

David Pearlman – Chair
Michael Rubenstein – Vice Chair
Bernard W. Greene
Amanda Zimmerman
Anthony Buono



Select Board Hearing Room
6th Floor, Brookline Town Hall

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Meeting ID: 160 594 2074

Charles Carey – Town Administrator

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**Select Board Agenda
Regular Meeting
Tuesday, August 11, 2026 at 5:30 PM**

1. Announcements/Updates

Select Board to announce recent and/or upcoming Events of Community Interest.

2. Appointment of Veteran Services Director

2a. Introduction and appointment of Veteran Services Director, SueAnn Chueng

3. Public Comment

Public Comment period for those who request to speak to the Board regarding Town issues. Persons wishing to speak may sign up in advance beginning on the Friday preceding the meeting or may sign up in person at the meeting. Speakers will be taken up in the order they sign up. Advance registration is available by calling the Select Board's office at 617-730-2202 or by e-mail at kmacgillivray@brooklinema.gov. The full Policy on Public Comment is available at BrooklineMA.gov/SelectBoard.

4. Miscellaneous

Approval of miscellaneous items, licenses, and contracts.

4a. Announcement pertaining to the review of the Board's executive session meeting minutes from January 1, 2026, through June 30, 2026, for purposes of disclosure.

Meeting Date	Determination
January 13, 2026	Release
January 27, 2026	Release
February 10, 2026	Release
February 17, 2026	Release
March 10, 2026	Release
March 24, 2026	Withheld
April 7, 2026	Withheld
April 14, 2026	Withheld
May 19, 2026	Withheld
June 30, 2026	Withheld

- 4b. Question of approving the meeting minutes from July 28, 2026.
- 4c. Question of approving and executing an MOA with MassDOT to accept a materials grant for 10 speed limit signs.
- 4d. Question of approving and executing an MOA with MassDOT to accept a materials grant for All-Way Stop Control Materials for LaGrange Street at Princeton Road and St. Paul Street at Dummer Street.
- 4e. Question of accepting an FY27 State 911 Department Support and Incentive grant in the amount of \$248, 276.00 for the reimbursement of personnel and salary-related costs associated with providing enhanced 911 services.
- 4f. Question of approving a contract WCI Corp in the amount of \$493,000 related to the Eliot Recreation Center renovation project.
- 4g. Question of authorizing the Select Board Chair, Town Administrator, and Director of Planning and Community Development to execute an Amendment to the Affordable Housing Restriction with the 90 Longwood LLC, related to 90 Longwood Avenue.
- 4h. Question of accepting the following donations for the Brookline Commission for the Arts:
Lauren Mistretta & Andrew Dean in the amount of \$600
Lawrence A Kozinn in the amount of \$40

Puppet Showplace Theater in the amount of \$20
- 4i. Question of accepting the following gifts to the Department of Public Health & Human Services:
- A \$200 monetary donation from the Brookline Community Foundation to support Brookline Medical Reserve Corps staff who provided sheltering services on the day of the 2026 Boston Marathon.
 - A \$300 gift card awarded through The 84 Movement Grant in recognition of the successful management of the grant.
- 4j. Question of approving the following maintenance contracts with Park Landscape Associates, Inc:
- Question of awarding Contract No. PW/27-02 Skyline Park Maintenance in the amount of \$62,178.00 to Park Landscape Associates, Inc. of Hyde Park, MA.
Question of awarding Contract No. PW/27-04 School Grounds Maintenance 1 in the amount of \$87,384.21 to Park Landscape Associates, Inc. of Hyde Park, MA.

Question of awarding Contract No. PW/27-05 School Grounds Maintenance 2 in the amount of \$96,789.21 to Park Landscape Associates, Inc. of Hyde Park, MA.

- 4k. Question of awarding Contract No. PW/26-25 Hammond Street Intersection, Signal and Corridor Improvements from Newton Street to Boylston Street in the amount of \$3,353,174.00 to J. Marchese & Sons. Inc. of Everett, MA.
- 4l. Question of approving Extra Work Order No. 2, in the amount of \$196,598.64 for work performed by JAM Construction Co., Inc. under Contract No. PW/25-17 (Amory Playground).
- 4m. Question of approving Extra Work Order No. 1 in the amount of \$7,448.95 for work performed by Northern Contracting Corp under Contract No. PW/25-17A (Amory Fieldhouse).
- 4n. Question of approving an Authorization to Hire request from the Director of Public Health:
Senior Public Health Inspector (GN10)
- 4o. Question of approving an Authorization to Hire request from the Director of Public Libraries:
Library Technology Support Specialist (T-10)
- 4p. Question of approving the following Authorization to Hire requests from the Commissioner of Public Works:

Water and Sewer Division

Motor Equipment Operator 3 – LN5

Motor Equipment Repairperson – LN6

Water & Sewer Utilities Working Foreperson – LN6

Water Use Analyst – T6

Parks and Open Space Division

Forestry Specialist: Tree Climber – GN9

*Horticulture Supervisor – GN9

Highway, Sanitation & Fleet Services Division

Traffic & Fire Alarm Supervisor – GN13

Signal Maintainer – GN8

Transfer Station Supervisor and Scale Operator – GN11

Traffic Signals & Municipal Light Manager – T9

* May 2026 Override Funded Position

- 4q. Question of accepting a grant from the Commonwealth of Massachusetts - Department of Energy Resources in the amount of \$125,000 to support a group of energy-conservation measures and authorize the Town Administrator to sign all necessary contractual, fiscal and electronic funds transfer agreements associated with the grant.
- 4r. Question of ratifying the Town's endorsement on a letter from the City of Boston to the U.S. Senate regarding the extension of Temporary Protected Status for Haiti.

5. Calendar

Review and potential vote on Calendar Items.

6. Boards and Commissions - Interviews

- 6a. Police Commissioners Advisory Committee
Nick Fetzer
- 6b. Housing Advisory Board
Jeffrey Berry
Leslie Reid
- 6c. Brookline Commission on Disability
Kailey Bennett
Kiran Bhatia

7. Gateway East Bus Lane Pilot

- 7a. Gateway East Bus Lane Pilot update on the Transportation Board's vote to remove the eastbound bus lane, retain the westbound bus lane and the segment between Station Street and Route 9
- 7b. Vote to authorize the Town Administrator to execute an updated Traffic Control Agreement and any related documents necessary to implement the approved modifications.

8. Exigent Statement Ratification Policy

- 8a. Review of policy regarding statements and letters of support requiring signatures before the next scheduled Select Board meeting.

9. Command Staff Salary Adjustments

- 9a. Review and possible vote on salary adjustments for command staff in the Police and Fire Departments (as funded by the 2026 Override).

10. (7:00 PM) Public Hearing - Continuation of Lodging House License Violation Hearing for 1459 Beacon Street

- 10a. Continuation of May 12 violation hearing for and possible vote on consequences for a lodging house license at 1459 Beacon Street, whose license was not recommended for renewal by the Building Department.

11. (7:15 PM) Public Hearing - MBTA Tree Removal Request

- 11a. Public Hearing regarding Beacon Street Public Shade Tree Removals and Possible Vote to Uphold the Tree Planting Committee's Hearing and Vote on 8/5/2026.

12. Brookline Recreational Reciprocal Agreement

- 12a. Discussion and possible vote to support the Brookline Recreation Reciprocal Agreement for Facility Use.

13. Boards and Commissions- Appointments

- 13a. Board of Assessors (1 vacancy)
Nicholas Ariniello
- 13b. Conservation Commission (1 vacancy, plus 1 pending)
Khandan Baradaran
Kelly Brilliant
Matthew Eddy
Ernest Cook
Cameron Ashrafzadeh
- 13c. Brookline Commission for the Arts (3 vacancies)
Khandan Baradaran
Arav Patel
Kelley Pope
Sayaka Minegishi
- 13d. Advisory Council on Public Health (2 vacancies)
Vinay Kadiyala
Cameron Ashrafzadeh
Solyana Henok
Jessica Michelson
- 13e. Naming Committee (1 vacancy)
Robert Moran

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[Select Board Webpage](#)

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[BrooklineMA.gov/Town-Legal-Notice](https://brooklinema.gov/Town-Legal-Notice)

Requests for language access may be sent to the Language Access Coordinator at ODEICR@brooklinema.gov.

SueAnn Cheung

Work Experience

Veterans Service Officer **Town of Saugus** *Aug. 2025 – Present*

- Providing local, state, and federal resources to town veterans and their families, and assisting with them with application processes for any available benefits and services.
- Performing outreach to veterans and their families of available resources such as benefits and services.
- Collaborating with Saugus Veterans Council and other veteran organizations to coordinate events and ceremonies such as those on Veterans Day and Memorial Day.
- Preparing and submitting budgets, benefit reports to town accounting and Executive Office of Veterans Services (EOVS) for reimbursements.

Veterans Events Coordinator **Boston Veterans Group** *Jul. 2019 - Present*

- Locating local resources for veterans and distributing information through social media or outreach.

SAVE Outreach Coordinator **Executive Office of Veterans Services** *May 2025 – Aug. 2025*

- Peer support with the SAVE (Statewide Advocacy for Veterans Empowerment) Team to veterans in the Commonwealth of Massachusetts.
- Completing intakes with veterans.
- Determining what services and needs are needed and connecting with the appropriate resources and community providers.

Regional Director **Eliot Community Human Services** *Dec. 2023 – May 2025*

- Providing oversight of Northeast and Southeast Regions of Massachusetts. Working with DDS (Department of Developmental Services) to provide mental health and residential rehabilitation services to clients with Developmental Disabilities and Acquired Brain Injuries.

Division Manager **Cooperative for Human Services** *Jan. 2022 – Dec. 2023*

- Supervision of programs in conjunction with the State of Massachusetts and DDS (Department of Developmental Services).
- Working with individuals with Developmental Disabilities and Acquired Brain Injuries.

Program Director **NeuroRestorative** *July 2021 – Dec. 2021*

- Supervised entire region of residential program operations.
- Ensuring agency and state policy, regulations, and guidelines are implemented.
- Managing \$24 million in budget for program operations.
- Successfully filled an entire region with managers within 2-3 months' time, making operations possible to run safely and efficiently.
- Providing support, leadership, direction, and supervision to all staff and promoting teamwork and morale.
- Keeping constant communication with funding source service coordinators, participant families and guardians.
- Continual work with Quality Insurance (QI) to adhere with policy, regulations, and compliance.

SueAnn Cheung



Residential Supervisor

NeuroRestorative

Dec. 2019 – July 2021

- Managed residential program operations, while directly working with program participants and providing staff supervision.
- Working with TBI / ABI participants to ensure their quality of life is the best that is offered, even amidst global pandemic.
- Coordinated annual ISP meetings with participants, their families, and service coordinator.
- Recruiting, interviewing, and hiring employees; providing all staff trainings per regulations
- Welcoming new employees and conducting New Hire Orientations.
- Office administration, including all participant appointments, staff schedules, and employee payroll.
- Providing leadership and mentorship to staff and ensuring the completion of any staff evaluations and counseling.
- Providing crisis prevention training, as the state's CPI certified instructor.
- Prepared and implemented for CARF (Commission on Accreditation of Rehabilitation Facilities), MRC (Massachusetts Rehabilitation Commission) / DDS (Department of Developmental Services) / DPH (Department of Public Health) licensing and certifications.
- Ensuring safety protocols and guidelines are implemented during COVID-19 pandemic for program participants and staff.

Residential Coordinator

MAB Community Services

July 2019 - Dec. 2019

- Managing program with TBI (Traumatic Brain Injury) / ABI (Acquired Brain Injury) participants, ensuring their quality of life is the best that we can offer.
- Working with participants with their annual person-centered plan / ISPs (Individual Service Plans).
- Completing progress notes, and annual ISPs.
- Following MRC / DDS / DPH guidelines and regulations, and working together with service coordinators, licensors, participants, and their families and guardians.
- Responsible for the overall direction, coordination, and operation of program.
- Interviewing, hiring, and evaluating employees.
- Office administration including employee payroll and client medical appointment scheduling.

Case Manager

MAB Community Services

Mar. 2019 - July 2019

- Supporting participants with traumatic brain injuries to achieve their ISP goals and to help them reach their highest potential, following MRC / DPH guidelines and regulations.
- Coordinating and scheduling medical appointments and recreational activities.
- Facilitating weekly house meetings, including completing menus and activity calendars.
- Providing support and guidance as a positive role model for staff, as well as participants.
- Liaison between family members, healthcare providers, and clients.
- Budget and funds management for house and participants.
- Crisis management; incident reporting to agency and state.

Office & Logistics Manager

BioPike

May 2014 - Dec. 2019

- Receiving and shipping orders for biotech products.
- Inventory control; communications between vendors and customers.

SueAnn Cheung



Operator & Practitioner

Sgt C Tattoos Boston & Hawaii

Nov. 2007 - Present

- Working with city guidelines and ISD (Inspectional Services Department) for licensing. Opening and operating the first licensed establishment in Downtown Boston.
- Scheduling and maintaining client appointments and records.
- Organizing and coordinating special events to network and advertise.

Sergeant (Training / Instructor; Supply / Logistics) U.S. Marine Corps

Dec. 2002 - Feb. 2007

- Providing peer support by providing motivation, guidance, emotional, and professional advice.
- Knowledgeable resources and benefits for military personnel.
- Office administration; Personnel training; instructed and facilitated various training classes.
- Warehouse inventory control; responsible for supply inventory valued at more than \$4 million at the age of 22.

SueAnn Cheung



Training / Certification

- Veterans Service Officers Certification (Commonwealth of Massachusetts / EOVS)
- NVLSP Veterans Benefits Certification
- Crisis Prevention Intervention (CPI) Certified Instructor
- Human Rights Officer
- QPR (Question, Persuade, Refer) Suicide Prevention Instructor Certification
- The American Legion's Be the One Columbia Protocol Suicide Prevention Training
- Substance Abuse Course Certification (Mass General Hospital / Home Base)
- ASIST (Applied Suicide Intervention Skills) Training Certification
- Lethal Means Training (Suicide Prevention)
- Positive Behavior Supports (PBS) Certification
- Trauma Informed Care Certification
- Qualified Brain Injury Support Supervisor (QBISP-S) Certification
- Proactive Approaches to Behavioral Challenges (PABC) Certification
- Medication Administration Program (MAP) Certification
- CPR / First Aid Certification
- Bloodborne Pathogens Certification

SueAnn Cheung



Education:

- Bachelor of Science - Psychology (Suffolk University)
- Hawaii Pacific University
- Boston Latin Academy

Community Service & Engagement:

- Marine Corps League, Worcester Detachment
 - Junior Vice Commandant
 - Color Guard
 - Fundraising Committee
 - Ball Committee
- Saugus Veterans Council
- American Legion, Saugus Post
 - Scholarship Committee



OFFICE OF THE TOWN COUNSEL
MEMORANDUM

TO: Select Board Members

FROM: Jonathan Simpson, Associate Town Counsel

RE: Executive Session minutes release (January 1, 2026 – June 30, 2026)

DATE: August 6, 2026

Town Counsel is designated by the Select Board to review the minutes of the Board's meetings in Executive Session periodically for the purpose of determining whether the minutes may be released or should remain confidential "because publication would defeat the lawful purposes of the executive session". Under the Open Meeting law, the determination must be announced at the Select Board's next meeting, and included in the minutes of the meeting. I have reviewed the minutes of the Board's meetings in executive session pertaining to the following dates, and have determined as follows:

<u>Meeting Date</u>	<u>Determination</u>
January 13, 2026	Release
January 27, 2026	Release
February 10, 2026	Release
February 17, 2026	Release
March 10, 2026	Release
March 24, 2026	Withheld
April 7, 2026	Withheld
April 14, 2026	Withheld
May 19, 2026	Withheld
June 30, 2026	Withheld



Select Board Minutes
Tuesday, July 28, 2026 at 5:30 PM
6th Floor Hearing Room

Present: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono for the open session portion of the meeting.

1. **Open Session**

Chair Pearlman declared that the Board shall enter into executive session for the purpose of considering the purchase, exchange, lease, or value of real property, specifically 26 Pleasant Street. And for the purpose of considering the value of real estate at the following properties: 15 Babcock Street, 12-24 Centre Street, and 25-39 Centre Street. The Board will reconvene in open session.

On motion it was,

Voted to enter into executive session for the purposes indicated below.

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman, Anthony Buono

2. **Executive Session - Real Property**

2a. Executive session, pursuant to G.L. c. 30A, §21(a)(6) ("Purpose 6"), for the purpose of considering the purchase, exchange, lease, or value of real property, specifically 26 Pleasant Street.

2b. Executive session, pursuant to G.L. c. 30A, § 21(a)(6) ("Purpose 6"), for the purpose of considering the value of real estate at the following properties: 15 Babcock Street, 12-24 Centre Street, and 25-39 Centre Street.

3. **Announcements/Updates**

Select Board to announce recent and/or upcoming Events of Community Interest.

1. Renter's Handbook Release - The first version of the Renter's Handbook is now available on the Town website. All renters and landlords are encouraged to review it for guidance and resources.
2. Select Board's 2030 Roadmap - The Select Board is advancing its 2030 Roadmap, focusing on collaboration with community groups and integrating their work into town goals.
3. Brookline Community Mental Health Center Initiatives - Three programs highlighted:
 - Child & Adolescent Groups: Support for young people facing challenges.
 - Momentum Coaching: Personalized coaching for high school students.
 - Parent Support Group: Available for summer 2026.

4. Poll Worker Recruitment for September 1 Election - There is a high need for poll workers for all elections, especially the upcoming September 1st election. Poll workers receive a stipend, training, and meals on Election Day. Interested individuals should email pollworker@brooklinema.gov.
5. National Night Out – August 4th - Community police awareness event at Lynch Park, 599 Brookline Ave, from 5–8 p.m. Activities include a bounce house, obstacle course, police canine demonstration, “Touch a Truck,” food, ice cream, carnival games, entertainment, and more.

4. **Public Comment**

1. Ann Lusk, Precinct 5 resident, urged the Select Board to refine the CIP-funded study of the Larz Anderson DPW yard and surrounding land, highlighting that past discussions have overlooked Isabel Anderson’s 1948 will, which dedicated all 64 acres for public recreation and education. Ann urged refinements to the Larz Anderson DPW yard study, citing historical obligations for public recreation and recommending alternative storage locations and improved layout of the gravel lot.
2. Susan Park, a Town Meeting Member from Precinct 17 speaking on behalf of 53 abutters, urged the Select Board to preserve 26 Pleasant Street as public open space, emphasizing that Coolidge Corner is a documented urban heat island with impervious surfaces that trap heat and worsen environmental and health conditions. Also noted that North Brookline has less open space than the national average. Susan highlighted large-scale developments like the proposed Waldo Durgan project that will intensify heat, energy use, and pollution, and argued that creating a park with mature trees at 26 Pleasant would provide essential cooling, cleaner air, mental-health benefits, and community gathering space.
3. Al Davis warned that dense high-rises disrupt neighborhood character and environmental stability, supporting a public park as a more appropriate use of the 26 Pleasant Street site.
4. Martin Yasseen, a 43-year resident of 25 John Street, spoke on behalf of neighbors who are strongly opposed to another large building at 26 Pleasant Street, stressing that the community feels its physical and mental health and basic rights are being overshadowed by powerful developers, and urged creation of a publicly accessible park.
5. Molly Shepa, a Precinct 17 resident living near the 26 Pleasant Street lot, spoke in strong support of converting the site into public open space, emphasizing that North Brookline is already densely developed and formally identified as a heat-island area due to extensive pavement and buildings. She argued that a park would provide meaningful, long-term environmental benefits, shade, reduced heat, improved air quality, and offer a welcoming place for neighbors to gather.

5. **Miscellaneous**

Approval of miscellaneous items, licenses, and contracts.

- 5a. Question of approving the meeting minutes from July 14, 2026.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

- 5b. Question of approving a citation of recognition and appreciation for Dr. Harold Petersen.

Michael Rubenstein read the citation.

PROCLAMATION

Brookline Select Board

The Brookline Select Board expressing its appreciation to

Dr. Harold Petersen

for his exemplary 37 years of service to Town of Brookline on the Board of Assessors

WHEREAS Dr. Harold Petersen has proudly concluded an extraordinary thirty-seven years of dedicated service as a member of the Town of Brookline Board of Assessors; and

WHEREAS, the vital work of the Board of Assessors is essential to the fair and effective operation of local government, ensuring that property assessments remain accurate, equitable, and consistent to support the schools, services, and community resources that residents rely on every day; and

WHEREAS, throughout his tenure, Dr. Petersen has consistently demonstrated the highest standards of professionalism, integrity, and an unwavering commitment to the residents of our community; and

WHEREAS, his deep understanding of assessment practices, institutional knowledge, and expertise as a renowned economist have brought a unique and invaluable perspective to the Board of Assessors, allowing him to expertly analyze economic trends and market forces to enhance local decision-making and economic stability; and

WHEREAS, Dr. Petersen's remarkable dedication has provided vital continuity through decades of change, reflecting the very best of public service through fairness, thoughtful analysis, and care;

NOW, THEREFORE, IN CONSIDERATION OF THE FOREGOING that the Select Board hereby extends its deepest gratitude and sincere appreciation to Dr. Harold Petersen for his lasting impact on the Town of Brookline and the Board of Assessors.

Dr. Petersen expressed his gratitude for the recognition and acknowledged the staff of the Assessors' Office, and the Select Board for their service.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5c. Question of accepting two partial Fiscal Year 2027 grant awards from the Massachusetts Department of Mental Health (DMH) Jail/Arrest Diversion Program, totaling \$82,000, to support the continuation of two important behavioral health initiatives within the Brookline Police Department.

The awards consist of:

\$64,000 for the Norfolk County Crisis Intervention Training and Technical assistance

\$18,000 for the Department's Co-Response Jail/Arrest Diversion Program

Chief Paster reviewed the grants and how the funds will be used.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5d. Question of accepting a Shared Streets and Spaces Grant from the Massachusetts Department of Transportation in the amount of \$250,000 for the purchase of five Bluebikes stations.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5e. Question of accepting a FY27 (State FY26) Massachusetts Department of Transportation Community Transit Grant Program award in the amount of \$50,000, which supports senior transportation services from July 2, 2026 - June 30, 2027.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5f. Question of accepting a FFY25 Emergency Management Performance Grant from the Massachusetts Emergency Management Agency, in the amount of \$23,040.00, to enable the Office of Emergency Management to purchase security equipment for the Emergency Operations Center.

Bernard Greene expressed some concerns related to these funds being used towards immigration security and scrutiny. Town Administrator Carey reviewed the parameters around the grant. These grants are being constantly monitored to review what the funds will be used for.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5g. Question of accepting the Older Adults Technology and Health Grant from the Massachusetts Assoc. Of Council on Aging and Senior Center Directors (MCOA) in the amount of \$10,000.00

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5h. Question of accepting a Fiscal Year 2025 Bulletproof Vest Partnership (BVP) grant from the U.S. Dept. of Justice, Office of Justice Programs, Bureau of Justice Assistance, in the amount of \$5,708.70 to support the purchase of body armor for Brookline Police Dept. officers.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5i. Question of accepting a donation from Chestnut Hill Realty to the Brookline Police Dept. in the amount \$5,000.00 to support the National Night Out event on August 4, 2026.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5j. Question of approving the petition of NStar Electric Company d/b/a Eversource Energy for permission to construct, and a location for a pole in Kent Street approximately 25 feet north of existing pole 91/8 north of the intersection with Station Street on the east side (continued from 2/18/26).

