beechwood. But even before that construction, it has become very difficult to get out of the Irving Park neighborhood, across N. Beacon. The traffic lights have been reconfigured with the construction on Arsenal, and it has been awful for the people in the Irving Park neighborhood to leave, particularly at rush hours. This morning, it took two full light cycles and then a quick scoot through a yellow light for me to continue north toward Arsenal. I generally like the changes proposed to Watertown Square, specifically the lane markings and the separate green lights for Galen and Mt. Auburn traffic to cross the intersection. I am hoping that those changes will improve the square enough that no changes need to be made to Charles River Rd. Can we see how those first changes work first? I don't want to lose our quiet neighborhood and have many more speeding cars travelling through- and make traffic so much more worse than it already is. Thank you for your attention,
Sincerely, Carol Wilson-Braun

From: [Jeff Wilson-Braun](#)
Sent: Monday, July 10, 2017 11:16 PM
To: Clark, Michael (DOT)
Subject: Irving Street as a thruway to Watertown Square

To whom it may concern: Not in favor from a neighborhood perspective. Irving Street and the surrounding blocks between N. Beacon St and Charles River Road are family oriented and relatively quiet. Sending additional traffic will lower the quality of living and possibly the value of the housing stock. With this proposed change, connecting Watertown Square bound traffic from Charles River Road north on Irving St to get to the Square, will come vehicles seeking alternative thruways when Irving St becomes clogged by its intersection at the traffic light with N. Beacon St. This means additional traffic going either way on Riverside either to gain access to N Beacon via Royal St or via Ladd St and Alfred Road. Or zipping up Irving Park North and South which surround a small park for children, dog walkers, and those who enjoy a small bit of bucolic scenery in a city where green space is already at risk. Many cars already move with surprising speed and possibly above speed limits on Irving the short distance from Riverside to N Beacon. Additional cars with folk seeking to go to work or to get to school will likely increase this tendency. The intersections at N Beacon and Irving and also Irving and Riverside have a history of significant vehicle accidents. Rush hour traffic would seem likely to increase accidents. Perkins School staff and residents use these streets for pedestrian training for low vision/blind and increased traffic would seem likely to put them at greater risk. Respectfully, Jeff Wilson-Braun

ARSENAL STREET

CORRIDOR STUDY

Comment Form – June 22, 2016 Public Meeting

1. Please select up to 3 alternatives that you think should be prioritized. *Check the box next to the alternative(s) you select.*

- ☐ (1) Bicycle Lanes east of School Street
- ☐ (3) Cross Connectivity between the Greenway and Charles River
- ☐ (6) Soldier's Field Road Gateway Improvements
- ☐ (7) Watertown Square Gateway Improvements
- ☒ (10) North Beacon Street Express Bus
- ☒ (11) Transit Signal Priority
- ☐ (14) Transit Shelters
- ☒ (15) Transit Service Improvements to Existing Routes
- ☐ (17) Adaptive Signal Control

2. Why do you think these alternatives should be prioritized?

1. THE NEW DEVELOPMENT WILL CONTINUE
TO ADD VEHICLES. ONLY TRANSIT
IMPROVEMENTS WILL GET PEOPLE
OUT OF CARS.

3. Would you like to share any other comments with MassDOT regarding the Arsenal Street Corridor Study Draft Final Report?

THE DOT STUDY DOES NOT ADDRESS
THE URBAN DESIGN ASPECT OF
ARSENAL STREET. ARSENAL STREET
SHOULD BE A "BOULEVARD" NOT
JUST A ROAD TO MOVE TRAFFIC.

I KNOW THIS IS TOO LATE
BUT I FIGURED I WOULD
SEND IT ANYWAY

NAME ROBERT LAURICELLA TITLE BOARD MEMBER

ORGANIZATION TREES FOR WATERTOWN

MAILING ADDRESS _____

EMAIL ADDRESS _____

Please return this sheet with your comments to a staff member at the meeting, or mail to the following address by Wednesday, July 5, 2017:

MassDOT, Attn: Michael Clark, Ten Park Plaza, Suite 4160, Boston, MA 02116.

Thank you for your comments!