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5k. Question of approving the application for a transfer of an All-Alcohol Beverages License from YUYI Corp. d/b/a KAO JIU to URBANTASTE LLC d/b/a YU YUE Restaurant at 406 Harvard St. with the proposed manager, Alezha Cai.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

Question of approving the application for a New Common Victualler / Entertainment/ Outdoor Dining License for URBANTASTE LLC d/b/a YU YUE Restaurant at 406 Harvard St. Hours of operation and Entertainment are Sunday–Saturday 10:00 AM – 12:00 AM. Entertainment will consist of Radio/Taped Music and Television. Outdoor dining hours of operation will be Sunday–Saturday 10:00 AM – 11:00 PM. Seating will consist of 46 inside seats and 24 outdoor dining seats.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

Question of approving the application for an Alternate Manager, Abel Cai for URBANTASTE LLC d/b/a YU YUE Restaurant at 406 Harvard St.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5l. Question of approving the application for a Change of Stock Interest for Maguro Thai Sushi Inc. d/b/a Maguro at 1335 Beacon St. Brookline, MA 02445.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

Question of approving the application for a Change of Officers, Directors, LLC Manager for Maguro Thai Sushi Inc. d/b/a Maguro at 1335 Beacon St. Brookline, MA 02445.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

Question of approving the application of Alternate Manager, Wanalee Chamchoy for Maguro Thai Sushi Inc. d/b/a Maguro at 1335 Beacon St. Brookline, MA 02445.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5m. Question of approving the application of Alternate Managers, Samuel Kamholtz and Patrick Sorohan for D2 Restaurant d/b/a Esmail's 1306 Beacon St at 1306 Beacon St.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5n. Question of approving the applications for Alternate Managers Patrick McDonough and Lindsie Grace for CDXX MA TransCo, LLC d/b/a NETA at 160 Washington Street Brookline, MA.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5o. Question of approving an increase in rental days from 90 days per year to a maximum of 180 days for a short-term rental located at 129 Addington Rd. in Brookline, MA.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5p. Question of approving a temporary closure from August 10th to September 8th, 2026 for i-Collab X d/b/a Miraku located at 9 Babcock St.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5q. Question of approving the remaining Open Air Parking Licenses for 2026-2027.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5r. Question of approving an Authorization to Hire request from the Director of Public Health and Human Services:

Senior Office Assistant (C5)

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5s. Question of approving an Authorization to Hire request from the Director of Planning and Community Development:

Economic Development and Long-Term Planner (T6)

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5t. Question of approving and Authorization to Hire request from the Town Clerk:

Senior Clerk Typist (C6)

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5u. Question of approving a professional services contract with Stantec Consulting Services, Inc. for \$100,000 related to the municipal properties formerly known as the west campus of Newbury College. The contract covers community engagement, site planning explorations, and related cost estimates to support a study conducted by the Select Board- appointed Fisher Hill West Uses Advisory Committee.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5v. Question of awarding and executing contract PW-26-49 to Nu-Pipe, LLC for the Tannery Brook Drain Rehabilitation Project in the amount of \$317,609.75. Rehabilitation of the Tannery Brook Drain is limited to a critical section beneath the MBTA Green line C branch in Washington Square.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5w. Question of approving Extra Work Order #1 for engineering contract PW-26-16 with Brown and Caldwell in the amount of \$59,000 to assist with contract administration and construction oversight of the Tannery Brook Drain Rehabilitation Project.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5x. Question of approving an Appropriations Transfer Request from the Director of Public Health in the amount \$50,000.00:

From: Org# 51005110 Obj# 524010 Professional Services \$50,000.00
To: Org# 51005110 Obj#558105 Food Security-Vouchers \$50,000.00

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5y. Question of accepting the transmittal of the CDEICR (Commission for Diversity, Equity, Inclusion, & Community Relations) Annual report.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

6. **Calendar**

Review and potential vote on Calendar Items.

7. **Boards and Commissions - Interviews**

7a. **Parks and Recreation Commission**

Jess Levasseur is a new Town Meeting member from Precinct 9, described extensive involvement in community activities, including parenting three children who use local parks, participating in adult soccer leagues, teaching and coaching in Newton public schools, and advising extracurricular clubs. Emphasis placed on the importance of community events in parks to foster connections across age groups and reduce device use among youth. Suggestions included recurring pickup sports and intergenerational activities. Experience from coaching in Naperville, Illinois highlighted the value of structured coach training and pre-season seminars. Insights shared about field sharing and coordination in Newton, with openness to learning from other towns.

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7b. Board of Assessors

Nicholas Ariniello outlined extensive experience in property assessment, including two decades with the City of Boston's assessing department, where responsibilities spanned abatements, appeals, tax policy, legislative work, and eventually serving as the sole assessing authority under Boston's charter. The interview emphasized deep familiarity with Massachusetts assessment law, valuation methods for diverse property types, collaboration with Brookline assessors on statewide issues, and a commitment to fair administration of tax systems. Additional discussion focused on public education, transparency, and helping residents understand valuations. Interest in serving Brookline was framed as an opportunity to continue public service while transitioning professionally.

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8. Washington Square/Brookline Village Parking Studies Presentation

8a. Progress Report on the Select Board's Request for Parking Studies in Brookline Village and Washington Square Related to the Washington Street Complete Streets Project.

Public Works Commissioner, Erin Chute made the introductions for this project substantially funded through the federal and state Transportation Improvement Program (TIP).

Santec Consultant, Liza Cohen, provided an update on the Board's earlier request for a detailed analysis of parking and curb use in both commercial districts, conducted as part of the broader Washington Street Complete Streets Project. The presentation outlined the study purpose, methodology, inventory of existing parking supply, observed occupancy patterns, and challenges relating to long-term parking, loading activity, and wayfinding.

Key findings showed dense peak-period demand in core areas but underused parking supply nearby, with opportunities to rebalance parking availability, adjust pricing zones, improve signage, expand access to public-garage spaces, and modernize commercial permit systems.

Early recommendations emphasized shifting long-term parkers away from high-demand blocks, clarifying curb regulations, potentially incorporating Driscoll School parking during off-hours, and improving driver guidance through coordinated wayfinding across both districts. Overall, the update confirmed that further refinement will continue through the 75% design phase and incorporated local business and resident feedback into next steps for improving circulation, access, and parking management in support of the Complete Streets goals.

9. **16 Williams St. PILOT Agreement**

9a. Question of voting to authorize the Select Board Chair, Town Administrator, and Tax Assessor to execute a Payment In Lieu of Taxes (PILOT) agreement with Victory Programs, Inc., related to 16 Williams Street.

Planning Director, Kara Brewton presented the proposed PILOT (Payment in Lieu of Taxes) Agreement for the property at 16 Williams Street, following the Town's decision to assign its Right of First Refusal (ROFR) to Victory Programs.

The Select Board had required three conditions for the assignment: acceptance of the ROFR, a permanent affordable housing restriction, and participation in the Town's 25% PILOT contribution model. Victory Programs agreed to the ROFR and the affordable housing restriction and expressed openness to the PILOT terms.

The draft agreement spans 20 fiscal years, beginning in FY2027 and extending through FY2046, requiring Victory Programs to pay 25% of what the property's standard tax levy would be if taxable, consistent with Brookline's PILOT policy for charitable-use properties. Edits to the final agreement included clarifying contract language and adding an exhibit describing the property. The agreement establishes a stable, long-term contribution structure—without a phased ramp-up—and maintains Brookline's commitment to equitable PILOT negotiations across nonprofit organizations.

On motion, it was,

Voted to authorize the Select Board Chair, Town Administrator, and Tax Assessor to execute a Payment In Lieu of Taxes (PILOT) agreement with Victory Programs, Inc., related to 16 Williams Street.

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

10. **Warrant Article Vetting**

10a. Review and possible vote on invitation to vet potential warrant articles in advance of filing.

The Select Board discussed establishing an invitation-based pre-filing article process for prospective warrant articles, designed to help petitioners refine proposals before the legally binding filing deadline. The goal, as explained by Chas Carey and Michael Rubenstein, is not gatekeeping, but offering petitioners early guidance on feasibility, legal implications, alignment with Town plans, and potential implementation costs.

The process would allow petitioners to submit draft ideas for review so staff can identify conflicts with existing bylaws, practical obstacles, or whether the concern can be resolved administratively rather than legislatively. Bernard Greene noted that residents might assume “vetting” meant approval or evaluation of merit, which is not the Board’s intention. The language clarifies this.

Board members emphasized that the process is voluntary, preserves petitioners’ full legal rights, and helps avoid situations where a warrant article becomes unworkable due to scope limitations or legal issues identified too late.

The Board also discussed encouraging joint committee hearings to reduce burdens on petitioners and create clearer, more efficient review. Amanda Zimmerman noted that many petitioners struggle with “scope” rulings issued by the Moderator, and early feedback could prevent articles from being ruled partially out of order.

On motion it was,

Voted on the proposed invitation to review potential warrant articles in advance of filing as outlined in the attached materials.

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

There being no further business, the Chair ended the meeting at 9:00 PM.

ATTEST

AI assisted in drafting these minutes.



Select Board Minutes
Tuesday, July 28, 2026 at 5:30 PM
6th Floor Hearing Room

Present: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono for the open session portion of the meeting.

1. **Open Session**

Chair Pearlman declared that the Board shall enter into executive session for the purpose of considering the purchase, exchange, lease, or value of real property, specifically 26 Pleasant Street. And for the purpose of considering the value of real estate at the following properties: 15 Babcock Street, 12-24 Centre Street, and 25-39 Centre Street. The Board will reconvene in open session.

On motion it was,

Voted to enter into executive session for the purposes indicated below.

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman, Anthony Buono

2. **Executive Session - Real Property**

2a. Executive session, pursuant to G.L. c. 30A, §21(a)(6) ("Purpose 6"), for the purpose of considering the purchase, exchange, lease, or value of real property, specifically 26 Pleasant Street.

2b. Executive session, pursuant to G.L. c. 30A, § 21(a)(6) ("Purpose 6"), for the purpose of considering the value of real estate at the following properties: 15 Babcock Street, 12-24 Centre Street, and 25-39 Centre Street.

3. **Announcements/Updates**

Select Board to announce recent and/or upcoming Events of Community Interest.

1. Renter's Handbook Release - The first version of the Renter's Handbook is now available on the Town website. All renters and landlords are encouraged to review it for guidance and resources.
2. Select Board's 2030 Roadmap - The Select Board is advancing its 2030 Roadmap, focusing on collaboration with community groups and integrating their work into town goals.
3. Brookline Community Mental Health Center Initiatives - Three programs highlighted:
 - Child & Adolescent Groups: Support for young people facing challenges.
 - Momentum Coaching: Personalized coaching for high school students.
 - Parent Support Group: Available for summer 2026.

4. Poll Worker Recruitment for September 1 Election - There is a high need for poll workers for all elections, especially the upcoming September 1st election. Poll workers receive a stipend, training, and meals on Election Day. Interested individuals should email pollworker@brooklinema.gov.
5. National Night Out – August 4th - Community police awareness event at Lynch Park, 599 Brookline Ave, from 5–8 p.m. Activities include a bounce house, obstacle course, police canine demonstration, “Touch a Truck,” food, ice cream, carnival games, entertainment, and more.

4. **Public Comment**

1. Anne Lusk, Precinct 5 resident, urged the Select Board to refine the CIP-funded study of the Larz Anderson DPW yard and surrounding land, highlighting that past discussions have overlooked Isabel Anderson’s 1948 will, which dedicated all 64 acres for public recreation and education. Anne urged refinements to the Larz Anderson DPW yard study, citing historical obligations for public recreation and recommending alternative storage locations and improved layout of the gravel lot.
2. Susan Park, a Town Meeting Member from Precinct 17 speaking on behalf of 53 abutters, urged the Select Board to preserve 26 Pleasant Street as public open space, emphasizing that Coolidge Corner is a documented urban heat island with impervious surfaces that trap heat and worsen environmental and health conditions. Also noted that North Brookline has less open space than the national average. Susan highlighted large-scale developments like the proposed Waldo Durgan project that will intensify heat, energy use, and pollution, and argued that creating a park with mature trees at 26 Pleasant would provide essential cooling, cleaner air, mental-health benefits, and community gathering space.
3. Al Davis warned that dense high-rises disrupt neighborhood character and environmental stability, supporting a public park as a more appropriate use of the 26 Pleasant Street site.
4. Martin Yasseen, a 43-year resident of 25 John Street, spoke on behalf of neighbors who are strongly opposed to another large building at 26 Pleasant Street, stressing that the community feels its physical and mental health and basic rights are being overshadowed by powerful developers, and urged creation of a publicly accessible park.
5. Molly Shepa, a Precinct 17 resident living near the 26 Pleasant Street lot, spoke in strong support of converting the site into public open space, emphasizing that North Brookline is already densely developed and formally identified as a heat-island area due to extensive pavement and buildings. She argued that a park would provide meaningful, long-term environmental benefits, shade, reduced heat, improved air quality, and offer a welcoming place for neighbors to gather.

5. **Miscellaneous**

Approval of miscellaneous items, licenses, and contracts.

5a. Question of approving the meeting minutes from July 14, 2026.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5b. Question of approving a citation of recognition and appreciation for Dr. Harold Petersen.

Michael Rubenstein read the citation.

PROCLAMATION

Brookline Select Board

The Brookline Select Board expressing its appreciation to

Dr. Harold Petersen

for his exemplary 37 years of service to Town of Brookline on the Board of Assessors

WHEREAS Dr. Harold Petersen has proudly concluded an extraordinary thirty-seven years of dedicated service as a member of the Town of Brookline Board of Assessors; and

WHEREAS, the vital work of the Board of Assessors is essential to the fair and effective operation of local government, ensuring that property assessments remain accurate, equitable, and consistent to support the schools, services, and community resources that residents rely on every day; and

WHEREAS, throughout his tenure, Dr. Petersen has consistently demonstrated the highest standards of professionalism, integrity, and an unwavering commitment to the residents of our community; and

WHEREAS, his deep understanding of assessment practices, institutional knowledge, and expertise as a renowned economist have brought a unique and invaluable perspective to the Board of Assessors, allowing him to expertly analyze economic trends and market forces to enhance local decision-making and economic stability; and

WHEREAS, Dr. Petersen's remarkable dedication has provided vital continuity through decades of change, reflecting the very best of public service through fairness, thoughtful analysis, and care;

NOW, THEREFORE, IN CONSIDERATION OF THE FOREGOING that the Select Board hereby extends its deepest gratitude and sincere appreciation to Dr. Harold Petersen for his lasting impact on the Town of Brookline and the Board of Assessors.

Dr. Petersen expressed his gratitude for the recognition and acknowledged the staff of the Assessors' Office, and the Select Board for their service.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5c. Question of accepting two partial Fiscal Year 2027 grant awards from the Massachusetts Department of Mental Health (DMH) Jail/Arrest Diversion Program, totaling \$82,000, to support the continuation of two important behavioral health initiatives within the Brookline Police Department.

The awards consist of:

\$64,000 for the Norfolk County Crisis Intervention Training and Technical assistance

\$18,000 for the Department's Co-Response Jail/Arrest Diversion Program

Chief Paster reviewed the grants and how the funds will be used.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5d. Question of accepting a Shared Streets and Spaces Grant from the Massachusetts Department of Transportation in the amount of \$250,000 for the purchase of five Bluebikes stations.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5e. Question of accepting a FY27 (State FY26) Massachusetts Department of Transportation Community Transit Grant Program award in the amount of \$50,000, which supports senior transportation services from July 2, 2026 - June 30, 2027.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5f. Question of accepting a FY25 Emergency Management Performance Grant from the Massachusetts Emergency Management Agency, in the amount of \$23,040.00, to enable the Office of Emergency Management to purchase security equipment for the Emergency Operations Center.

Bernard Greene expressed some concerns related to these funds being used towards immigration security and scrutiny. Town Administrator Carey reviewed the parameters around the grant. These grants are being constantly monitored to review what the funds will be used for.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5g. Question of accepting the Older Adults Technology and Health Grant from the Massachusetts Assoc. Of Council on Aging and Senior Center Directors (MCOA) in the amount of \$10,000.00

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5h. Question of accepting a Fiscal Year 2025 Bulletproof Vest Partnership (BVP) grant from the U.S. Dept. of Justice, Office of Justice Programs, Bureau of Justice Assistance, in the amount of \$5,708.70 to support the purchase of body armor for Brookline Police Dept. officers.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5i. Question of accepting a donation from Chestnut Hill Realty to the Brookline Police Dept. in the amount \$5,000.00 to support the National Night Out event on August 4, 2026.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5j. Question of approving the petition of NStar Electric Company d/b/a Eversource Energy for permission to construct, and a location for a pole in Kent Street approximately 25 feet north of existing pole 91/8 north of the intersection with Station Street on the east side (continued from 2/18/26).

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5k. Question of approving the application for a transfer of an All-Alcohol Beverages License from YUYI Corp. d/b/a KAO JIU to URBANTASTE LLC d/b/a YU YUE Restaurant at 406 Harvard St. with the proposed manager, Alezha Cai.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

Question of approving the application for a New Common Victualler / Entertainment/ Outdoor Dining License for URBANTASTE LLC d/b/a YU YUE Restaurant at 406 Harvard St. Hours of operation and Entertainment are Sunday–Saturday 10:00 AM – 12:00 AM. Entertainment will consist of Radio/Taped Music and Television. Outdoor dining hours of operation will be Sunday–Saturday 10:00 AM – 11:00 PM. Seating will consist of 46 inside seats and 24 outdoor dining seats.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

Question of approving the application for an Alternate Manager, Abel Cai for URBANTASTE LLC d/b/a YU YUE Restaurant at 406 Harvard St.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

5l. Question of approving the application for a Change of Stock Interest for Maguro Thai Sushi Inc. d/b/a Maguro at 1335 Beacon St. Brookline, MA 02445.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

Question of approving the application for a Change of Officers, Directors, LLC Manager for Maguro Thai Sushi Inc. d/b/a Maguro at 1335 Beacon St. Brookline, MA 02445.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

Question of approving the application of Alternate Manager, Wanalee Chamchoy for Maguro Thai Sushi Inc. d/b/a Maguro at 1335 Beacon St. Brookline, MA 02445.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5m. Question of approving the application of Alternate Managers, Samuel Kamholtz and Patrick Sorohan for D2 Restaurant d/b/a Esmail's 1306 Beacon St at 1306 Beacon St.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5n. Question of approving the applications for Alternate Managers Patrick McDonough and Lindsie Grace for CDXX MA TransCo, LLC d/b/a NETA at 160 Washington Street Brookline, MA.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5o. Question of approving an increase in rental days from 90 days per year to a maximum of 180 days for a short-term rental located at 129 Addington Rd. in Brookline, MA.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5p. Question of approving a temporary closure from August 10th to September 8th, 2026 for i-Collab X d/b/a Miraku located at 9 Babcock St.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5q. Question of approving the remaining Open Air Parking Licenses for 2026-2027.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5r. Question of approving an Authorization to Hire request from the Director of Public Health and Human Services:

Senior Office Assistant (C5)

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5s. Question of approving an Authorization to Hire request from the Director of Planning and Community Development:

Economic Development and Long-Term Planner (T6)

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5t. Question of approving and Authorization to Hire request from the Town Clerk:

Senior Clerk Typist (C6)

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5u. Question of approving a professional services contract with Stantec Consulting Services, Inc. for \$100,000 related to the municipal properties formerly known as the west campus of Newbury College. The contract covers community engagement, site planning explorations, and related cost estimates to support a study conducted by the Select Board- appointed Fisher Hill West Uses Advisory Committee.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5v. Question of awarding and executing contract PW-26-49 to Nu-Pipe, LLC for the Tannery Brook Drain Rehabilitation Project in the amount of \$317,609.75. Rehabilitation of the Tannery Brook Drain is limited to a critical section beneath the MBTA Green line C branch in Washington Square.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5w. Question of approving Extra Work Order #1 for engineering contract PW-26-16 with Brown and Caldwell in the amount of \$59,000 to assist with contract administration and construction oversight of the Tannery Brook Drain Rehabilitation Project.

Approved

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman
Absent: Anthony Buono

5x. Question of approving an Appropriations Transfer Request from the Director of Public Health in the amount \$50,000.00:

From: Org# 51005110 Obj# 524010 Professional Services \$50,000.00

To: Org# 51005110 Obj#558105 Food Security-Vouchers \$50,000.00

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On motion, it was,

Voted to authorize the Select Board Chair, Town Administrator, and Tax Assessor to execute a Payment In Lieu of Taxes (PILOT) agreement with Victory Programs, Inc., related to 16 Williams Street.

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

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10a. Review and possible vote on invitation to vet potential warrant articles in advance of filing.

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The Board also discussed encouraging joint committee hearings to reduce burdens on petitioners and create clearer, more efficient review. Amanda Zimmerman noted that many petitioners struggle with “scope” rulings issued by the Moderator, and early feedback could prevent articles from being ruled partially out of order.

On motion it was,

Voted on the proposed invitation to review potential warrant articles in advance of filing as outlined in the attached materials.

Aye: David Pearlman, Michael Rubenstein, Bernard Greene, Amanda Zimmerman

Absent: Anthony Buono

There being no further business, the Chair ended the meeting at 9:00 PM.

ATTEST

AI assisted in drafting these minutes.



BROOKLINE

DEPARTMENT OF PUBLIC WORKS

Erin Chute,
Public Works Commissioner

Dan Murphy, PE
Engineering & Transportation Director

Memorandum

To: Select Board
From: Dan Murphy, Director of Engineering and Transportation
Date: August 11th, 2026
Re: Acceptance of MassDOT Speed Limit Signage Grant and Authorization to Execute Agreement
Cc: Chas Carey, Town Administrator
Erin Chute, Commissioner of Public Works

The Department of Public Works is pleased to inform the Select Board that the Town has been selected to receive sign materials through the Massachusetts Department of Transportation's Speed Limit Signage Materials Procurement Program. The program provides speed limit signs, statutory placards, posts, and associated mounting materials to help municipalities manage vehicle speeds and improve roadway safety by posting existing speed limits.

This program reflects a new MassDOT policy regarding the posting of statutory speed limits. Previously, MassDOT generally allowed municipalities to install speed limit signs only on roadways with an approved special speed regulation or within an adopted 20 mph safety zone. As a result, roadways governed by the Town's statutory 25 mph speed limit could not be posted with individual 25 mph signs. Instead, signs were installed at entrances to Brookline to remind drivers that the Town-wide speed limit is 25 mph unless otherwise posted.

The new MassDOT policy allows municipalities to install signs identifying the statutory 25 mph speed limit. This provides an additional tool to reinforce the Town-wide speed limit and complements the Town's separate effort to designate and sign residential streets and selected collector roadways as 20 mph safety zones. DPW has been implementing the 20 mph safety zone signage program throughout the Town as a separate initiative.

The Town used StreetLight transportation data to identify priority locations where vehicle speeds exceeded the Town's statutory 25 mph speed limit. StreetLight is a transportation analytics platform that uses aggregated and anonymized information from connected vehicles, navigation devices, and other transportation data sources. The data is processed and validated to provide estimates of roadway conditions, including vehicle speeds, traffic volumes, and travel times.

Based on this analysis, the Town requested signs for the following roadways:

- Five signs on Beacon Street
- One sign on Harvard Street
- Two signs on Longwood Avenue
- One sign on Chapel Street
- One sign on Carlton Street

MassDOT approved all 10 requested signs. The specific locations and directions of travel are identified in Exhibit A of the Memorandum of Agreement.

The grant has an estimated material value of approximately \$3,000. MassDOT will deliver the signs, posts, anchors, bolts, and associated mounting materials. The Town will be responsible for installing, and maintaining the signs. The signs must be installed within 90 days after delivery.

The Department of Public Works requests that the Select Board vote to accept the MassDOT Speed Limit Signage grant and authorize the Town Administrator to execute the Memorandum of Agreement and any other documents necessary to accept and implement the grant.

MEMORANDUM OF AGREEMENT STATIC SPEED LIMIT SIGNS

This Memorandum of Understanding (“**Agreement**”) is made and entered into, by and between the Massachusetts Department of Transportation, having offices at 10 Park Plaza, Boston, Massachusetts 02116 (“**MassDOT**”) and the CITY/TOWN of BROOKLINE, a municipal corporation within the Commonwealth of Massachusetts, having offices at 333 Washington St, Brookline MA 02445 (“**Municipality**”). Municipality and MassDOT may hereafter sometimes be collectively referred to as the “Parties” and individually as the “Party.”

WHEREAS, to improve safety and speed management, MassDOT intends to procure the static speed limit signs and accompanying posts identified in Exhibit A (the “**Signs**”) for installation in municipally owned public roadways also identified in Exhibit A; and

WHEREAS, Municipality has requested that MassDOT provide one or more Signs for installation in the municipally owned roadway(s); and

WHEREAS, MassDOT has approved Municipality’s request, and Municipality has agreed to install the Signs at Municipality’s own expense; and

WHEREAS, MassDOT and Municipality seek to confirm their respective rights and obligations in connection with the Signs as set forth in this Agreement.

NOW, THEREFORE, in consideration of the promises herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. **Recitals.** The recitals in this Agreement are true and correct, and are incorporated herein by reference and made part of his Agreement.
2. **Signs.** MassDOT agrees to provide Municipality with 10 Signs. MassDOT will fund the entire cost of the Signs, including the cost of transporting the Signs to the location designated by the Parties as provided in Section 3 below. Upon receipt of its receipt of the Signs, ownership of the Signs will transfer to Municipality.

It is understood and agreed that MassDOT’s procurement of the Signs is contingent upon availability and continued appropriation of federal funds, and if for any reason whatsoever, such funds are terminated or reduced or otherwise become unavailable, MassDOT may terminate this Agreement in whole or in part.

3. **Delivery of Signs.** MassDOT agrees to transport the Signs to the following location at a date and time agreed to by the Parties: 870 Hammond Street Brookline, MA 02467 (the

“**Designated Site**”). Municipality shall be solely responsible for safely and properly unloading the Signs from the delivery vehicle at the Designated Site. On the date of delivery, Municipality shall, at its sole expense, provide all necessary personnel and equipment necessary to unload and take delivery of the Signs, including, but not limited to, a forklift. Municipality acknowledges and agrees that MassDOT personnel will not be available or responsible for unloading or assisting with the unloading of the Signs at the Designated Site. MassDOT shall not be liable for any extra expenses incurred by Municipality due to its failure to provide the personnel or equipment necessary to safely take delivery of the Signs.

Municipality shall confer with MassDOT to establish a mutually agreeable date of delivery. For the purpose of coordinating and accepting delivery of the Signs, Municipality designates the following representative as its point of contact:

Name: Jose Palermo-Nieves
Email: jpalermonieves@brooklinema.gov

4. **Installation.** Aside from funding and providing the Signs, MassDOT shall have no further obligations. Municipality shall provide all necessary labor, materials, equipment, and other services necessary to install the Signs in accordance with vendor specifications. Municipality shall comply with all federal, state, and local laws, ordinances, rules and regulations applicable to the installation of the Signs. Municipality shall install each Sign in conformance with the following: (1) the applicable provisions of M.G.L.c. 90, including but not limited to, M.G.L.c. 90, §17 and M.G.L.c.90, § 17C, and (2) the applicable requirements of the most current edition of the *Manual of Uniform Traffic Control Devices (MUTCD)*, including but not limited to, Section 2B.21. Municipality shall remove all existing conflicting speed limit signage and signage that does not conform to the MUTCD guidelines prior to the installation of the Signs. Municipality shall also obtain, at its sole cost and expense, any and all applicable permits, approvals, including local approvals, and/or clearances required by local and state agencies, commissions, or bodies necessary for the completion of the project. Municipality’s failure to comply with any requirement of this paragraph shall constitute a material breach of this Agreement and MassDOT may require Municipality to correct the deficiency at its own expense.

Municipality shall install each Sign within ninety (90) days of its delivery to Municipality. In the event that Municipality cannot complete the installation within the ninety-day period due to extraordinary circumstances, it may request an extension. Extraordinary circumstances shall not include staffing shortages or weather conditions. Any request for an extension must be made in writing to MassDOT soon as practicably possible, but not later than sixty (60) days after Municipality’s receipt of the Item. Municipality’s request shall include a justification describing the extraordinary circumstances for the requested extension, the anticipated installation date, and any other information deemed necessary by MassDOT. After conferring with FHWA, MassDOT, in its sole and exclusive discretion, may agree to grant said request for an extension of time if it

finds that sufficient justification has been provided by the Municipality. If Municipality fails to install a Sign within the ninety-day period, and no written extension has been approved by MassDOT, ownership of the Sign shall revert to MassDOT and Municipality shall promptly return the uninstalled Sign to MassDOT at its own expense.

Within seven (7) days of installing each Sign, Municipality shall provide MassDOT with a photograph depicting the Sign as installed, including, but not limited its orientation on the public way, and documentation, in a form acceptable to MassDOT, evidencing the Sign's location, the latitude and longitude (in decimal degrees (DD) format: e.g. 34.11914, -118.30036) of the installed Sign, and the date of its installation.

- 5. Maintenance.** Municipality shall, at its sole expense, be responsible for the maintenance and upkeep of the Signs. Municipality shall maintain each installed Sign installed pursuant to this Agreement in good repair throughout the Signs useful life. MassDOT shall have no obligation to replace any Sign at the end of its useful life. Failure on the part of Municipality to fulfill its responsibilities for the proper maintenance Signs may disqualify Municipality from participation in future Federal Aid Projects in which Municipality has maintenance responsibility. Municipality's obligations under this Section shall survive the expiration or earlier termination of this Agreement.
- 6. Term.** This Agreement shall be effective as of the date of full execution by Municipality and MassDOT and, unless terminated earlier as provided herein or otherwise agreed in writing by the Parties, shall remain in full force and effect for a period of two (2) years after Municipality's receipt of the Signs. This Agreement may be terminated by mutual agreement of the Parties, upon such terms and conditions as the Parties may mutually agree upon. Such termination shall be effective in accordance with a written agreement by the Parties.

In addition, MassDOT may, by written notice to Municipality, terminate this Agreement in any one of the following circumstances:

- a. The Municipality neglects or fails to comply with any provision of this Agreement in accordance with its terms or within the time specified for performance herein. In the event this Agreement is terminated pursuant to this provision, MassDOT shall not be liable to the Municipality for any costs incurred or burdens assumed upon or subsequent to, and associated with, such termination.
- b. The applicable federal funding source fails to appropriate or otherwise make available funds for the Agreement. In the event this Agreement is terminated pursuant to this provision, MassDOT shall not be liable to Municipality for any costs.

In the event that MassDOT terminates this Agreement after the delivery of a Sign to Municipality but prior to its installation, Municipality shall, at its expense, return the Sign to the applicable MassDOT District Office or as otherwise directed by MassDOT.

7. **Compliance with Laws.** Municipality, in meeting its obligations hereunder, shall comply with all applicable federal, state, county, municipal and other governmental statutes, laws, rules, orders, regulations and ordinances. Municipality's obligations under this Section 6 shall survive the expiration or earlier termination of this Agreement.
8. **Indemnification.** To the extent permitted by the laws of the Commonwealth, Municipality shall indemnify, defend (at Municipality's sole expense and with counsel reasonably acceptable to MassDOT), and hold harmless MassDOT and all of MassDOT's officers, agents, and employees, from and against any and all suits, claims, proceedings, liabilities, losses damages, penalties, charges and expenses (including attorneys' fees and experts' fees) of every name and nature, based on or arising out of any actual or alleged loss or injury (including death) to persons or damage to real or tangible property that are caused or alleged to be caused, in whole or in part, by, or to arise out of the acts or omissions of, Municipality, or its employees, contractors, subcontractors, or agents, in its performance of the obligations set forth herein. Municipality's obligations under this Section 7 shall survive the expiration or earlier termination of this Agreement.
9. **Notice.** Any notices required or permitted to be given hereunder shall be given in writing and shall be delivered (a) in person, (b) by certified or registered mail, postage prepaid, return receipt requested, or (c) by a commercial overnight courier that guarantees next day delivery and provides a receipt. Such notices shall be addressed as follows:

If to MassDOT: Massachusetts Department of Transportation
Highway Division of Traffic & Safety Engineering
10 Park Plaza
Boston, MA 02116
Attention: Bonnie Polin
CC: Evelyn Densmore

If to Municipality: Engineering and Transportation
333 Washington Street
Brookline MA 01701
Attention: Director of Engineering

or to such other address as either Party may from time to time specify in writing to the other Party. Any notice shall be effective only upon delivery.

10. Authority. The individuals executing this Agreement represent that they are empowered and duly authorized to so execute this Agreement on behalf of the Parties they represent.

11. Miscellaneous. This Agreement represents the entire agreement between the Parties with respect to the subject matter hereof, superseding any prior oral or written agreements or understandings regarding the same, and any modification amendment or change to the terms and conditions hereof shall be binding only when expressed in writing and signed by both Parties hereto. This Agreement may be signed in multiple counterparts each of which shall be deemed an original, but all of which when taken together shall constitute one and the same instrument. This Agreement shall be governed by and interpreted in accordance with the laws of the Commonwealth of Massachusetts, without regard to its choice of law rules. If any provision or condition of this Agreement shall be deemed invalid or unenforceable, the remaining provisions and conditions shall remain in full force and effect and shall be valid and enforceable to the fullest extent permitted by law.

IN WITNESS WHEREOF, Municipality and MassDOT have caused this Agreement to be executed by their duly authorized officers or representatives.

MASSACHUSETTS DEPARTMENT OF
TRANSPORTATION

By: _____
Name: David Mohler
Title: Executive Director of Planning
Date: _____

MUNICIPALITY

By: _____
Name: _____
Title: _____
Date: _____



Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Phillip Eng, Interim Secretary of Transportation



Exhibit A
07/07/2026

Daniel Martin
333 Washington St
Brookline MA 02455
dmartin@brooklinema.gov

Dear Daniel Martin,

Thank you for your submission to the Speed Signs Materials Procurement Program during the Fiscal Year 2026 application solicitation. I am pleased to notify you that BROOKLINE's application for the location(s) described below has been approved.

MassDOT will provide the following equipment for this program. Included but not listed; bolts and posts. It is the responsibility of the municipality to install all materials on the approved corresponding roadways listed above within 90-days of delivery.

Address	Coordinates	Speed Limit Sign	Anchor Type	Direction of Travel
1221 Beacon St, Brookline, MA, 02446, USA	42.343276007, -71.116695986	25	Ground Mount Anchor	EB
477 Harvard St, Brookline, MA, 02446, USA	42.34719441, -71.128688285	25	Ground Mount Anchor	NB
1589 Beacon St, Brookline, MA, 02446, USA	42.339476667, -71.133630612	25	Ground Mount Anchor	EB
199 Longwood Ave, Brookline, MA, 02446, USA	42.3404586680001, -71.111401965	25	Ground Mount Anchor	WB
20 Chapel St, Brookline, MA, 02446, USA	42.340795203, -71.110960671	25	Ground Mount Anchor	NB
31 Longwood Ave, Brookline, MA, 02446, USA	42.341260706, -71.119504804	25	Ground Mount Anchor	EB
1909 Beacon St, Brookline, MA, 02445, USA	42.336355063, -71.148110332	25	Ground Mount Anchor	EB
1718 Beacon St, Brookline, MA, 02445, USA	42.338410911, -71.139644477	25	Ground Mount Anchor	WB
1064 Beacon St, Brookline, MA, 02446, USA	42.34544482, -71.1097467	25	Ground Mount Anchor	WB
22 Carlton St, Brookline, MA, 02446, USA	42.344356967, -71.108519756	25	Ground Mount Anchor	SB

Please email Evelyn Densmore (Evelyn.S.Densmore@dot.state.ma.us) with questions related to this award. Thank you for your commitment to improve safety on locally owned roadways and for your participation in the Speed Sign Materials Procurement Program.

Sincerely,

Bonnie Polin
State Safety Engineer

cc: Evelyn Densmore (Evelyn.S.Densmore@dot.state.ma.us)



Memorandum

To: Select Board
From: Dan Murphy, Director of Engineering and Transportation
Date: August 11th, 2026
Re: Acceptance of MassDOT All-Way Stop Control Grant and Authorization to Execute Agreements
Cc: Chas Carey, Town Administrator

The Department of Public Works is pleased to inform the Select Board that the Town has been selected to receive sign materials through the Massachusetts Department of Transportation's All-Way Stop Control Safety Assessment Program. The program provides equipment to assist municipalities with converting eligible high-risk intersections from two-way stop control to all-way stop control.

The grant will provide sign materials for the following intersections:

- Saint Paul Street at Dummer Street
- LaGrange Street at Princeton Road

MassDOT completed engineering evaluations at both intersections that included crash history, traffic volumes, turning movements, vehicle speeds, sight distance, traffic operations, and applicable Manual on Uniform Traffic Control Devices warrants. Both analyses are included in the Board Materials along with the grant Memoranda of Agreement. The Transportation Board approved converting both intersections to all-way stop control at its July 15, 2026 meeting following MassDOT's safety evaluations.

Both intersections were identified by MassDOT as locations with crash histories that could benefit from all-way stop control. MassDOT determined that both intersections met the crash-history warrant, which requires five or more reported crashes within a 12-month period that may have been preventable through the installation of all-way stop control. Meeting this warrant is relatively uncommon in Brookline.

Saint Paul Street at Dummer Street and LaGrange Street at Princeton Road are also identified as high-risk locations on the Town's Vision Zero network. LaGrange Street at Princeton Road is additionally identified in the Town's Safe Routes to School Priority Report as a location needing safety improvements.

MassDOT's operational analysis found that the proposed all-way stop control would introduce some additional delay on the currently uncontrolled approaches. At LaGrange Street and Princeton Road, the LaGrange Street approach would experience the largest change during the morning peak period, increasing from free-flow conditions to approximately 22 seconds of delay. However, all approaches are expected to operate at Level of Service D or better, and the intersection overall is expected to operate at Level of Service C during both the morning and evening peak periods. MassDOT determined that the anticipated operational impacts were acceptable given the expected safety benefits.

MassDOT will fund and deliver the sign materials, including solar-powered LED-enhanced STOP signs, ALL WAY plaques, warning signs, posts, anchors, and associated mounting hardware. The Town will be responsible for installation, pavement-marking modifications, traffic control, and future maintenance.

The grant has an estimated material value of approximately \$30,000 and includes 16 solar-powered LED-enhanced STOP signs, 15 STOP AHEAD warning signs, and 32 sign posts with associated mounting hardware for the two intersections. Exhibit A of each Memorandum of Agreement outlines the sign installations for each location. The work must be completed within 90 days after the equipment is delivered.

The Department of Public Works requests that the Select Board vote to accept the MassDOT All-Way Stop Control Safety Assessment Program grants and authorize the Town Administrator to execute the two Memoranda of Agreement and any other documents necessary to accept and implement the grants.

MEMORANDUM OF AGREEMENT ALL WAY STOP CONTROL (AWSC) PROGRAM

This Memorandum of Agreement (“**Agreement**”) is made and entered into this _____ day of _____, 2026, by and between the Massachusetts Department of Transportation, established pursuant to Chapter 6C of the General Laws, as amended, having its principal place of business at Ten Park Plaza, Boston, Massachusetts, 02116 (“**MassDOT**”), and the CITY/TOWN of _____ Brookline _____, a municipal corporation and political subdivision of the Commonwealth of Massachusetts located in _____ Norfolk _____ County (“**Municipality**”). The Municipality and MassDOT are each sometimes referred to individually herein as a “Party”, and collectively as the “Parties.”

RECITALS

WHEREAS, to enhance pedestrian and driver safety in the Commonwealth of Massachusetts, MassDOT intends to procure sign materials as part of a program to assist municipalities with the conversion certain high-risk intersections on municipally owned roadways from two-way stop control (“**TWSC**”) to all-way stop control (“**AWSC**”); and

WHEREAS, Municipality desires to convert the intersections(s) identified in Exhibit A (the “**Locations**”), which are within the geographical jurisdiction of Municipality, from TWSC to AWSC, and has requested that MassDOT provide Municipality with the AWSC sign materials identified in Exhibit B (the “**Sign Materials**”); and

WHEREAS, MassDOT has confirmed that the Location(s) are eligible for the AWSC materials program and has approved Municipality’s request for Sign Materials; and

WHEREAS, Municipality has agreed to install the Sign Materials and convert the Location(s) from TWSC to AWSC at Municipality’s own expense; and

WHEREAS, MassDOT and Municipality seek to confirm their respective rights and obligations in connection with the Sign Materials as set forth in this Agreement.

NOW, THEREFORE, in consideration of the premises herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. **Recitals.** The recitals in this Agreement are true and correct, and are incorporated herein by reference and made part of his Agreement.
2. **Sign Materials.** MassDOT agrees to provide Municipality with the Sign Materials identified in Exhibit B. MassDOT will fund the entire cost of the Sign Materials, including the cost of delivery to Municipality. Upon delivery, ownership of the Sign Materials will transfer to Municipality.

It is understood and agreed that MassDOT’s procurement of the Sign Materials is contingent upon availability and continued appropriation of federal funds, and if for any

reason whatsoever, such funds are terminated or reduced or otherwise become unavailable, MassDOT may terminate this Agreement immediately.

3. **Project.** Municipality, at its sole expense, shall convert the Locations from TWSC to AWSC in accordance with Exhibit A and Exhibit B (the “**Project**”). As part of the conversion, Municipality shall install the Sign Materials provided by MassDOT at the location(s) indicated in the Project plans. Aside from the Sign Materials, Municipality shall provide all necessary labor, materials (including pavement marking materials, if applicable), equipment, and other services necessary to complete the Project. Municipality shall also be solely responsible for evaluating the specific site constraints for each Location and providing all necessary temporary traffic control devices and/or police details necessary to safely complete the Project. Traffic control plans, signs, devices, and police details shall conform to the Official Standards of MassDOT. Prior to installation, Municipality shall obtain, at its sole cost and expense, any and all applicable permits, approvals, including local approvals, and/or clearances required by local and state agencies, commissions, or bodies necessary for the conversion of the Location(s) to AWSC and for the completion of the Project. Municipality’s failure to comply with any requirement of this paragraph shall constitute a material breach of this Agreement and MassDOT may require Municipality to correct the deficiency at its own expense.

Municipality shall install the Sign Materials and complete the Project within ninety (90) days of their delivery to Municipality. If Municipality fails to install the Sign Materials and complete the Project within the ninety-day period, ownership of the Sign Materials shall revert to MassDOT and Municipality must return the Sign Materials to MassDOT at its sole expense.

Within a week of completing the Project, Municipality shall provide written notice to MassDOT that the Project has been completed. The notice shall include the Project’s completion date. Municipality shall also provide MassDOT with photograph(s) depicting each sign installed pursuant to this Agreement (“**Sign**”) and documentation, in a form acceptable to MassDOT, evidencing each Sign’s location and date of installation.

4. **Operation and Maintenance.** Municipality, at its own expense, shall be solely responsible for the proper operation, maintenance, and repair of the Signs for the duration of the Signs’ useful life. The Signs shall be operated and maintained in accordance with the applicable provisions of the most recent edition of the *Manual on Uniform Traffic Control Devices* (MUTCD) and the Massachusetts Amendments to the MUTCD published by MassDOT. In addition to annual preventative maintenance, Municipality’s maintenance obligation also includes the replacement of major components and miscellaneous parts due to damage or wear and any tree trimming that may be necessary for the proper functioning of a solar-powered Sign. Except for temporary New Traffic Pattern Ahead Signs, Municipality shall not remove or relocate any Sign nor install additional signs (warning or regulatory) with the limits of the Project without receiving

prior written approval from MassDOT. Temporary New Traffic Pattern Ahead Signs shall be removed by Municipality in the time frame indicated in Exhibit B. Failure on the part of Municipality to fulfill its responsibilities for the proper maintenance and operation of the Signs may disqualify Municipality from participation in future Federal Aid Projects in which Municipality has maintenance responsibility. Municipality's obligations under this Section shall survive the expiration or earlier termination of this Agreement.

5. **Term.** This Agreement shall be effective as of the date of full execution by Municipality and MassDOT and, unless terminated earlier as provided herein or otherwise agreed in writing by the Parties, shall remain in full force and effect for a period of 2 years after Municipality's receipt of the Sign Materials. This Agreement may be terminated by mutual agreement of the Parties, upon such terms and conditions as the Parties may mutually agree upon. Such termination shall be effective in accordance with a written agreement by the Parties.

In addition, MassDOT may, by written notice to Municipality, terminate this Agreement in any one of the following circumstances:

- (a) The Municipality neglects or fails to comply with any provision of this Agreement in accordance with its terms or within the time specified for performance herein, and Municipality fails to cure any such failure within thirty (30) calendar days after receipt of notice specifying such failure. In the event this Agreement is terminated pursuant to this provision, MassDOT shall not be liable to the Municipality for any costs incurred or burdens assumed upon or subsequent to, and associated with, such termination.
- (b) The applicable Federal funding source fails to appropriate or otherwise make available funds for the Agreement. In the event this Agreement is terminated pursuant to this provision, MassDOT shall not be liable to Municipality for any costs.

In the event that MassDOT terminates this MOA subsequent to the delivery of the Sign Materials to Municipality but prior to their installation, Municipality shall, at its expense, return the Sign Materials to the applicable MassDOT District Office.

6. **Compliance with Laws.** Municipality, in meeting its obligations hereunder, shall comply with all applicable federal, state, county, municipal and other governmental statutes, laws, rules, orders, regulations and ordinances. Municipality's obligations under this Section 6 shall survive the expiration or earlier termination of this Agreement.
7. **Indemnification.** To the extent permitted by the laws of the Commonwealth, Municipality shall indemnify, defend (at Municipality's sole expense and with counsel reasonably acceptable to MassDOT), and hold harmless MassDOT and all of MassDOT's officers, agents, and employees, from and against any and all suits, claims, proceedings, liabilities, losses

damages, penalties, charges and expenses (including attorneys' fees and experts' fees) of every name and nature, based on or arising out of any actual or alleged loss or injury (including death) to persons or damage to real or tangible property that are caused or alleged to be caused, in whole or in part, by, or to arise out of the acts or omissions of, Municipality, or its employees, contractors, subcontractors, or agents, in its performance of the obligations set forth herein. Municipality's obligations under this Section 7 shall survive the expiration or earlier termination of this Agreement.

8. **Notices.** Any notices required or permitted to be given hereunder shall be given in writing and shall be delivered (a) in person, (b) by certified or registered mail, postage prepaid, return receipt requested, or (c) by a commercial overnight courier that guarantees next day delivery and provides a receipt. Such notices shall be addressed as follows:

If to MassDOT: Massachusetts Department of Transportation
Highway Division of Traffic & Safety Engineering
10 Park Plaza, Suite 7520
Boston, MA 02116
Attention: Neil Boudreau

If to Municipality: Engineering and Transportation
333 Washington Street
Brookline MA 01701
Attention: Director of Engineering

or to such other address as either Party may from time to time specify in writing to the other Party. Any notice shall be effective only upon delivery.

9. **Authority.** The individuals executing this MOA represent that they are empowered and duly authorized to so execute this MOA on behalf of the Parties they represent.
10. **Miscellaneous.** This MOA represents the entire agreement between the Parties with respect to the subject matter hereof, superseding any prior oral or written agreements or understandings regarding the same, and any modification amendment or change to the terms and conditions hereof shall be binding only when expressed in writing and signed by both Parties hereto. This MOA may be signed in multiple counterparts each of which shall be deemed an original, but all of which when taken together shall constitute one and the same instrument. This MOA shall be governed by and interpreted in accordance with the laws of the Commonwealth of

Massachusetts, without regard to its choice of law rules. If any provision or condition of this MOA shall be deemed invalid or unenforceable, the remaining provisions and conditions shall remain in full force and effect and shall be valid and enforceable to the fullest extent permitted by law.

IN WITNESS WHEREOF, Municipality and MassDOT have caused this Agreement to be executed by their duly authorized officers or representatives as of the date first above written.

MASSACHUSETTS DEPARTMENT
OF TRANSPORTATION

MUNICIPALITY

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Exhibit A Location



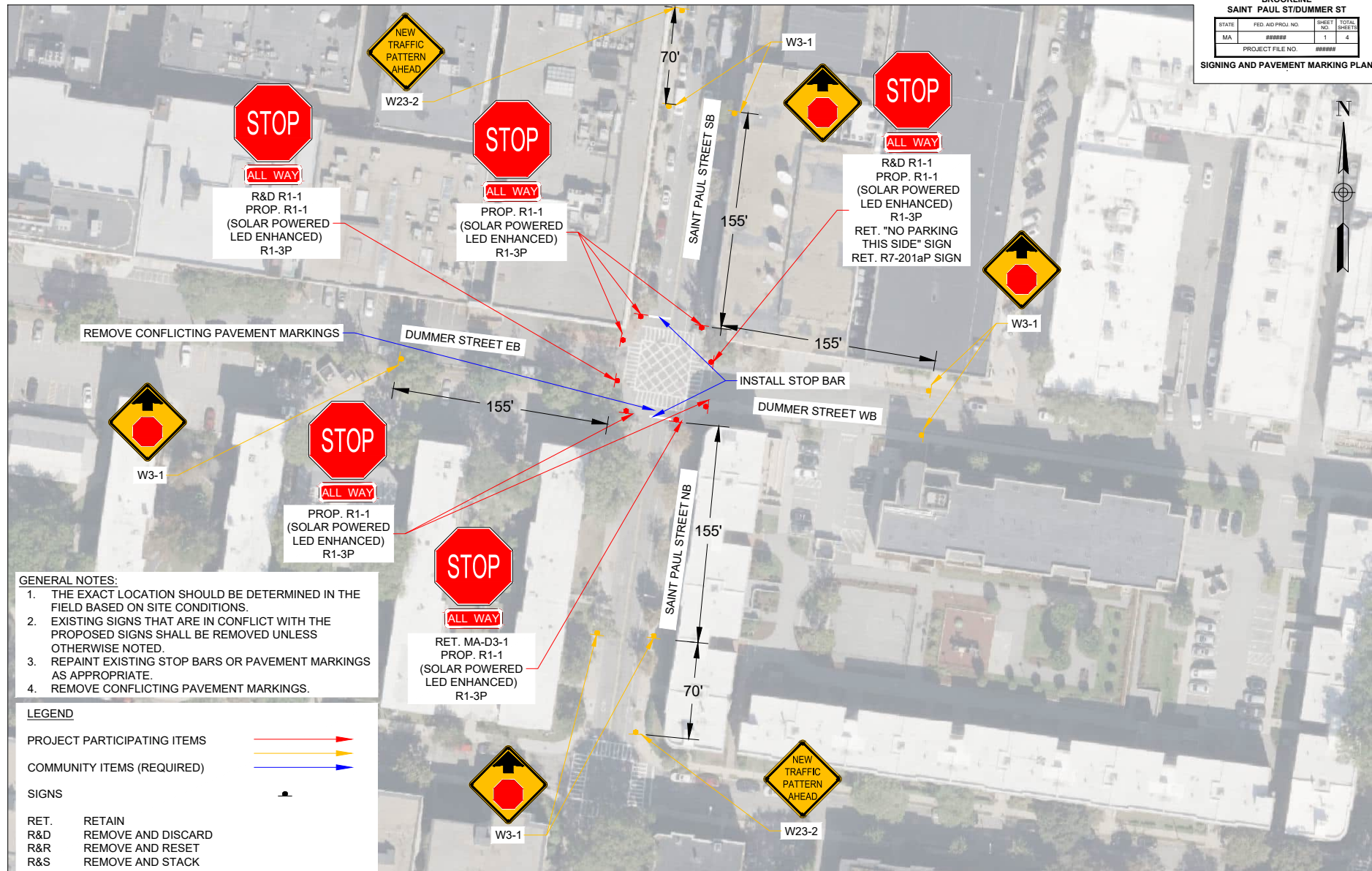


Exhibit B

Sign Materials



TRAFFIC SIGN SUMMARY

BROOKLINE SAINT PAUL ST/DUMMER ST			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	#####	4	4
PROJECT FILE NO.		#####	
SIGN SUMMARY			

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
LED ENHANCED R1-1	30"	30"		MUTCD 2023 STANDARDS			8	RED	WHITE	WHITE	P5*, 8	6.25	50
R1-3P	18"	6"		MUTCD 2023 STANDARDS			8	RED	WHITE	WHITE	0, MNT w/ R1-1	0.75	6
W3-1	30"	30"		MUTCD 2023 STANDARDS			7	YELLOW	BLACK	BLACK	P5*, 7	6.25	43.75
W23-2	36"	36"		MUTCD 2023 STANDARDS			2	YELLOW	BLACK	BLACK	P5*, 2	9	18

* VERTICAL RETROREFLECTIVE SHEETING STRIPS ON ALL P5 SIGN SUPPORTS FRONTS FOR ENHANCED SIGN CONSPICUITY PER MUTCD 2023 STANDARDS TO BE INSTALLED. STRIPS SHALL BE AT LEAST 2 INCHES WIDE AND MATCH THE BACKGROUND COLOR OF THE SIGN.

GENERAL NOTES:

1. REFER TO INTERSECTION LAYOUT PLAN AND THE EVALUATION REPORT FOR COMPLETE LIST OF REQUIRED AND OPTIONAL ITEMS AND MEASURES TO BE DONE.
2. NEW TRAFFIC PATTERN AHEAD SIGNS ARE TEMPORARY AND SHOULD BE REMOVED WHEN THE TRAFFIC PATTERN RETURN TO NORMAL, WHEN THE CHANGED PATTERN IS NO LONGER CONSIDERED TO BE NEW, OR WITHIN 12 MONTHS.
3. SIGNS SHALL BE INSTALLED MINIMUM OF 6' FROM THE EDGE OF ROADWAY AND AT A MOUNTING HEIGHT OF 7' FROM THE BOTTOM EDGE OF THE SIGN TO THE ROADWAY SURFACE. SIGN POSITIONS SHALL CONFORM TO MUTCD FIGURES 2A-2 AND 2A-3.

June 16, 2026

Dan Martin
Sustainable Transportation Engineer
Town of Brookline
333 Washington Street, 4th Floor
Brookline, MA 02445

Subject: **All-Way Stop Control (AWSC)**
 [Saint Paul St and Dummer Street](#)
 Feasibility Analysis

Dear Dan:

Jacobs Engineering Group Inc. (Jacobs) is pleased to provide you with the results of our evaluation for the intersection of Saint Paul Street and Dummer Street in the Town of Brookline.

MassDOT is partnering with Commonwealth municipalities to identify and investigate municipal intersections that would potentially benefit from All-Way Stop-Control (AWSC) conversion. On behalf of MassDOT, under their **All-Way Stop Control Material Procurement Program – Round 2**, Jacobs has reviewed the traffic data, including volumes, turning movements, speeds and recent crash history as well as site conditions to evaluate whether this location is suitable for conversion to AWSC.

Based on the analysis, the intersection is recommended for moving forward with conversion to AWSC. The results of the analysis are summarized in the technical memorandum included with this letter.

Under this program, MassDOT will provide STOP signs at recommended locations for the conversion. It shall be up to the municipality to decide whether they should prefer to receive LED STOP signs or traditional static STOP signs. Studies have shown that LED STOP signs can be an effective tool to improve safety by increasing conspicuity and driver compliance. LED STOP signs are recommended to enhance visibility both during the daytime and nighttime and during adverse weather conditions like fog and rain. The lighted signs will also aid the drivers during the transition period when they need to become accustomed to stopping at a location where they did not have to stop prior to the conversion. The LED lights on the STOP sign are solar-powered, and the municipality will be responsible for maintenance. This may include regular vegetation clearing to ensure adequate sunlight for solar power. In some cases, municipalities have opted to use the LED STOP signs on the mainline approaches and the static signs on the minor approaches. Site-specific conditions should be taken into consideration, such as proximity to residences and tree cover. We are more than happy to discuss the pros and cons with you if you need assistance in making the decision.

Additionally, Doubled-Up STOP signs are recommended. This means installing STOP signs on both the left and right sides of the roadway. This is considered a low-cost, effective, safety countermeasure to increase driver awareness and recognition of the intersection and potential conflicts. These may be either LED or traditional static signs, as preferred by the municipality.

To summarize, the Conversion Plan encompasses two key safety enhancements, implementation of LED-illuminated STOP signs and installation of doubled-up STOP signs at all intersection approaches. For your convenience, we have included a form for confirming sign options as Attachment 5 to this memorandum. Your selections will directly inform the list of sign materials to be included in the Memorandum of

Agreement (MOA) package that will be prepared for signature should the town choose to move forward with the conversion.

Within the memorandum you will find important details concerning the requirements and next steps for implementing the AWSC conversion. The information includes necessary procedures and expectations for the successful implementation of the conversion project. We kindly request that you review this document in its entirety.

Should you have any questions or require further clarification on any aspect of the information provided, please do not hesitate to contact me at Erika.Lindeberg@Jacobs.com or 959-900-5397.

Your attention to this matter is greatly appreciated, and we look forward to working together to ensure a smooth and compliant conversion process.

Sincerely,



Erika B Lindeberg
2026.06.17
12:35:20-04'00'

Erika Lindeberg, PE, PTOE, RSP1
Senior Project Manager
Jacobs

Introduction

The Massachusetts Department of Transportation (MassDOT) is considering the conversion of municipally owned Two-Way Stop Control (TWSC) intersections to All-Way Stop Control (AWSC) to improve safety. A preliminary screening process based on a systemic analysis of 2022–2024 crash data has identified a list of candidate intersections. Through this preliminary screening process and confirmed interest from your community, Saint Paul St and Dummer Street intersection in Brookline has been selected to proceed with a feasibility analysis performed by Jacobs Engineering Group Inc. The assessment is based on engineering judgement of site conditions and an analysis of traffic operations. A warrant analysis was conducted utilizing methodologies outlined in the Manual for Uniform Traffic Control Devices (MUTCD)¹. This memorandum summarizes the feasibility analysis (study area description and traffic operations), warrant analysis, recommendations, and next steps.

Intersection Study Area

Figure 1 shows the intersection while Table 1 summarizes details about the surrounding area. The intersection is in an urban area.

The intersection of Saint Paul Street and Dummer Street is a four-way unsignalized intersection with stop control on the east and west (Dummer Street) approaches. Saint Paul Street functions as the major street and is functionally classified as a Minor Arterial. Dummer Street operates as the minor street and is east-west under stop control. An MA-R2-9B townwide 25 MPH speed limit sign is installed approximately 275 feet north of the intersection on Saint Paul Street.

There are sidewalks at all corners of the intersection. High visibility ladder-style crosswalks are provided on all approaches, with a “Do not Block Intersection” markings in the middle of the crosswalks. A dedicated northbound bike lane is provided on Saint Paul Street and continues through the intersection, with shared lane markings (sharrows) in the southbound travel lane also continuing through the intersection. The intersection is located approximately 300 feet south of the signalized intersection of Saint Paul Street and Commonwealth Avenue. Commonwealth Avenue is a major arterial roadway that influences traffic and pedestrian activity in the area.

There is on-street parking on the west side of St. Paul Street as it approaches the intersection from the north and on the south side of Dummer Street as it approaches the intersection from the west.

For the minor street (Dummer Street) stop-controlled approaches, sight distance is based on assumed design speed of 25 MPH (85th percentile speed data collected) on Dummer Street. The required sight distance to complete turns from Dummer Street is 280 feet minimum for left turns and 240 feet minimum for right turns. Westbound drivers on Dummer Street experience limited sight distance to both northbound and southbound traffic on St. Paul Street due to obstruction from vegetation and building.

¹ US Department of Transportation Federal Highway Administration. *Manual on Uniform Traffic Control Devices*. 11th edition, December 2023.

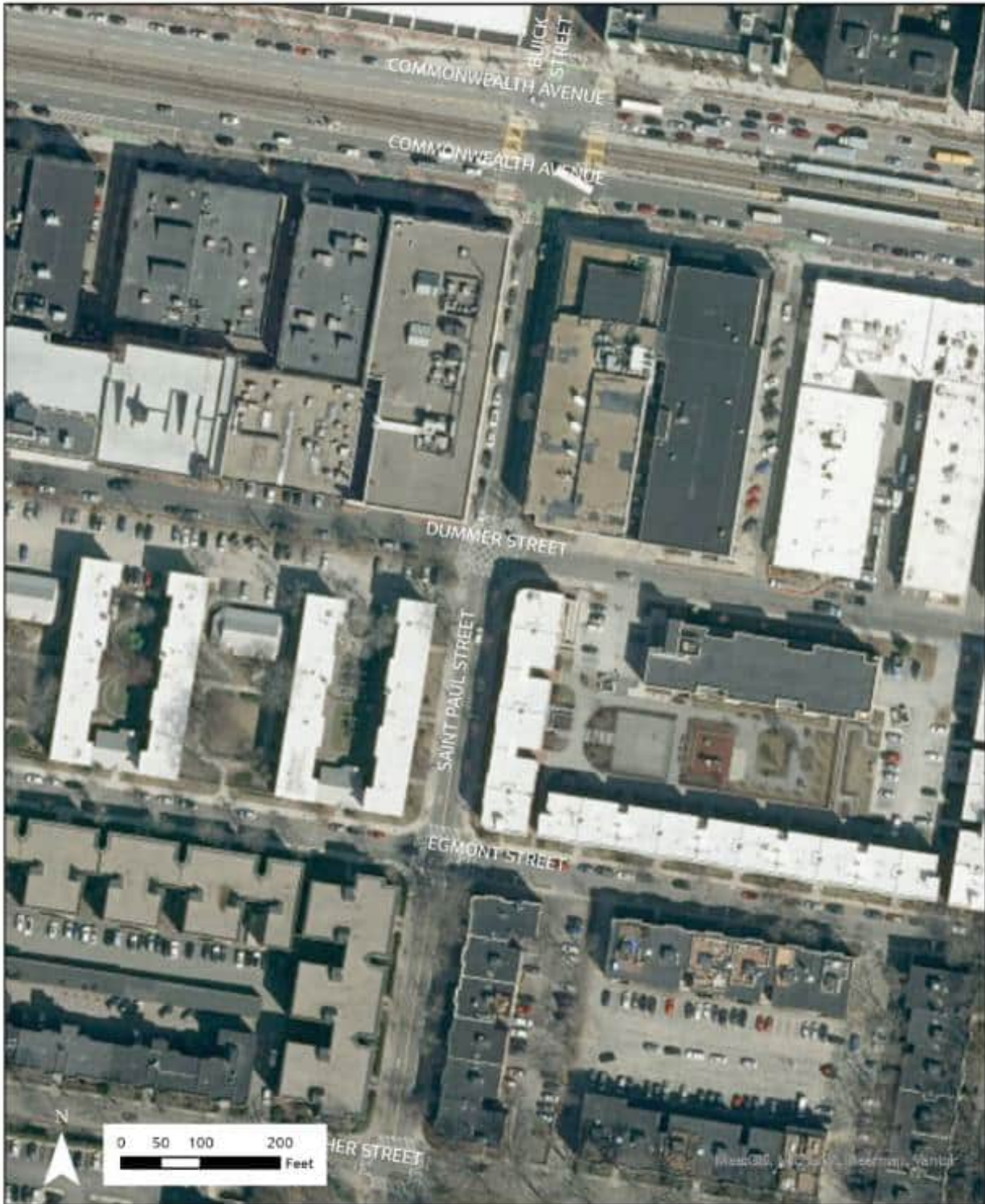


Figure 1: Intersection Study Area

Table 1: Intersection Characteristics (based on desktop review and MassDOT Roadway Inventory)

	Northbound Approach: Saint Paul Street	Southbound Approach: Saint Paul Street	Eastbound Approach: Dummer Street	Westbound Approach: Dummer Street
Functional Classification	Minor Arterial	Minor Arterial	Local	Local
Geometry/Turn Lanes	LTR	LTR	LTR	LTR
Speeds*				
Posted Speed Limit (mph)	25	25	N/A	N/A
85th% Speed (mph)	23	23	Not applicable on stop-controlled approaches	
50th% Speed (mph)	17	19		
Statutory Speed (mph)	N/A	N/A	25	25
Design Speed (mph)	25	25	N/A	N/A
Is there a crosswalk?	Yes	Yes	Yes	Yes
Is there a sidewalk?	Yes	Yes	On the north side but not on the south side	Yes
Is there a bike lane?	Yes	Yes (sharrow)	No	No

*Speed data for Saint Paul Street collected on January 6th, 2026, by Precision Data Industries.

LTR (Combined-Lane Left-Through-Right)

Site Observations

A field visit was not performed for this location. The site conditions summarized in Table 2 are based on a desktop review of images captured in July 2025.

Table 2: Site Conditions

Condition	Observation
Are speed limit signs posted?	Yes, 25 mph speed limit sign posted approximately 300 ft North of the intersection.
Are signs faded, turned, defaced?	WB Stop sign partially obstructed by leaves
Are there any obstructions blocking the view of opposing or conflicting vehicles?	A building and trees blocking the view for westbound vehicles turning right or left.
Are there any site conditions that could impact sign placement? (Limited ROW, physical obstructions, shaded area for LED, etc.)	SW corner may be too shady to support solar-powered LED
Are drivers complying with intersection controls?	N/A
Is vehicle delay causing a safety problem?	N/A
Is there an intersection where spillback occurs? (Could be a result of AWSC queuing or adjacent intersection queues impacting AWSC location)	No, Synchro analysis does not show spillback.
Would AWSC likely hinder any adjacent driveways or street?	No
Do pavement markings have to be refurbished? (e.g. "STOP", STOP lines, Lane lines, Crosswalks, etc.)	No
Is the minor road at an awkward skew or are there any other issues requiring widely separated STOP positions?	No
Is there a need to install channelization to reduce conflict areas?	No

Crash History

Between 2022 and 2024, there were eight reported crashes. Of these, there were six angle crashes, which have the potential to be preventable by converting to AWSC. The crash history meets the minimum MUTCD Warrant A (Crash Experience) for AWSC conversion.

Traffic Operations

Unadjusted peak hour turning movements were analyzed to determine how the intersection would perform as ASWC. The analysis was performed using Synchro² software based on methodologies outlined in the *Highway Capacity Manual 7th Edition (HCM)*³. The HCM defines Level of Service (LOS) for unsignalized intersections according to Table 3.

Table 3: HCM LOS Criteria for Unsignalized Intersections

LOS	Average Control Delay (sec/vehicle)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Table 4, below, indicates the predicted AM and PM peak hour LOS if the intersection were converted to AWSC. The full traffic operations analysis outputs and traffic count data are attached to this memorandum (Attachments 2 and 8). The results are interpreted as follows:

- When all approaches perform at LOS D or better, the intersection is considered suitable for AWSC conversion.
- If a major street approach is currently free flowing under TWSC but operates at LOS E as AWSC, then additional assessment is needed.
- If a major street approach is currently free flowing under TWSC but operates at LOS F as AWSC, then the intersection is considered unsuitable for AWSC conversion, however it will not be automatically ruled out as other factors shall be considered.

² CUBIC Transportation Systems. *Synchro Studio 12*. Software, 2023.

³ Transportation Research Board. *Highway Capacity Manual*, 7th edition, 2022.

Table 4: Level of Service Operations (under existing peak hour volumes)

Intersection Approach	Existing				AWSC			
	AM LOS	AM Control Delay (s/veh)	PM LOS	PM Control Delay (s/veh)	AM LOS	AM Control Delay (s/veh)	PM LOS	PM Control Delay (s/veh)
Northbound Approach (Saint Paul Street)	A	0.2	A	0.4	B	13.3	B	12.1
Southbound Approach (Saint Paul Street)	A	1.6	A	0.6	B	10.8	B	12.3
Eastbound Approach (Dummer Street)	C	19.8	C	18.2	A	9.9	B	10.2
Westbound Approach (Dummer Street)	C	18.2	C	22.4	A	9.9	B	11
Overall Intersection LOS	A		A		B		B	

Existing conditions were evaluated based on vehicle volumes collected during the winter season in January 2026. Based on the existing condition, Saint Paul Street is estimated to operate at LOS A and Dummer Street at LOS C in both AM and PM peaks.

Comparably, when the intersection is converted to the build condition (All-Way Stop Controlled), most approaches would operate either LOS A or LOS B.

The overall intersection LOS will see a minimal intersection delay and operate at LOS B for both AM and PM peaks. This indicates that the AWSC configuration is not anticipated to introduce capacity reduction at this location. While LOS results suggest that both the existing TWSC and AWSC configuration operate acceptably, it is important to recognize Level of Service alone does not determine the suitability of an AWSC conversion. A full operational results summary is included in Attachment 2.

In addition to delay, 95th percentile queues were reviewed to confirm whether vehicles might spillback from the Dummer Street intersection into Commonwealth Avenue-St. Paul Street to the north. The southbound 95th percentile queues on St. Paul Street at Dummer Street are estimated to be 1-2 vehicles during the AM and PM peak hours under AWSC.

AWSC Conversion Recommendation

Based on engineering judgement at this location, conversion to AWSC is recommended given that 1) Crash Experience Warrant A and Sight Distance Warrant B are satisfied; and 2) that there are no negative impacts to operational performance anticipated based on the Synchro analysis. A detailed AWSC warrant analysis is included in Attachment 1.

Implementing AWSC at this location is anticipated to establish a consistent level of control across all approaches reducing the potential for angle crashes and eliciting consistent driver behavior at an intersection where visibility varies by direction. The introduction of uniform stopping requirements is anticipated to enhance safety for all movements.

Refer to the Conversion Plan for Details. The following items shall be completed by the municipality just prior to the conversion:

- Remove conflicting pavement markings
- Remove existing Intersection Ahead signs
- Install new STOP bars

Next Steps

STEP ONE Review the attachments that follow and contact Jacobs with any questions or concerns:

- Attachment 1 - AWSC Warrant Analysis
- Attachment 2 – Synchro Reports
- Attachment 3 – Conversion Plan (includes sign installation guidance and proposed pavement markings, as well as required work items – some of which are to be supplied by MassDOT- Installed by the municipality, and others which are to be supplied by the municipality - Installed by the municipality.

Note: All improvements shown on the enclosed Conversion Plan are required for the AWSC conversion, with the exception of doubled up signs and LED signs which are recommended but not required.

- Attachment 4 – Sign Summary (details proposed signage and quantities)
- Attachment 5 – Form for Confirming Sign Options
- Attachment 6 – Community Informational Flyer
- Attachment 7 – Sample MOA
- Attachment 8 - Traffic Volumes and Speeds

The Conversion Plan outlines all improvements mandated by the terms of the MOA. These are essential modifications that must be implemented. The Conversion Plan includes:

1. The locations of the new signs, removal of existing signage and, if applicable, any signs that are to be retained and reused.
2. New pavement markings and removal of any conflicting pavement markings that are necessary.

Required items that may not appear on the Conversion Plan:

1. Areas of vegetation and tree trimming necessary to ensure proper visibility of signs.
2. Areas of vegetation and tree trimming necessary to ensure adequate sunlight exposure for any LED STOP sign solar panels.

The information shown on the Conversion Plan regarding placement of signs and pavement markings shall be field verified by the town prior to installation. Sign locations may be adjusted as needed to avoid roadside features and appurtenances; however, any significant adjustments shall be brought to the attention of the engineer for further review.

If the community has any concerns or requests for changes to the proposed design, please bring them to our attention within 5 days of receipt of this report as this project is advancing on a tight timeline.

STEP TWO Determine whether the **LED stop signs and doubled-up STOP signs** as shown on the Conversion Plan are preferred and notify Jacobs of your decision utilizing the form

provided (Attachment 5). **In particular, please confirm whether the southwest corner of the intersection will be exposed to enough sunlight to support solar-powered LED.**

The standard AWSC conversion sign package includes LED STOP signs on both major and minor street intersection approaches. LED STOP signs are effective tools for improving intersection safety by gaining driver attention and increasing the intersection's conspicuity. LED STOP signs require continuing maintenance to ensure effective operation including battery and solar panel maintenance and routine vegetation clearing to ensure adequate sunlight for charging. Traditional static STOP signs are acceptable (or a combination of LED and static if desired) as an alternative if requested by municipality. **It is necessary that communities review the LED STOP signs proposed in the attached plan to ensure that they are feasible (for example, that there is adequate sunlight to power sign solar panels) and preferred for this location.**

Additionally, doubled-up STOP signs are also being shown on the Conversion Plan. This is a low-cost countermeasure being used systemically to improve intersection safety nationwide. Maintenance includes routine vegetation clearing to ensure visibility of the sign.

STEP THREE Review the **Optional Work Items** described in the Community Informational Flyer and determine whether the city would like to include any of the items in the conversion. These optional treatments listed in the section below are supplementary measures that can be taken to alert drivers to the traffic control modifications and increase safety at the intersection particularly during the transitional period when drivers are still becoming aware of the need to stop. Any costs associated with the optional work items would be borne by the municipality.

STEP FOUR Execute a **Memorandum of Agreement (MOA)** If the community agrees with the recommendation for conversion to AWSC, it must perform the necessary internal steps to gain local approval. Once formal approval is submitted to Jacobs (on behalf of MassDOT), Jacobs will then prepare the Memorandum of Agreement (MOA) for signatures. The MOA will establish the agreed-upon conditions which the assets provided by MassDOT to Brookline will be installed, and agreement to complete the required work items identified in the attached plan.

Upon executing the MOA, MassDOT will procure the necessary signage and materials for the conversion, including STOP signs (with option for flashing LED Stop Signs), "All Way Stop" placards, warning signs such as "Stop Ahead", and red retroreflective signpost strips. Delivery of the materials is expected during Federal Fiscal Year (FFY) 2026.

STEP FIVE Notify Jacobs of the preferred sign **delivery location** and provide a contact person's name and phone number for delivery arrangements.

STEP SIX Complete the conversion within **90 days**, beginning when you receive the new signs. Proof of installation is required. **Within a week of completing the project, the municipality shall provide written notice to MassDOT that the project has been completed. The notice shall include the project's completion date. The municipality shall also provide MassDOT with photographs depicting each sign installed as evidence of each sign's location.**

Optional Work Items:

- "NEW" plaques on the STOP signs at newly controlled approaches

- “NEW TRAFFIC PATTERN AHEAD” signs on minor approaches – recommend removal after 6 months
- Warning flags on STOP AHEAD signs on new control approaches
- Pavement Markings – install STOP and STOP AHEAD stencils
- Changeable message signs – install prior to conversion for advance notice to drivers
 - Recommended 2 weeks in advance and 2 weeks after installation
- Optical speed bars – install for speed management on intersection approaches
- Speed study – perform speed measurements after the acclimatization period to determine if a speed limit change on the new stopped approaches would be supported

Lastly, an Informational Flyer (Attachment 6) is attached to provide best practices and recommendations for converting an intersection to AWSC. The municipality is encouraged to work with the community about the upcoming change in traffic control prior to implementing the change.

Jacobs is available to answer any questions about this assessment and will be coordinating with the city to ensure that the conversion is completed according to the Conversion Plan and enclosed MassDOT standards in a timely manner.

Attachment 1

AWSC Warrant Analysis



All-Way Stop Control Warrant Analysis Checklist

Based on [US Department of Transportation Federal Highway Administration. Manual on Uniform Traffic Control Devices. 11th edition, December 2023.](#) Sections 2B.12-17:

*The decision to install all-way stop control on site roadways may be based on engineering judgement. **Satisfying an all-way stop control warrant or warrants shall not in itself require the installation of all-way stop control at an unsignalized intersection.***

☒ Warrant A: Crash Experience

Year	Total Crashes	Preventable Crashes
2022	2	1
2023	6	5
2024	-	-

AWSC may be installed at an intersection where an engineering study indicates that:	Warrant compliance
A. <u>For a 4-leg intersection:</u> There are 5 or more reported crashes in a 12-month period OR 6 or more reported crashes in a 36-month period that were of a type susceptible to correction by the installation of all-way stop control*	☒ Satisfied ☐ Not Satisfied
B. <u>For a 3-leg intersection:</u> There are 4 or more reported crashes in a 12-month period OR 5 or more reported crashes in a 36-month period that were of a type susceptible to correction by the installation of all-way stop control*	

☒ Warrant B: Sight Distance

Sight distance observations are based on desktop evaluation not a site visit.

All-way stop control may be installed at an intersection Where an engineering study indicates that:	Warrant compliance
<i>Sight distance on the minor-road approaches controlled by a STOP sign is not adequate for a vehicle to turn onto or cross the major (uncontrolled) road</i> <i>At such a location, a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop</i>	☒ Satisfied ☐ Not Satisfied

☐ Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection

All-way stop control may be installed at an intersection Where an engineering study indicates that:	Warrant Compliance
<i>All-way stop control may be installed at locations where all-way stop control is an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal (see Chapter 4C) at the intersection</i> OR <i>for the installation of yield control at a circular intersection.</i>	☐ Satisfied ☒ Not Satisfied

Information regarding planned future improvements for this intersection was not available at the time of evaluation; therefore, this warrant cannot be assessed.

☐ Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

Volume counts for this project were collected over the highest four hours of the day during the AM and PM peaks. Therefore, the 8th highest hour required by this warrant was not available and the warrant is not evaluated. However, volume data are reported for the peak hour of the day.

Direction	Street Name	Motor vehicle, bicycle, and pedestrian volume	Date
Major approaches	St. Paul St	520 Units/Hour (UPH)	January 6, 2026
Minor approaches	Dummer St	242 UPH	5:00PM

** Note: All-way stop controls at intersections with substantially differing approach volumes can reduce the effectiveness of these devices for all roadway users.*

All-way stop control may be installed at an intersection	Warrant Compliance
Where an engineering study indicates that:	
A. The combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major-street approaches is <u>at least 300 units per hour for each of any 8 hours</u> of a typical day. AND B. The combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor street approaches is <u>at least 200 units per hour</u> for each of any of the same 8 hours	☐ Satisfied ☐ Not Satisfied
1. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants may be reduced to 70 percent of the values given in Items A and B in Paragraph 1 of this Section.	☐ Satisfied ☐ Not Satisfied

☐ Warrant E: Other Factors (Section 2B.17)

<i>All-way stop control may be installed at an intersection where an engineering study indicates that all-way stop control is needed due to other factors not addressed in the other all-way stop control warrants. Such other factors may include, but are not limited to, the following:</i>	Warrant Compliance
<i>The need to control left-turn conflicts</i>	☐ Satisfied ☒ Not Satisfied
<i>An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where all-way stop control would improve traffic operational characteristics of the intersection, or</i>	☐ Satisfied ☒ Not Satisfied
<i>Where pedestrian and/or bicyclist movements support the installation of all-way stop control</i>	☐ Satisfied ☒ Not Satisfied

Attachment 2

Synchro Reports



Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	56	13	21	38	21	5	229	124	34	137	30
Future Vol, veh/h	7	56	13	21	38	21	5	229	124	34	137	30
Conflicting Peds, #/hr	8	0	22	22	0	4	2	0	6	2	0	11
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	29	74	81	88	79	66	62	90	78	71	84	83
Heavy Vehicles, %	0	0	0	5	0	14	0	2	2	3	2	0
Mvmt Flow	24	76	16	24	48	32	8	254	159	48	163	36

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	591	723	214	675	662	348	210	0	0	419	0	0
Stage 1	288	288	-	356	356	-	-	-	-	-	-	-
Stage 2	303	436	-	319	306	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.15	6.5	6.34	4.1	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.15	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.15	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.545	4	3.426	2.2	-	-	2.227	-	-
Pot Cap-1 Maneuver	422	355	831	364	385	669	1372	-	-	1134	-	-
Stage 1	724	677	-	655	633	-	-	-	-	-	-	-
Stage 2	711	584	-	686	665	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	325	330	807	257	358	661	1359	-	-	1128	-	-
Mov Cap-2 Maneuver	325	330	-	257	358	-	-	-	-	-	-	-
Stage 1	683	639	-	647	624	-	-	-	-	-	-	-
Stage 2	615	576	-	554	627	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	19.78		18.15		0.15		1.61	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	32	-	-	358	377	337	-
HCM Lane V/C Ratio	0.006	-	-	0.323	0.276	0.042	-
HCM Ctrl Dly (s/v)	7.7	0	-	19.8	18.2	8.3	0
HCM Lane LOS	A	A	-	C	C	A	A
HCM 95th %tile Q(veh)	0	-	-	1.4	1.1	0.1	-



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↑	↑↑			↑			↑↑
Traffic Volume (vph)	0	756	31	18	161	437	70	84	28	143	20	7
Future Volume (vph)	0	756	31	18	161	437	70	84	28	143	20	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	10	10	10	12	11	12	12	12
Grade (%)		-3%				3%			-1%			4%
Storage Length (ft)	0		0		400		0	0		0	0	
Storage Lanes	0		0		1		0	0		0	0	
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			0.97	0.96			0.90			0.96
Frt		0.993				0.977			0.920			0.969
Flt Protected					0.950				0.986			0.977
Satd. Flow (prot)	0	3223	0	0	1632	2889	0	0	1514	0	0	1610
Flt Permitted					0.950				0.889			0.765
Satd. Flow (perm)	0	3223	0	0	1585	2889	0	0	1308	0	0	1260
Right Turn on Red			No				No			Yes		
Satd. Flow (RTOR)									73			
Link Speed (mph)		25				25			25			25
Link Distance (ft)		1199				1138			394			390
Travel Time (s)		32.7				31.0			10.7			10.6
Confl. Peds. (#/hr)	20		16		20		45	60		37	28	
Confl. Bikes (#/hr)												
Peak Hour Factor	0.25	0.87	0.78	0.50	0.73	0.90	0.80	0.91	0.64	0.72	0.83	0.44
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	5%	3%	6%	1%	9%	3%	10%	0%	1%	10%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			0%
Adj. Flow (vph)	0	869	40	36	221	486	88	92	44	199	24	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	909	0	0	257	574	0	0	335	0	0	52
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		10				10			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.02	1.11	1.11	1.11	0.99	1.04	0.99	1.03	1.03
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Turn Type		NA		Prot	Prot	NA		Perm	NA		Perm	NA
Protected Phases		1		2	2	1 2			6			6
Permitted Phases								6			6	
Detector Phase		1		2	2	1 2		6	6		6	6
Switch Phase												
Minimum Initial (s)		8.0		6.0	6.0			8.0	8.0		8.0	8.0
Minimum Split (s)		19.0		14.0	14.0			20.0	20.0		20.0	20.0
Total Split (s)		35.0		22.0	22.0			35.0	35.0		35.0	35.0
Total Split (%)		35.0%		22.0%	22.0%			35.0%	35.0%		35.0%	35.0%

Major Road: Commonwealth Ave
Minor Road: St Paul St & Buick St

Synchro 12 Report
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Lane Group	SBR	Ø5	Ø8
Lane Configurations			
Traffic Volume (vph)	4		
Future Volume (vph)	4		
Ideal Flow (vphpl)	1900		
Lane Width (ft)	12		
Grade (%)			
Storage Length (ft)	0		
Storage Lanes	0		
Taper Length (ft)			
Lane Util. Factor	1.00		
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)	0		
Flt Permitted			
Satd. Flow (perm)	0		
Right Turn on Red	No		
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)	68		
Confl. Bikes (#/hr)			
Peak Hour Factor	0.33		
Growth Factor	100%		
Heavy Vehicles (%)	0%		
Bus Blockages (#/hr)	0		
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)	12		
Shared Lane Traffic (%)			
Lane Group Flow (vph)	0		
Enter Blocked Intersection	No		
Lane Alignment	Right		
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor	1.03		
Turning Speed (mph)	9		
Turn Type			
Protected Phases		5	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)		1.0	1.0
Minimum Split (s)		4.0	4.0
Total Split (s)		4.0	4.0
Total Split (%)		4%	4%

Major Road: Commonwealth Ave
Minor Road: St Paul St & Buick St

Synchro 12 Report
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Brookline, MA
Commonwealth Ave (EB/WB) & St Paul (NB/SB)

Existing Conditions AM-Signalized Intersection

03/23/2026

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Yellow Time (s)		3.5		3.0	3.0			3.5	3.5		3.5	3.5
All-Red Time (s)		3.5		3.5	3.5			4.0	4.0		4.0	4.0
Lost Time Adjust (s)		0.0			0.0				0.0			0.0
Total Lost Time (s)		7.0			6.5				7.5			7.5
Lead/Lag		Lead		Lag	Lag			Lag	Lag		Lag	Lag
Lead-Lag Optimize?												
Recall Mode		C-Max		Max	Max			Max	Max		Max	Max
Act Effect Green (s)		28.0			15.5	50.0			27.5			27.5
Actuated g/C Ratio		0.28			0.16	0.50			0.28			0.28
v/c Ratio		1.01			1.02	0.40			0.81			0.15
Control Delay (s/veh)		68.7			105.3	16.6			43.5			28.9
Queue Delay		0.0			0.0	0.0			0.0			0.0
Total Delay (s/veh)		68.7			105.3	16.6			43.5			28.9
LOS		E			F	B			D			C
Approach Delay (s/veh)		68.7				44.0			43.5			28.9
Approach LOS		E				D			D			C
Queue Length 50th (ft)		~321			~171	123			159			25
Queue Length 95th (ft)		#437			#237	167			155			26
Internal Link Dist (ft)		1119				1058			314			310
Turn Bay Length (ft)					400							
Base Capacity (vph)		902			252	1444			412			346
Starvation Cap Reductn		0			0	0			0			0
Spillback Cap Reductn		0			0	0			0			0
Storage Cap Reductn		0			0	0			0			0
Reduced v/c Ratio		1.01			1.02	0.40			0.81			0.15

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 56 (56%), Referenced to phase 1:EBWB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay (s/veh): 54.1

Intersection LOS: D

Intersection Capacity Utilization 66.3%

ICU Level of Service C

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: St Paul St./Buick St. & Commonwealth Ave.



Major Road: Commonwealth Ave
Minor Road: St Paul St & Buick St

Synchro 12 Report
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Lane Group	SBR	Ø5	Ø8
Yellow Time (s)		2.0	2.0
All-Red Time (s)		0.0	0.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead		
Lead-Lag Optimize?			
Recall Mode		Ped	Ped
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay (s/veh)			
Queue Delay			
Total Delay (s/veh)			
LOS			
Approach Delay (s/veh)			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Intersection												
Int Delay, s/veh	7.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	53	19	45	66	47	12	171	85	19	208	25
Future Vol, veh/h	12	53	19	45	66	47	12	171	85	19	208	25
Conflicting Peds, #/hr	28	0	18	9	0	17	5	0	3	5	0	11
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	60	70	68	75	82	90	79	90	80	80	84	83
Heavy Vehicles, %	0	0	0	0	2	2	0	2	0	0	2	0
Mvmt Flow	20	76	28	60	80	52	15	190	106	24	248	30

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	610	653	292	629	615	276	289	0	0	301	0	0
Stage 1	321	321	-	279	279	-	-	-	-	-	-	-
Stage 2	289	332	-	351	336	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.52	6.22	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4.018	3.318	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	410	389	752	397	407	763	1285	-	-	1271	-	-
Stage 1	695	655	-	732	680	-	-	-	-	-	-	-
Stage 2	723	648	-	670	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	283	370	733	289	386	741	1272	-	-	1266	-	-
Mov Cap-2 Maneuver	283	370	-	289	386	-	-	-	-	-	-	-
Stage 1	673	634	-	719	667	-	-	-	-	-	-	-
Stage 2	568	636	-	546	621	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	18.24		22.38		0.38		0.62	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	82	-	-	394	396	139	-
HCM Lane V/C Ratio	0.012	-	-	0.313	0.486	0.019	-
HCM Ctrl Dly (s/v)	7.9	0	-	18.2	22.4	7.9	0
HCM Lane LOS	A	A	-	C	C	A	A
HCM 95th %tile Q(veh)	0	-	-	1.3	2.6	0.1	-



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↑	↑↑			↑			↑↑
Traffic Volume (vph)	0	495	40	26	198	659	19	87	13	124	52	18
Future Volume (vph)	0	495	40	26	198	659	19	87	13	124	52	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	10	10	10	12	11	12	12	12
Grade (%)		-3%				3%			-1%			4%
Storage Length (ft)	0		0		400		0	0		0	0	
Storage Lanes	0		0		1		0	0		0	0	
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.85	0.98			0.83			0.89
Frt		0.981				0.992			0.932			0.965
Flt Protected					0.950				0.979			0.973
Satd. Flow (prot)	0	3172	0	0	1645	3132	0	0	1488	0	0	1620
Flt Permitted					0.950				0.805			0.661
Satd. Flow (perm)	0	3172	0	0	1403	3132	0	0	1144	0	0	1030
Right Turn on Red			No				No			Yes		
Satd. Flow (RTOR)									57			
Link Speed (mph)		25				25			25			25
Link Distance (ft)		1199				1138			394			390
Travel Time (s)		32.7				31.0			10.7			10.6
Confl. Peds. (#/hr)	41		28		76		88	84		87	111	
Confl. Bikes (#/hr)												
Peak Hour Factor	0.25	0.93	0.53	0.75	0.88	0.84	0.43	0.71	0.75	0.86	0.61	0.64
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	3%	0%	1%	3%	0%	0%	0%	1%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			0%
Adj. Flow (vph)	0	532	75	35	225	785	44	123	17	144	85	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	607	0	0	260	829	0	0	284	0	0	153
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		10				10			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.02	1.11	1.11	1.11	0.99	1.04	0.99	1.03	1.03
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Turn Type		NA		Prot	Prot	NA		Perm	NA		Perm	NA
Protected Phases		1		2	2	1 2			6			6
Permitted Phases								6			6	
Detector Phase		1		2	2	1 2		6	6		6	6
Switch Phase												
Minimum Initial (s)		8.0		6.0	6.0			8.0	8.0		8.0	8.0
Minimum Split (s)		19.0		14.0	14.0			20.0	20.0		20.0	20.0
Total Split (s)		28.0		22.0	22.0			32.0	32.0		32.0	32.0
Total Split (%)		31.1%		24.4%	24.4%			35.6%	35.6%		35.6%	35.6%

Major Road: Commonwealth Ave
Minor Road: St Paul St & Buick St

Synchro 12 Report
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Lane Group	SBR	Ø5	Ø8
Lane Configurations			
Traffic Volume (vph)	24		
Future Volume (vph)	24		
Ideal Flow (vphpl)	1900		
Lane Width (ft)	12		
Grade (%)			
Storage Length (ft)	0		
Storage Lanes	0		
Taper Length (ft)			
Lane Util. Factor	1.00		
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)	0		
Flt Permitted			
Satd. Flow (perm)	0		
Right Turn on Red	No		
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)	68		
Confl. Bikes (#/hr)			
Peak Hour Factor	0.60		
Growth Factor	100%		
Heavy Vehicles (%)	0%		
Bus Blockages (#/hr)	0		
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)	40		
Shared Lane Traffic (%)			
Lane Group Flow (vph)	0		
Enter Blocked Intersection	No		
Lane Alignment	Right		
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor	1.03		
Turning Speed (mph)	9		
Turn Type			
Protected Phases	5	8	
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	1.0	1.0	
Minimum Split (s)	4.0	4.0	
Total Split (s)	4.0	4.0	
Total Split (%)	4%	4%	

Major Road: Commonwealth Ave
Minor Road: St Paul St & Buick St

Synchro 12 Report
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Brookline, MA
Commonwealth Ave (EB/WB) & St Paul (NB/SB)

Existing Conditions PM-Signalized Intersection

03/23/2026

												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Yellow Time (s)		3.5		3.0	3.0			3.5	3.5		3.5	3.5
All-Red Time (s)		3.5		3.5	3.5			4.0	4.0		4.0	4.0
Lost Time Adjust (s)		0.0			0.0				0.0			0.0
Total Lost Time (s)		7.0			6.5				7.5			7.5
Lead/Lag		Lead		Lag	Lag			Lag	Lag		Lag	Lag
Lead-Lag Optimize?												
Recall Mode		C-Max		Max	Max			Max	Max		Max	Max
Act Effect Green (s)		21.0			15.5	43.0			24.5			24.5
Actuated g/C Ratio		0.23			0.17	0.48			0.27			0.27
v/c Ratio		0.82			0.92	0.55			0.81			0.55
Control Delay (s/veh)		43.4			75.0	18.5			43.7			36.6
Queue Delay		0.0			0.0	0.0			0.0			0.0
Total Delay (s/veh)		43.4			75.0	18.5			43.7			36.6
LOS		D			E	B			D			D
Approach Delay (s/veh)		43.4				32.0			43.7			36.6
Approach LOS		D				C			D			D
Queue Length 50th (ft)		178			148	173			122			77
Queue Length 95th (ft)		#264			#284	208			166			93
Internal Link Dist (ft)		1119				1058			314			310
Turn Bay Length (ft)					400							
Base Capacity (vph)		740			283	1496			352			280
Starvation Cap Reductn		0			0	0			0			0
Spillback Cap Reductn		0			0	0			0			0
Storage Cap Reductn		0			0	0			0			0
Reduced v/c Ratio		0.82			0.92	0.55			0.81			0.55

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 87 (97%), Referenced to phase 1:EBWB, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay (s/veh): 37.1

Intersection LOS: D

Intersection Capacity Utilization 62.7%

ICU Level of Service B

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Commonwealth Ave. & Buick St.



Major Road: Commonwealth Ave
Minor Road: St Paul St & Buick St

Synchro 12 Report
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Lane Group	SBR	Ø5	Ø8
Yellow Time (s)		2.0	2.0
All-Red Time (s)		0.0	0.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead		
Lead-Lag Optimize?			
Recall Mode		Ped	Ped
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay (s/veh)			
Queue Delay			
Total Delay (s/veh)			
LOS			
Approach Delay (s/veh)			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	56	13	21	38	21	5	229	124	34	137	30
Future Vol, veh/h	7	56	13	21	38	21	5	229	124	34	137	30
Peak Hour Factor	0.29	0.74	0.81	0.88	0.79	0.66	0.62	0.90	0.78	0.71	0.84	0.83
Heavy Vehicles, %	0	0	0	5	0	14	0	2	2	3	2	0
Mvmt Flow	24	76	16	24	48	32	8	254	159	48	163	36
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.9	9.9	13.3	10.8
HCM LOS	A	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	9%	26%	17%
Vol Thru, %	64%	74%	48%	68%
Vol Right, %	35%	17%	26%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	358	76	80	201
LT Vol	5	7	21	34
Through Vol	229	56	38	137
RT Vol	124	13	21	30
Lane Flow Rate	421	116	104	247
Geometry Grp	1	1	1	1
Degree of Util (X)	0.55	0.181	0.165	0.35
Departure Headway (Hd)	4.697	5.636	5.724	5.097
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	771	636	626	709
Service Time	2.705	3.678	3.766	3.11
HCM Lane V/C Ratio	0.546	0.182	0.166	0.348
HCM Control Delay, s/veh	13.3	9.9	9.9	10.8
HCM Lane LOS	B	A	A	B
HCM 95th-tile Q	3.4	0.7	0.6	1.6



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↑	↑↑			↑			↑↑
Traffic Volume (vph)	0	756	31	18	161	437	70	84	28	143	20	7
Future Volume (vph)	0	756	31	18	161	437	70	84	28	143	20	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	10	10	10	12	11	12	12	12
Grade (%)		-3%				3%			-1%			4%
Storage Length (ft)	0		0		400		0	0		0	0	
Storage Lanes	0		0		1		0	0		0	0	
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			0.97	0.96			0.90			0.96
Frt		0.993				0.977			0.920			0.969
Flt Protected					0.950				0.986			0.977
Satd. Flow (prot)	0	3223	0	0	1632	2889	0	0	1514	0	0	1610
Flt Permitted					0.950				0.889			0.765
Satd. Flow (perm)	0	3223	0	0	1585	2889	0	0	1308	0	0	1260
Right Turn on Red			No				No			Yes		
Satd. Flow (RTOR)									73			
Link Speed (mph)		25				25			25			25
Link Distance (ft)		1199				1138			394			390
Travel Time (s)		32.7				31.0			10.7			10.6
Confl. Peds. (#/hr)	20		16		20		45	60		37	28	
Confl. Bikes (#/hr)												
Peak Hour Factor	0.25	0.87	0.78	0.50	0.73	0.90	0.80	0.91	0.64	0.72	0.83	0.44
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	5%	3%	6%	1%	9%	3%	10%	0%	1%	10%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			0%
Adj. Flow (vph)	0	869	40	36	221	486	88	92	44	199	24	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	909	0	0	257	574	0	0	335	0	0	52
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		10				10			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.02	1.11	1.11	1.11	0.99	1.04	0.99	1.03	1.03
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Turn Type		NA		Prot	Prot	NA		Perm	NA		Perm	NA
Protected Phases		1		2	2	1 2			6			6
Permitted Phases								6			6	
Detector Phase		1		2	2	1 2		6	6		6	6
Switch Phase												
Minimum Initial (s)		8.0		6.0	6.0			8.0	8.0		8.0	8.0
Minimum Split (s)		19.0		14.0	14.0			20.0	20.0		20.0	20.0
Total Split (s)		35.0		22.0	22.0			35.0	35.0		35.0	35.0
Total Split (%)		35.0%		22.0%	22.0%			35.0%	35.0%		35.0%	35.0%

Major Road: Commonwealth Ave
Minor Road: St Paul St & Buick St

Synchro 12 Report
Page 1

Lane Group	SBR	Ø5	Ø8
Lane Configurations			
Traffic Volume (vph)	4		
Future Volume (vph)	4		
Ideal Flow (vphpl)	1900		
Lane Width (ft)	12		
Grade (%)			
Storage Length (ft)	0		
Storage Lanes	0		
Taper Length (ft)			
Lane Util. Factor	1.00		
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)	0		
Flt Permitted			
Satd. Flow (perm)	0		
Right Turn on Red	No		
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)	68		
Confl. Bikes (#/hr)			
Peak Hour Factor	0.33		
Growth Factor	100%		
Heavy Vehicles (%)	0%		
Bus Blockages (#/hr)	0		
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)	12		
Shared Lane Traffic (%)			
Lane Group Flow (vph)	0		
Enter Blocked Intersection	No		
Lane Alignment	Right		
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor	1.03		
Turning Speed (mph)	9		
Turn Type			
Protected Phases	5	8	
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	1.0	1.0	
Minimum Split (s)	4.0	4.0	
Total Split (s)	4.0	4.0	
Total Split (%)	4%	4%	

Major Road: Commonwealth Ave
Minor Road: St Paul St & Buick St

Synchro 12 Report
Page 2

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Yellow Time (s)		3.5		3.0	3.0			3.5	3.5		3.5	3.5
All-Red Time (s)		3.5		3.5	3.5			4.0	4.0		4.0	4.0
Lost Time Adjust (s)		0.0			0.0				0.0			0.0
Total Lost Time (s)		7.0			6.5				7.5			7.5
Lead/Lag		Lead		Lag	Lag			Lag	Lag		Lag	Lag
Lead-Lag Optimize?												
Recall Mode		C-Max		Max	Max			Max	Max		Max	Max
Act Effect Green (s)		28.0			15.5	50.0			27.5			27.5
Actuated g/C Ratio		0.28			0.16	0.50			0.28			0.28
v/c Ratio		1.01			1.02	0.40			0.81			0.15
Control Delay (s/veh)		68.7			105.3	16.6			43.5			28.9
Queue Delay		0.0			0.0	0.0			0.0			0.0
Total Delay (s/veh)		68.7			105.3	16.6			43.5			28.9
LOS		E			F	B			D			C
Approach Delay (s/veh)		68.7				44.0			43.5			28.9
Approach LOS		E				D			D			C
Queue Length 50th (ft)		~321			~171	123			159			25
Queue Length 95th (ft)		#437			#237	167			155			26
Internal Link Dist (ft)		1119				1058			314			310
Turn Bay Length (ft)					400							
Base Capacity (vph)		902			252	1444			412			346
Starvation Cap Reductn		0			0	0			0			0
Spillback Cap Reductn		0			0	0			0			0
Storage Cap Reductn		0			0	0			0			0
Reduced v/c Ratio		1.01			1.02	0.40			0.81			0.15

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 56 (56%), Referenced to phase 1:EBWB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay (s/veh): 54.1

Intersection LOS: D

Intersection Capacity Utilization 66.3%

ICU Level of Service C

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: St Paul St. & Commonwealth Ave.



Lane Group	SBR	Ø5	Ø8
Yellow Time (s)		2.0	2.0
All-Red Time (s)		0.0	0.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead		
Lead-Lag Optimize?			
Recall Mode		Ped	Ped
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay (s/veh)			
Queue Delay			
Total Delay (s/veh)			
LOS			
Approach Delay (s/veh)			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	53	19	45	66	47	12	171	85	19	208	25
Future Vol, veh/h	12	53	19	45	66	47	12	171	85	19	208	25
Peak Hour Factor	0.60	0.70	0.68	0.75	0.82	0.90	0.79	0.90	0.80	0.80	0.84	0.83
Heavy Vehicles, %	0	0	0	0	2	2	0	2	0	0	2	0
Mvmt Flow	20	76	28	60	80	52	15	190	106	24	248	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10.2	11	12.1	12.3
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	14%	28%	8%
Vol Thru, %	64%	63%	42%	83%
Vol Right, %	32%	23%	30%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	268	84	158	252
LT Vol	12	12	45	19
Through Vol	171	53	66	208
RT Vol	85	19	47	25
Lane Flow Rate	311	124	193	301
Geometry Grp	1	1	1	1
Degree of Util (X)	0.44	0.197	0.299	0.438
Departure Headway (Hd)	5.091	5.744	5.592	5.232
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	707	623	642	687
Service Time	3.132	3.797	3.64	3.273
HCM Lane V/C Ratio	0.44	0.199	0.301	0.438
HCM Control Delay, s/veh	12.1	10.2	11	12.3
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.3	0.7	1.3	2.2



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↑	↑↑			↑			↑↑
Traffic Volume (vph)	0	495	40	26	198	659	19	87	13	124	52	18
Future Volume (vph)	0	495	40	26	198	659	19	87	13	124	52	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	12	10	10	10	12	11	12	12	12
Grade (%)		-3%				3%			-1%			4%
Storage Length (ft)	0		0		400		0	0		0	0	
Storage Lanes	0		0		1		0	0		0	0	
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.85	0.98			0.83			0.89
Frt		0.981				0.992			0.932			0.965
Flt Protected					0.950				0.979			0.973
Satd. Flow (prot)	0	3172	0	0	1645	3132	0	0	1488	0	0	1620
Flt Permitted					0.950				0.805			0.661
Satd. Flow (perm)	0	3172	0	0	1403	3132	0	0	1144	0	0	1030
Right Turn on Red			No				No			Yes		
Satd. Flow (RTOR)									57			
Link Speed (mph)		25				25			25			25
Link Distance (ft)		1199				1138			394			483
Travel Time (s)		32.7				31.0			10.7			13.2
Confl. Peds. (#/hr)	41		28		76		88	84		87	111	
Confl. Bikes (#/hr)												
Peak Hour Factor	0.25	0.93	0.53	0.75	0.88	0.84	0.43	0.71	0.75	0.86	0.61	0.64
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	3%	0%	1%	3%	0%	0%	0%	1%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			0%
Adj. Flow (vph)	0	532	75	35	225	785	44	123	17	144	85	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	607	0	0	260	829	0	0	284	0	0	153
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		10				10			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.02	1.11	1.11	1.11	0.99	1.04	0.99	1.03	1.03
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Turn Type		NA		Prot	Prot	NA		Perm	NA		Perm	NA
Protected Phases		1		2	2	1 2			6			6
Permitted Phases								6			6	
Detector Phase		1		2	2	1 2		6	6		6	6
Switch Phase												
Minimum Initial (s)		8.0		6.0	6.0			8.0	8.0		8.0	8.0
Minimum Split (s)		19.0		14.0	14.0			20.0	20.0		20.0	20.0
Total Split (s)		28.0		22.0	22.0			32.0	32.0		32.0	32.0
Total Split (%)		31.1%		24.4%	24.4%			35.6%	35.6%		35.6%	35.6%

Major Road: Commonwealth Ave
Minor Road: St Paul St & Buick St

Synchro 12 Report
Page 1

Lane Group	SBR	Ø5	Ø8
Lane Configurations			
Traffic Volume (vph)	24		
Future Volume (vph)	24		
Ideal Flow (vphpl)	1900		
Lane Width (ft)	12		
Grade (%)			
Storage Length (ft)	0		
Storage Lanes	0		
Taper Length (ft)			
Lane Util. Factor	1.00		
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)	0		
Flt Permitted			
Satd. Flow (perm)	0		
Right Turn on Red	No		
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)	68		
Confl. Bikes (#/hr)			
Peak Hour Factor	0.60		
Growth Factor	100%		
Heavy Vehicles (%)	0%		
Bus Blockages (#/hr)	0		
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)	40		
Shared Lane Traffic (%)			
Lane Group Flow (vph)	0		
Enter Blocked Intersection	No		
Lane Alignment	Right		
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor	1.03		
Turning Speed (mph)	9		
Turn Type			
Protected Phases	5	8	
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	1.0	1.0	
Minimum Split (s)	4.0	4.0	
Total Split (s)	4.0	4.0	
Total Split (%)	4%	4%	

Major Road: Commonwealth Ave
Minor Road: St Paul St & Buick St

Synchro 12 Report
Page 2

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Yellow Time (s)		3.5		3.0	3.0			3.5	3.5		3.5	3.5
All-Red Time (s)		3.5		3.5	3.5			4.0	4.0		4.0	4.0
Lost Time Adjust (s)		0.0			0.0				0.0			0.0
Total Lost Time (s)		7.0			6.5				7.5			7.5
Lead/Lag		Lead		Lag	Lag			Lag	Lag		Lag	Lag
Lead-Lag Optimize?												
Recall Mode		C-Max		Max	Max			Max	Max		Max	Max
Act Effect Green (s)		21.0			15.5	43.0			24.5			24.5
Actuated g/C Ratio		0.23			0.17	0.48			0.27			0.27
v/c Ratio		0.82			0.92	0.55			0.81			0.55
Control Delay (s/veh)		43.4			75.0	18.5			43.7			36.6
Queue Delay		0.0			0.0	0.0			0.0			0.0
Total Delay (s/veh)		43.4			75.0	18.5			43.7			36.6
LOS		D			E	B			D			D
Approach Delay (s/veh)		43.4				32.0			43.7			36.6
Approach LOS		D				C			D			D
Queue Length 50th (ft)		178			148	173			122			77
Queue Length 95th (ft)		#264			#284	208			166			93
Internal Link Dist (ft)		1119				1058			314			403
Turn Bay Length (ft)					400							
Base Capacity (vph)		740			283	1496			352			280
Starvation Cap Reductn		0			0	0			0			0
Spillback Cap Reductn		0			0	0			0			0
Storage Cap Reductn		0			0	0			0			0
Reduced v/c Ratio		0.82			0.92	0.55			0.81			0.55

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 87 (97%), Referenced to phase 1:EBWB, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay (s/veh): 37.1

Intersection LOS: D

Intersection Capacity Utilization 62.7%

ICU Level of Service B

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: St Paul St. & Commonwealth Ave.





Lane Group	SBR	Ø5	Ø8
Yellow Time (s)		2.0	2.0
All-Red Time (s)		0.0	0.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead		
Lead-Lag Optimize?			
Recall Mode		Ped	Ped
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay (s/veh)			
Queue Delay			
Total Delay (s/veh)			
LOS			
Approach Delay (s/veh)			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

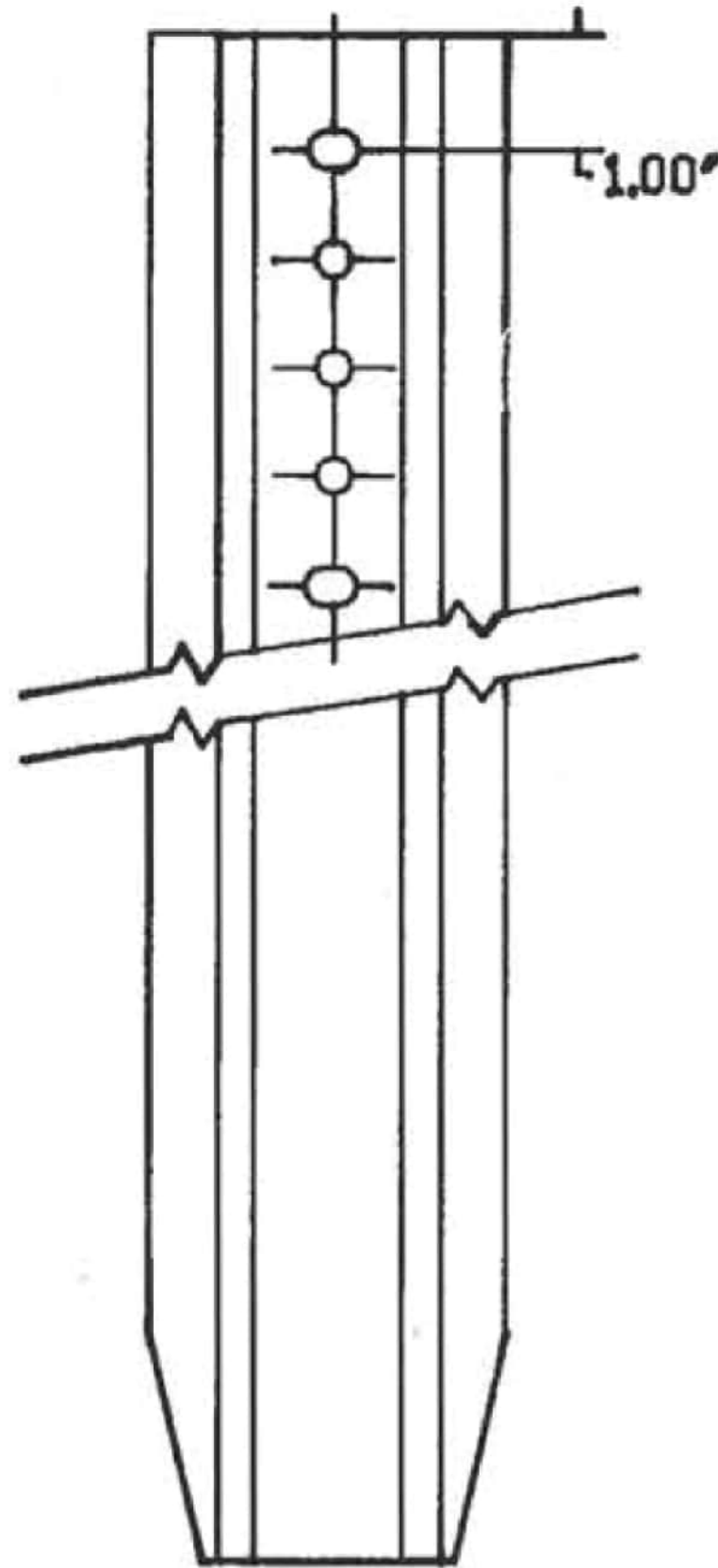
Attachment 3

Conversion Plan



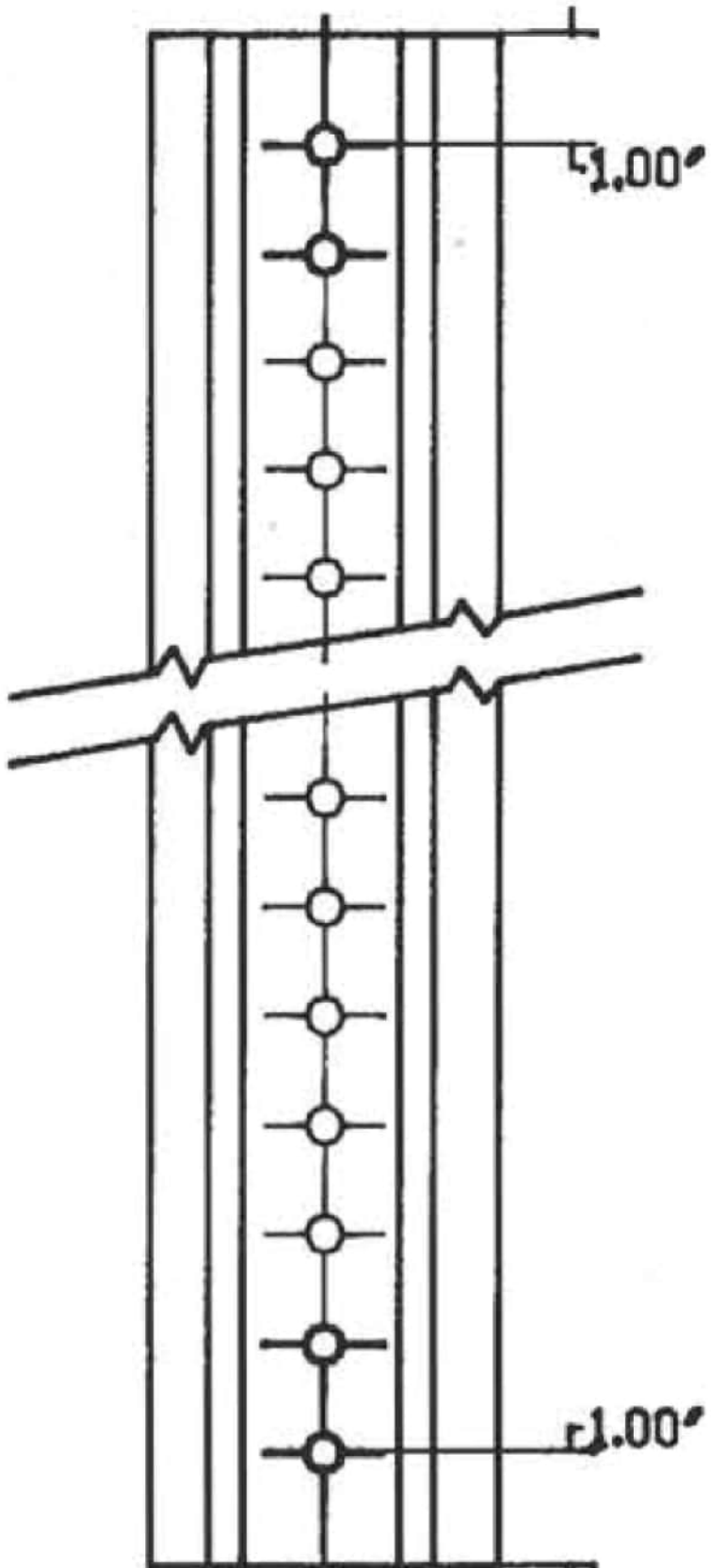
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	#####	2	4
PROJECT FILE NO. #####			

STANDARD SIGN INSTATLLATION DETAILS



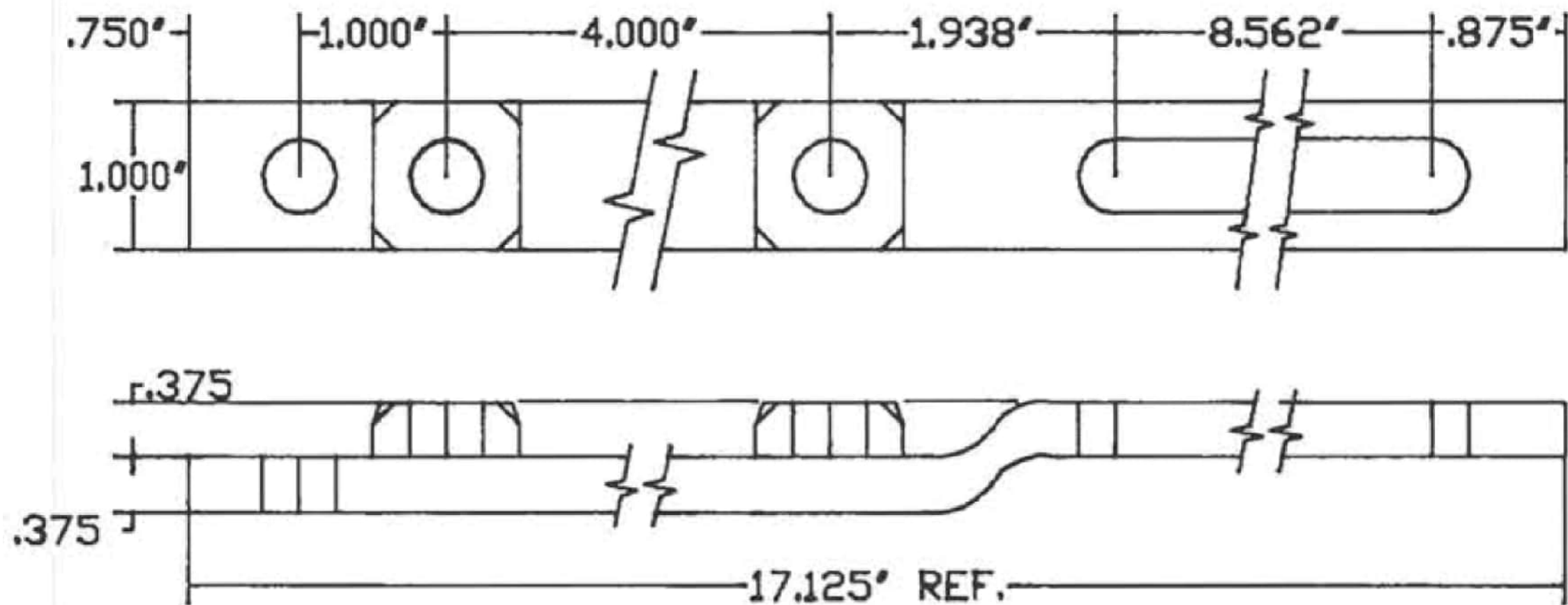
EZE-ERECT BASE POST

3/8" Dia. Holes on 1.00" Center, Excerpt First and Fifth are 3/8" x 1/2" slots
Punched 18 Holes
Bottom Pointed
Available in 2.5, 3.0 & 4.0 lb/ft
Lenght -3'6" and 4'0"



EZE-ERECT SIGN POST

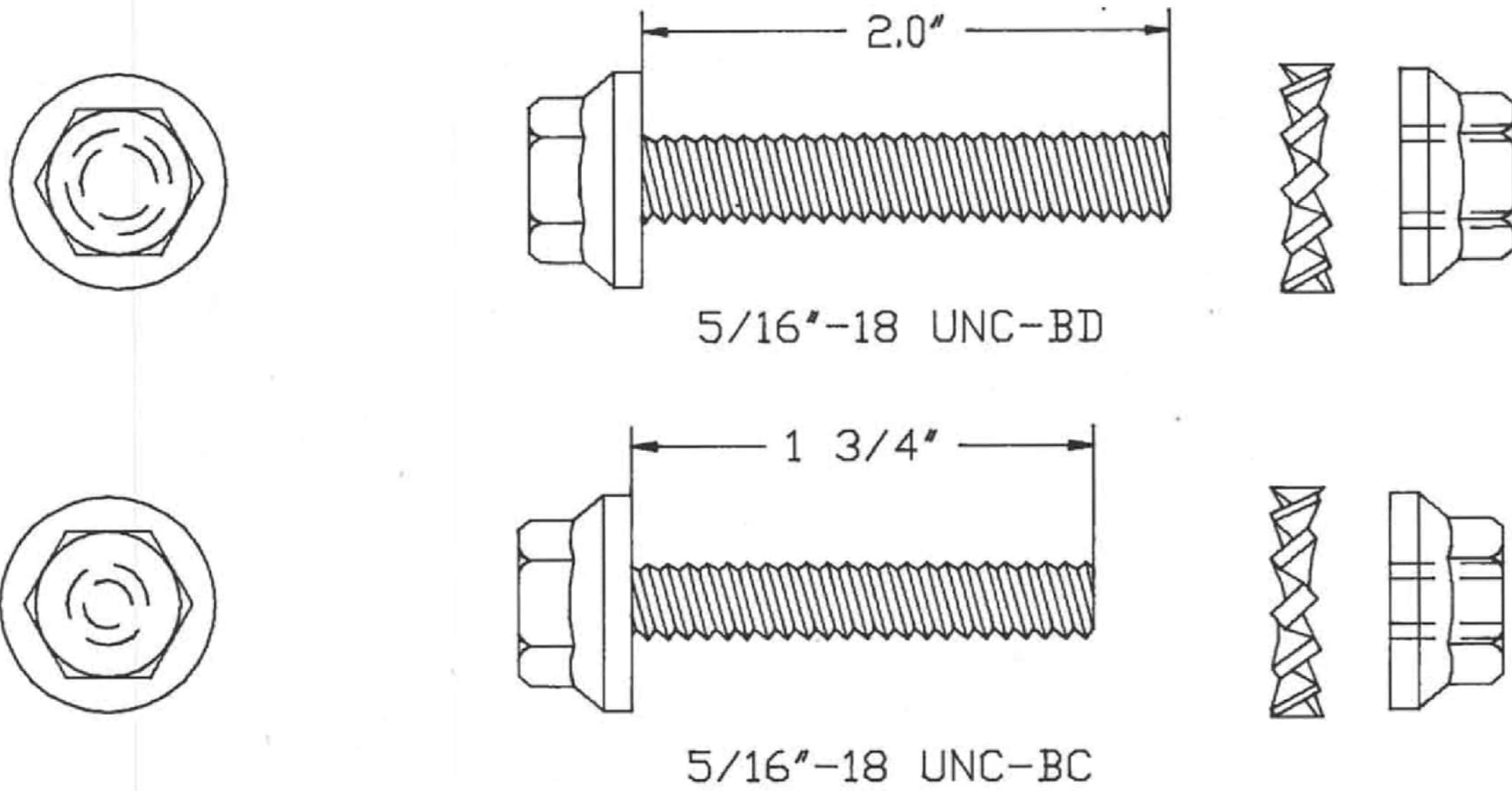
3/8" Dia. Holes on 1.00" Centers
Punched Full Length Available
in 2.0, 2.25, 2.5, 3.0 & 4.0 lb/ft
Length -6'0", 7'0", 8'0", 9'0",
10'0", 11'0", and 12'0"



RETAINER-SPACER STRAP

For All Weights of Sign Posts
Material-Mild Steel
Finish-Hot Dip Galvanize Per ASTM A-123

HEX HEAD-INTEGRAL FLANGE BOLT, NUT AND LOCKWASHER



5/16"-18 UNC x 2.0" Long (for 4.0 lb. posts) or 5/16"-18 UNC x 1 3/4" (for 2.0, 2.25, 2.5 & 3.0 lb. posts)
Bolt per ASTM A354, Grade BD or Grade BC
Nut per ASTM A563, Grade DH
Lockwasher is heavy duty external toothed.
Finish-Cadmium plated per ASTM A165-80, Type DS, except using clear chromate

SIGN SIZE	CHANNEL POST POST-WITH STRAP (EZE-ERECT)
5 S.F. AND UNDER	1-2 LB./FT.
OVER 5 S.F. UP TO 10 S.F.	1-2.25 LB./FT.
* OVER 10 S.F. UP TO 20 S.F.	2-2.25 LB./FT.

* NOTE: Signs with a width of 4' and over shall require 2 posts.

GALVANIZING FINISH

Galvanizing Shall Conform with ASTM Specification A123-73. It Shall Be Galzanized After All Fabrication and Punching, Has Been Completed.

GENERAL NOTES:

1. DETAILS PROVIDED ARE FROM THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, 1990 ED.

GROUND INSTALLATION

METHOD OF INSTALLATION

- STEP 1** Drive Sign Post Anchor To Within 3 Or 4' Of Surface.
- STEP 2** Pre-cut Anchor Sleeve So That The Holes Will Match And Still Be Flush With Top Of Sign Post Anchor, Drive Anchor Sleeve Until Holes Match As Noted Above, Then Drive Both The Sign Post Anchor And Anchor Sleeve Until One Hole Is Exposed Above Ground For Bolt Connection.

- STEP 3** Insert Sign Post And Bolt In Place.
- NOTE:** Driving Caps Must Be Used To Drive Posts. Retain 4'-0" Depth To Reach Theoretical Frost Line.

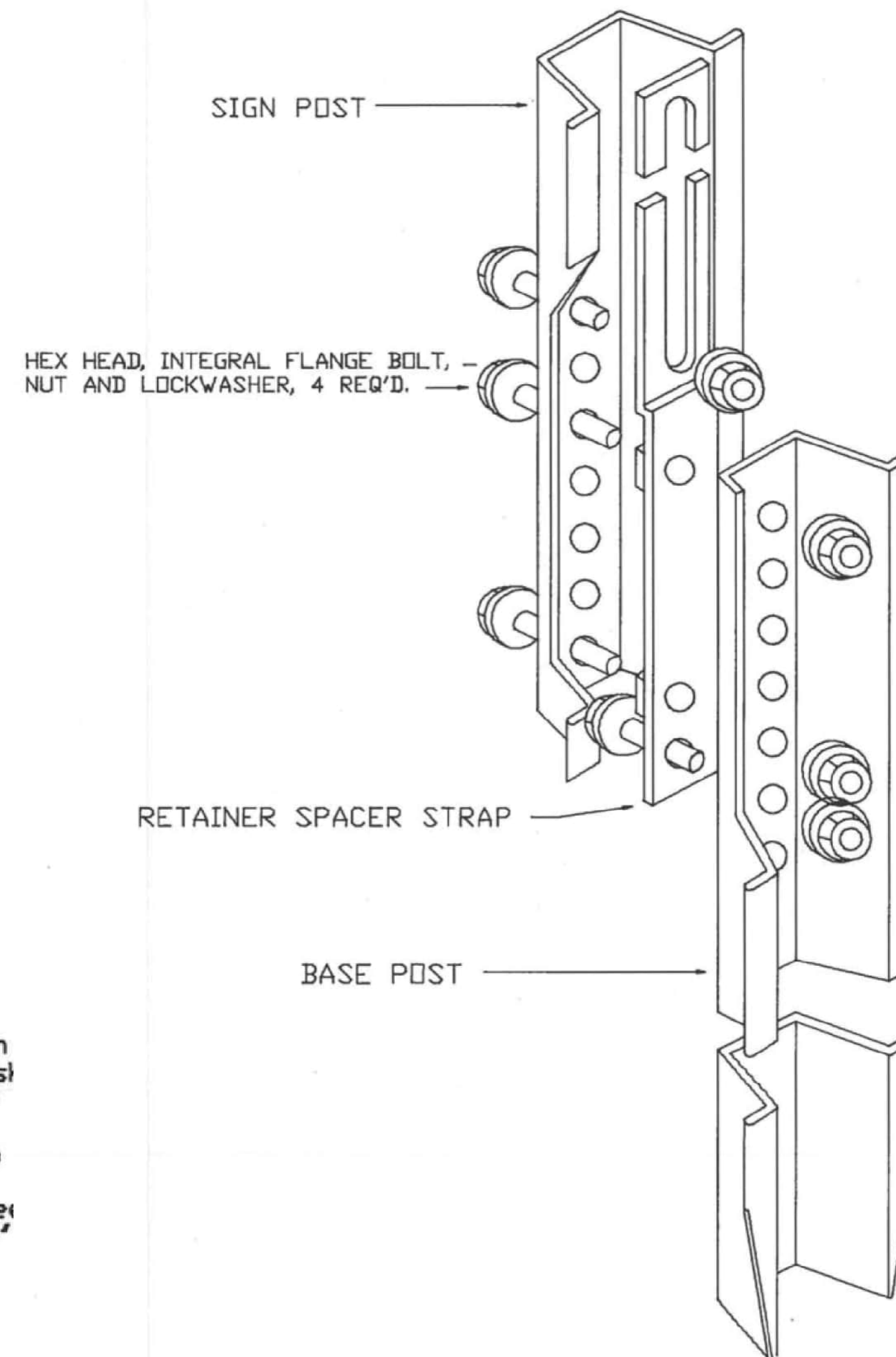
GENERAL NOTES

BREAKAWAY SIGN SUPPORTS SHALL BE FABRICATED FROM STEEL AND SHALL CONFORM TO THE BREAKAWAY DESIGN SHOWN ON THIS SHEET OR 'GROUND MOUNTED SIGN SUPPORTS BREAKAWAY DESIGN FOR SIGNS WITH AREA 20 SQ. FT. AND BELOW' AND THE MASS. DEPT. OF PUBLIC WORKS 'STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES'.

THE STEEL POSTS SHALL CONFORM TO ASTM-A366. THE CROSS SECTION OF THE POST SHALL BE SQUARE TUBE FORMED OF 12 GAUGE (.105" U.S.S. GAUGE) COLD-ROLLED CARBON STEEL SHEETS WHICH HAVE BEEN ZINC COATED (1.25 oz.) CONFORMING TO ASTM-A525, CAREFULLY ROLLED TO SIZE AND WELDED DIRECTLY IN THE CORNER BY HIGH FREQUENCY RESISTANCE WELDING OR EQUAL AND EXTERNALLY SCARFED TO AGREE WITH CORNER RADI. STANDARD OUTSIDE CORNER RADIUS SHALL BE 5/32" PLUS OR MINUS 1/64".

ALL BOLTS SHALL CONFORM TO ASTM-A307, CLASS A.
ALL BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AS PER ASTM-A153.

ATTACHMENT OF SIGN POST TO BASE POST



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	#####	3	4
PROJECT FILE NO.		#####	

STANDARD SIGN INSTALLATION DETAILS

EZE-ERECT SIGN POST INSTALLATION*

BOLTS: 5/16"-18 UNC x 2", GRBD, FOR 4.0 LB POSTS
5/16"-18 UNC x 1 3/4", GRBC, FOR 2.0, 2.25, 2.5 & 3.0 LB. POSTS
DO NOT USE 5/16" GRBC BOLTS ON 4.0 LB POSTS

- 1 A-DRIVE BASE POST TO WITHIN 12 IN. OF GROUND LEVEL

B-ATTACH RETAINER-SPACER STRAP WITH ONE BOLT, NUT, AND LOCKWASHER THROUGH BOTTOM HOLE OF STRAP AND SIXTH HOLE OF BASE POST. TOP HOLE OF STRAP SHOULD LINE UP WITH TOP HOLE IN BASE POST

C-ROTATE STRAP 90° TO LEFT

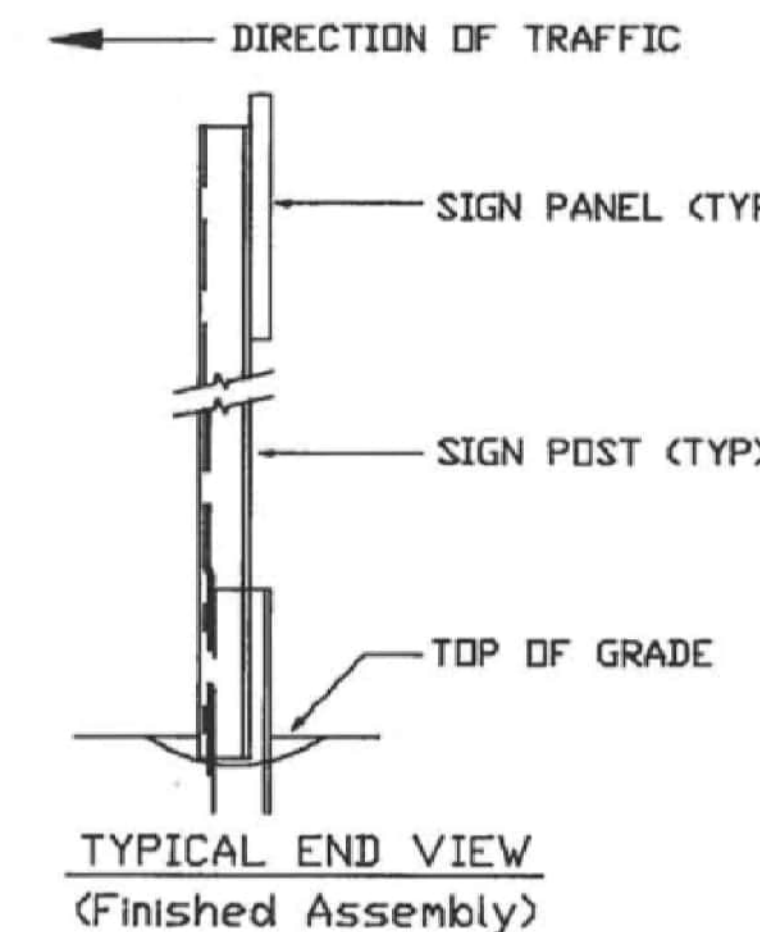
- 2 A-DRIVE BASE POST TO 4 IN. ABOVE GROUND

B-ROTATE STRAP TO VERTICAL POSITION

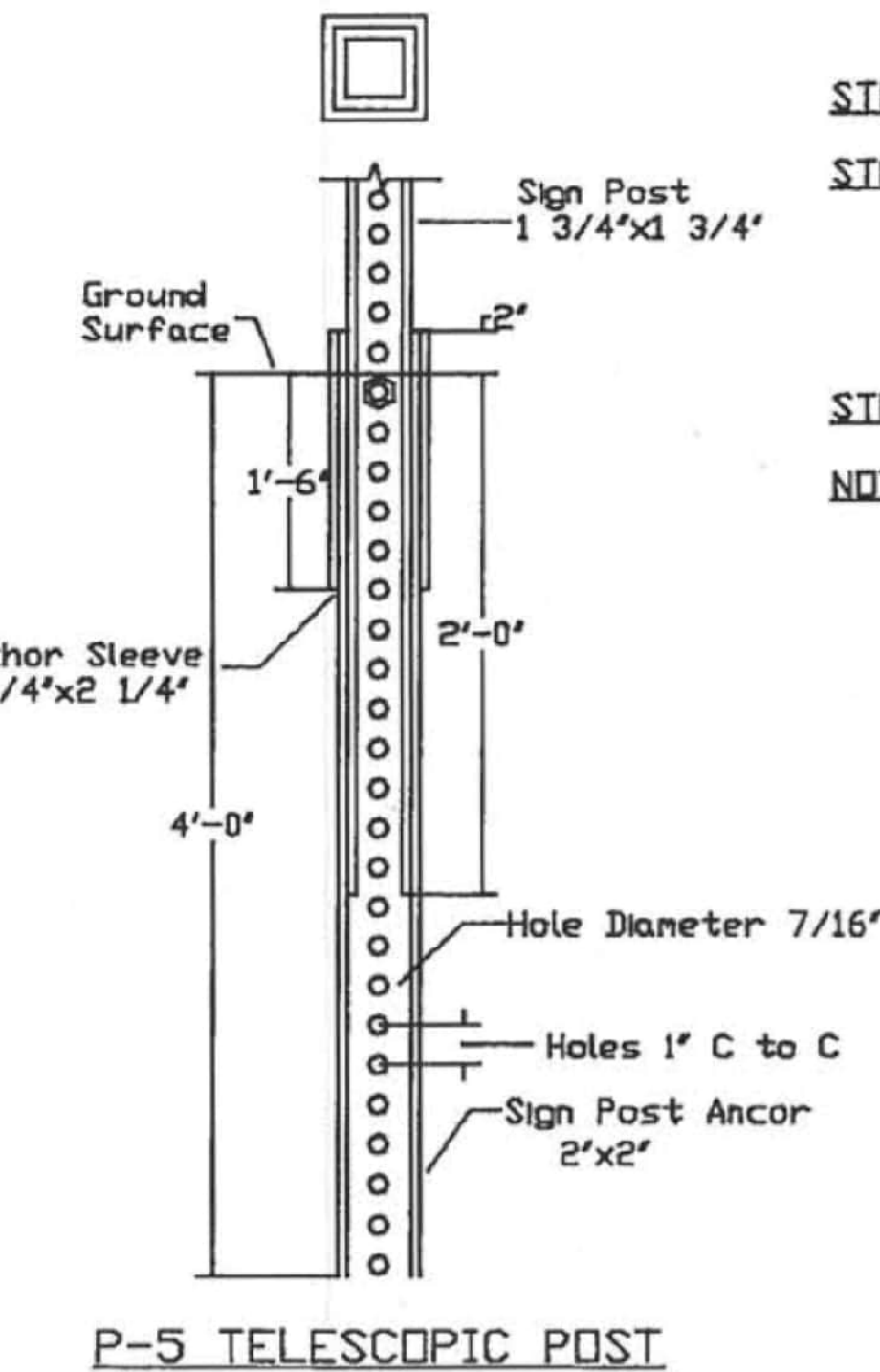
* Notwithstanding references to the availability of 3 and 4 lb./linear ft. posts, the sign size vs. post weight table on page 50 shall govern.

- 3 A-ATTACH SIGN POST WITH TWO BOLTS, NUTS, AND LOCKWASHERS IN BOTTOM AND FIFTH HOLES. (THESE CORRESPOND WITH SMALL HOLES IN STRAP)

B-INSERT ONE BOLT THROUGH SIGN POST AND BOTTOM OF LONG SLOT IN STRAP. TIGHTEN ALL NUTS SNUGLY BEFORE COMPLETELY TIGHTENING ASSEMBLY.

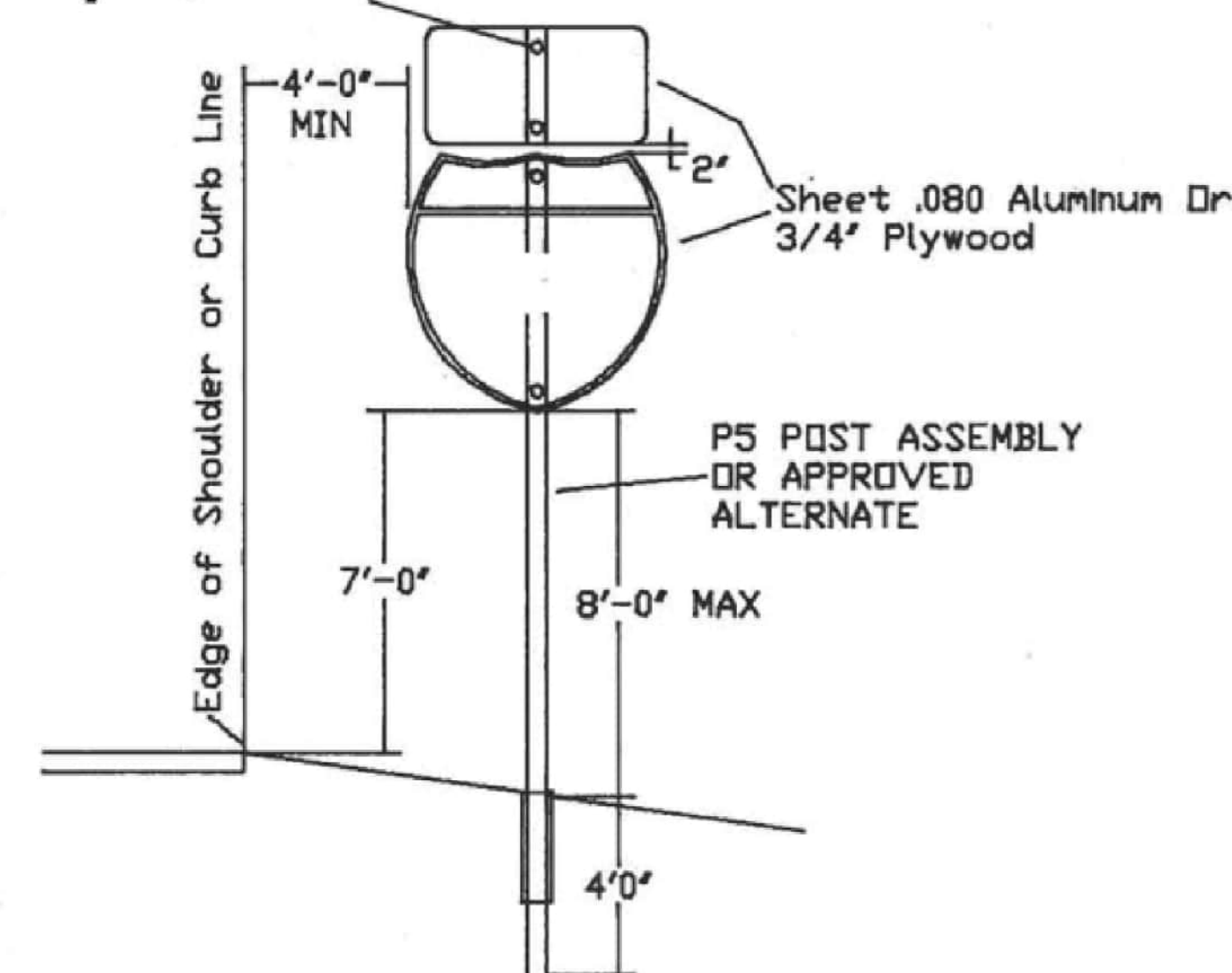


TYPICAL END VIEW
(Finished Assembly)



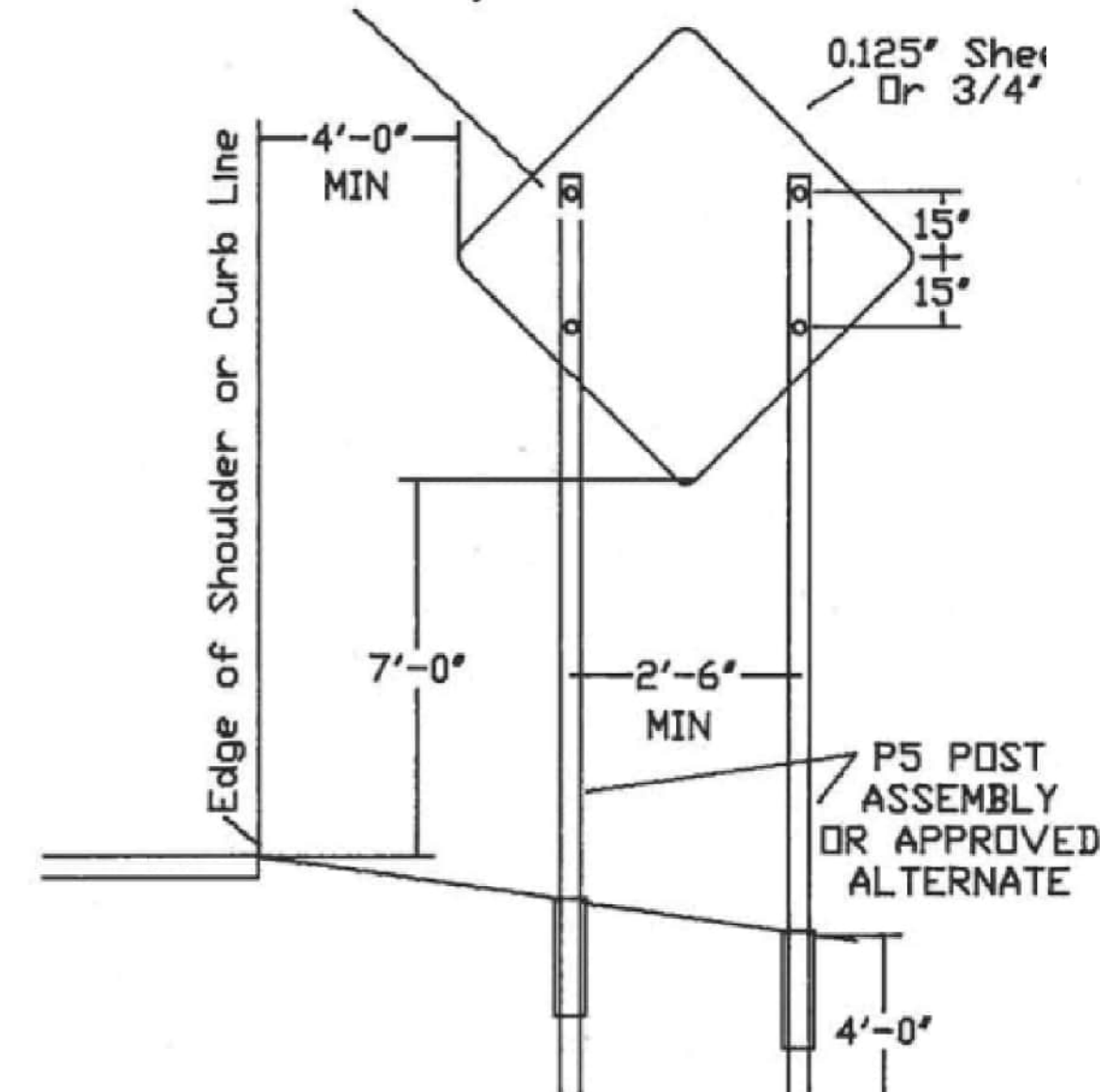
P-5 TELESCOPIC POST

Use 5/16" Dia. Hot Dipped Galvanized Button Head Bolt With A Slot In Head And Nut With Lockwasher, With A Minimum Of 1/4" Of Threads Beyond Nuts On All Signs After They Are Securely Fastened. (For Plywood Use 3/8" Dia. Bolt)



TYPICAL INSTALLATION FOR SIGNS WITH AREA UP TO AND INCLUDING 10 SQ. FT. SIGNS WITH A WIDTH OF 4' AND OVER SHALL REQUIRE TWO POSTS.

Use 3/8" Dia. Hot Dipped Galvanized Button With A Slot In Head And Nut With Lockwasher, With A Minimum Of 1/4" Of Threads Beyond Nuts On All Signs After They Are Securely Fastened. (For Plywood Use 3/8" Dia. Bolt)



TYPICAL INSTALLATION FOR SIGNS WITH AREA OVER 10 SQ. FT. UP TO AND INCLUDING 20 SQ. FT.

TYPICAL INSTALLATION FOR SMALL SIGNS (UP TO 20 SQ.FT.)

GENERAL NOTES:

1. DETAILS PROVIDED ARE FROM THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, 1990 ED.

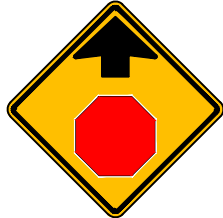
Attachment 4

Sign Summary



TRAFFIC SIGN SUMMARY

BROOKLINE SAINT PAUL ST/DUMMER ST			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	#####	4	4
PROJECT FILE NO.		#####	
SIGN SUMMARY			

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER			
LED ENHANCED R1-1	30"	30"		MUTCD 2023 STANDARDS			8	RED	WHITE	WHITE	P5*, 8	6.25	50
R1-3P	18"	6"		MUTCD 2023 STANDARDS			8	RED	WHITE	WHITE	0, MNT w/ R1-1	0.75	6
W3-1	30"	30"		MUTCD 2023 STANDARDS			7	YELLOW	BLACK	BLACK	P5*, 7	6.25	43.75
W23-2	36"	36"		MUTCD 2023 STANDARDS			2	YELLOW	BLACK	BLACK	P5*, 2	9	18

* VERTICAL RETROREFLECTIVE SHEETING STRIPS ON ALL P5 SIGN SUPPORTS FRONTS FOR ENHANCED SIGN CONSPICUITY PER MUTCD 2023 STANDARDS TO BE INSTALLED. STRIPS SHALL BE AT LEAST 2 INCHES WIDE AND MATCH THE BACKGROUND COLOR OF THE SIGN.

GENERAL NOTES:

- REFER TO INTERSECTION LAYOUT PLAN AND THE EVALUATION REPORT FOR COMPLETE LIST OF REQUIRED AND OPTIONAL ITEMS AND MEASURES TO BE DONE.
- NEW TRAFFIC PATTERN AHEAD SIGNS ARE TEMPORARY AND SHOULD BE REMOVED WHEN THE TRAFFIC PATTERN RETURN TO NORMAL, WHEN THE CHANGED PATTERN IS NO LONGER CONSIDERED TO BE NEW, OR WITHIN 12 MONTHS.
- SIGNS SHALL BE INSTALLED MINIMUM OF 6' FROM THE EDGE OF ROADWAY AND AT A MOUNTING HEIGHT OF 7' FROM THE BOTTOM EDGE OF THE SIGN TO THE ROADWAY SURFACE. SIGN POSITIONS SHALL CONFORM TO MUTCD FIGURES 2A-2 AND 2A-3.

Attachment 5

Form for Confirming Sign Options

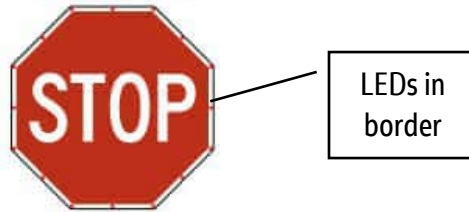


Confirm Sign Options

To avoid confusion and delay, please check the boxes below indicating preferred sign type and placement. Be sure to review your intersection's Conversion Plan (Attachment 3 in the memorandum).

LED Signs

LED stop signs are effective tools for improving intersection safety by gaining driver attention and increasing the intersection's conspicuity. LED stop signs require **continuing maintenance** to ensure effective operation including battery and solar panel maintenance and routine vegetation clearing to ensure adequate sunlight for charging.



Source: MUTCD 11th edition, Chapter 2A Figure 2A-1
https://mutcd.fhwa.dot.gov/pdfs/11th_Edition/Chapter2a.pdf

The municipality would like (check one)

- ☐ LED Stop Signs on ALL APPROACHES
- ☐ LED Stop Signs on the MAJOR APPROACHES and Static Stop Signs on the Minor Approaches
- ☐ Static Stop Signs on ALL APPROACHES
- ☐ Other (please specify) _____

Double Signing

Doubled-up signs (on both the left and right sides of the roadway) is also a FHWA [Proven Safety Countermeasure](#). However, they may involve tree removal or be unwanted for site restrictions or other reasons.



Source: [Connecticut Department of Transportation Technical Brief: Doubled-up Signs](#)

The municipality would like (check one)

- ☐ Double STOP and Stop Ahead Signs on ALL APPROACHES
- ☐ Double Signs on the MAJOR APPROACHES and Single Signs on the Minor Approaches
- ☐ Single STOP and Stop Ahead Signs on ALL APPROACHES
- ☐ Other (please specify) _____

Attachment 6

Community Informational Flyer



Best Practices for AWSC Conversion

Successful implementation of traffic control modifications from a Two-Way Stop Controlled Intersection to an All-Way Stop Controlled (AWSC) Intersection hinges on two critical factors:

1. Timely and extensive advance notification: get the word out to as many people as possible.
2. Comprehensive community engagement: provide transparency regarding when, how and why.

Proactively informing stakeholders increases the likelihood of a smoother transition and minimizes potential disruptions. This approach fosters understanding, cooperation, and compliance among community members, ultimately contributing to the overall success of the project.

This informational flyer provides best practices for successful conversion to AWSC, such as changeable message boards, temporary signs and plaques, and permanent treatments such as pavement markings.¹ This phased and proactive approach not only enhances public safety but also demonstrates the commitment to minimizing inconvenience and maintaining positive relationships with the communities served.

Two Weeks Prior to Implementation

Community Outreach	
Notify the Public of upcoming changes in as many ways as possible: media blasts, newspapers, local news broadcasts, signage, changeable message boards, etc. Be sure to include information regarding the expected safety benefits. See sample media post to the right. Reminders post implementation are also recommended.	Sample Media Post TRAFFIC ALERT Please be advised of an upcoming change to the traffic pattern at the intersection of Smith Road and Jones Road. On or about Monday, July 1, this intersection will be converted from a two-way stop to a four-way stop. What this means for you: All four approaches to the intersection will now have a stop sign. Drivers must come to a complete stop before proceeding through the intersection. Please remember the rule of right-of-way: the first vehicle to arrive at the stop sign is the first to proceed. If two vehicles arrive at the same time, the vehicle on the right has the right-of-way. This change is being implemented to improve safety at this intersection. Please drive with caution as everyone adjusts to the new pattern.

¹ The traffic control devices (signage and pavement markings) and changeable message boards referenced in this memorandum shall comply with the requirements outlined in the [Manual on Uniform Traffic Control Devices \(MUTCD\)](#). MassDOT also has an amendment to the MUTCD at: <https://www.mass.gov/doc/massachusetts-amendments-to-the-mutcd-2022/download>.

Portable Changeable Message Signs

When choosing the location for the **changeable message signs** it is important to consider the speed at which drivers typically travel at that site. Speeds impact the viewing distance necessary and the distance needed for vehicles to come to a complete stop. Other placement factors include roadway curvature (both horizontal and vertical), sight distance, and the presence of large trucks as these can block sign visibility. Refer to [MUTCD Section 6L.05 Portable Changeable Message Signs](#) for more information.

Sample Messages

**NEW ALL-
WAY STOP
AHEAD**

**STARTING
JANUARY 1**

**NEW ALL-
WAY STOP
AHEAD**

**ALL
TRAFFIC
MUST STOP**

First Twelve Months of Implementation

Once a new intersection control has been implemented, temporary treatments are recommended to provide the driver with advanced warning of the change. **These treatments should be left in place for no longer than 12 months.**

NEW Plaques

A **"NEW" plaque** can be mounted above a regulatory sign (STOP sign) when a new regulation takes effect to alert road users to the new traffic regulation. A **"NEW"** plaque may also be mounted above an advance warning sign (STOP AHEAD) to warn about a new traffic condition.



[MUTCD Section 2C.60 NEW Plaque \(W16-15P\)](#)



Source: reddit.com

New Traffic Pattern Ahead (W23-2)

A “NEW TRAFFIC PATTERN AHEAD” sign is recommended on the approach to an intersection to provide advance warning of a change in traffic patterns such as an intersection control or a change in roadway geometry.



[MUTCD Section 2C.38 NEW TRAFFIC PATTERN AHEAD \(W23-2\)](#)



Source: whatcomcounty.us

Warning Beacon – flashing, circular, yellow beacons may be added to the advance warning signs (Stop Ahead or New Traffic Pattern Ahead) and may be used to increase driver awareness of the new stop requirement, especially when standard signs may be overlooked due to high speeds or limited visibility.

The installation of warning beacons must adhere to the criteria outlined in the MUTCD Chapter 4S.
[MUTCD 11th Edition - Part 4](#)

Warning Beacons may be used as a temporary or permanent measure. The implementation of warning beacons shall be determined at the discretion of the municipality, taking into account the specific characteristics and concerns of the intersection and surrounding area.

Red or Orange Flags

One or more **red or orange flags** can be added above a regulatory or warning sign to help grab the driver's attention to the sign. They shall be oriented at 45 degrees to the vertical and can be either cloth or retroreflective material. Periodic flag maintenance or replacement may be required.



[MUTCD Section 2A.11 Enhanced Conspicuity for Standard Signs](#)



Source: coloradohometownweekly.com

Red or Orange Flags may also be used as a either a temporary or permanent treatment at the discretion of the municipality.

Long-Term Treatments

Some intersections may merit long-term treatments to improve compliance and realize the anticipated benefits of AWSC, particularly those intersections with geometric constraints. Such treatments can be highly cost effective, and may result in:

- Improved driver response
- Reduction of fatal and injury crashes
- Reduction of nighttime crashes

In addition to the examples below, the MUTCD describes treatments in [Section 2A.11 Enhanced Conspicuity for Standard Signs](#).

Vertical Retroreflective Strip on Signpost

Retroreflective sheeting on signposts are a Federal Highway Administration (FHWA) [Proven Safety Countermeasure](#).

A strip of retroreflective material can be used on a sign support to increase the sign's conspicuity. It must be two inches in width and extend the full length of the support from the sign to within two feet above the near edge of the roadway.

Its color shall match the background color of the sign. (Except that the color of the strip for the YIELD and DO NOT ENTER signs shall be red.)



Source: Trafficsign.com



Source: toolkits.ite.org

Double Signing

Doubled-up signs (on both the left and right sides of the roadway) are also an FHWA [Proven Safety Countermeasure](#).



Source: [Connecticut Department of Transportation Technical Brief: Doubled-up Signs](#)

STOP and STOP AHEAD Pavement Markings

Stenciled pavement markings can be installed in advance of the STOP and STOP AHEAD signs to supplement the traffic control device. Stenciled pavement markings can improve driver awareness of the stop-control at unsignalized intersections by having the intended messages directly within the driver's perceptual vision cone. STOP and STOP AHEAD Markings shall be white. Letters shall be 6 feet or more in height. If a pavement marking word message consists of more than one line of information, it should read in the direction of travel. See [MUTCD Section 3B.20](#).



Source: toolkits.ite.org

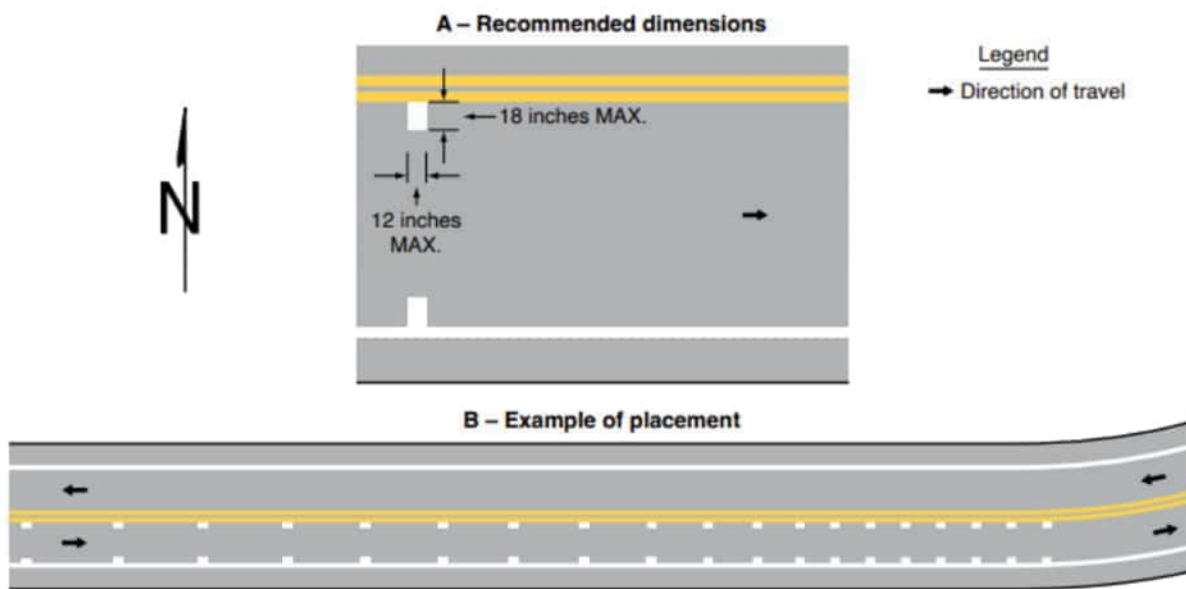
Optical Speed Bars

Also referred to as **Speed Reduction Markings**, optical speed bars are transverse pavement markings placed with progressively reduced spacing on both sides of the travel way to give drivers the impression that their speed is increasing. This illusion encourages drivers to slow down as they pass the markings. The markings can be used in advance of the intersection to manage speeds on the approach to the stop condition. These white transverse stripes are only allowed where longitudinal lines are present on both sides of the lane. FHWA notes that

Speed reduction markings should be reserved for unexpected horizontal or vertical curves or other feature where drivers need to decelerate in advance of the feature. The countermeasure should supplement, and not substitute for, appropriate warning signs and other traffic control devices. Agencies should avoid applying speed reduction markings to long roadway sections just to reduce traffic speed, because overuse could jeopardize the visual effect of the countermeasure. In addition, this countermeasure has been shown to be most effective in locations with unfamiliar drivers.²

² <https://highways.dot.gov/safety/rwd/keep-vehicles-road/horizontal-curve/low-cost-treatments-horizontal-curve-safety-2016-3>

Figure 3B-25. Example of the Application of Speed Reduction Markings



[MUTCD Section 3B. 28 Speed Reduction Markings](#)



Source: FHWA/KLS Engineering

Attachment 7 – Sample MOA



MEMORANDUM OF AGREEMENT ALL WAY STOP CONTROL (AWSC) PROGRAM

This Memorandum of Agreement (“**Agreement**”) is made and entered into this _____ day of _____, 2026, by and between the Massachusetts Department of Transportation, established pursuant to Chapter 6C of the General Laws, as amended, having its principal place of business at Ten Park Plaza, Boston, Massachusetts, 02116 (“**MassDOT**”), and the CITY/TOWN of _____, a municipal corporation and political subdivision of the Commonwealth of Massachusetts located in _____ County (“**Municipality**”). The Municipality and MassDOT are each sometimes referred to individually herein as a “Party”, and collectively as the “Parties.”

RECITALS

WHEREAS, to enhance pedestrian and driver safety in the Commonwealth of Massachusetts, MassDOT intends to procure sign materials as part of a program to assist municipalities with the conversion certain high-risk intersections on municipally owned roadways from two-way stop control (“**TWSC**”) to all-way stop control (“**AWSC**”); and

WHEREAS, Municipality desires to convert the intersections(s) identified in Exhibit A (the “**Locations**”), which are within the geographical jurisdiction of Municipality, from TWSC to AWSC, and has requested that MassDOT provide Municipality with the AWSC sign materials identified in Exhibit B (the “**Sign Materials**”); and

WHEREAS, MassDOT has confirmed that the Location(s) are eligible for the AWSC materials program and has approved Municipality’s request for Sign Materials; and

WHEREAS, Municipality has agreed to install the Sign Materials and convert the Location(s) from TWSC to AWSC at Municipality’s own expense; and

WHEREAS, MassDOT and Municipality seek to confirm their respective rights and obligations in connection with the Sign Materials as set forth in this Agreement.

NOW, THEREFORE, in consideration of the premises herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. **Recitals.** The recitals in this Agreement are true and correct, and are incorporated herein by reference and made part of his Agreement.
2. **Sign Materials.** MassDOT agrees to provide Municipality with the Sign Materials identified in Exhibit B. MassDOT will fund the entire cost of the Sign Materials, including the cost of delivery to Municipality. Upon delivery, ownership of the Sign Materials will transfer to Municipality.

It is understood and agreed that MassDOT’s procurement of the Sign Materials is contingent upon availability and continued appropriation of federal funds, and if for any

reason whatsoever, such funds are terminated or reduced or otherwise become unavailable, MassDOT may terminate this Agreement immediately.

3. **Project.** Municipality, at its sole expense, shall convert the Locations from TWSC to AWSC in accordance with Exhibit A and Exhibit B (the “**Project**”). As part of the conversion, Municipality shall install the Sign Materials provided by MassDOT at the location(s) indicated in the Project plans. Aside from the Sign Materials, Municipality shall provide all necessary labor, materials (including pavement marking materials, if applicable), equipment, and other services necessary to complete the Project. Municipality shall also be solely responsible for evaluating the specific site constraints for each Location and providing all necessary temporary traffic control devices and/or police details necessary to safely complete the Project. Traffic control plans, signs, devices, and police details shall conform to the Official Standards of MassDOT. Prior to installation, Municipality shall obtain, at its sole cost and expense, any and all applicable permits, approvals, including local approvals, and/or clearances required by local and state agencies, commissions, or bodies necessary for the conversion of the Location(s) to AWSC and for the completion of the Project. Municipality’s failure to comply with any requirement of this paragraph shall constitute a material breach of this Agreement and MassDOT may require Municipality to correct the deficiency at its own expense.

Municipality shall install the Sign Materials and complete the Project within ninety (90) days of their delivery to Municipality. If Municipality fails to install the Sign Materials and complete the Project within the ninety-day period, ownership of the Sign Materials shall revert to MassDOT and Municipality must return the Sign Materials to MassDOT at its sole expense.

Within a week of completing the Project, Municipality shall provide written notice to MassDOT that the Project has been completed. The notice shall include the Project’s completion date. Municipality shall also provide MassDOT with photograph(s) depicting each sign installed pursuant to this Agreement (“**Sign**”) and documentation, in a form acceptable to MassDOT, evidencing each Sign’s location and date of installation.

4. **Operation and Maintenance.** Municipality, at its own expense, shall be solely responsible for the proper operation, maintenance, and repair of the Signs for the duration of the Signs’ useful life. The Signs shall be operated and maintained in accordance with the applicable provisions of the most recent edition of the *Manual on Uniform Traffic Control Devices* (MUTCD) and the Massachusetts Amendments to the MUTCD published by MassDOT. In addition to annual preventative maintenance, Municipality’s maintenance obligation also includes the replacement of major components and miscellaneous parts due to damage or wear and any tree trimming that may be necessary for the proper functioning of a solar-powered Sign. Except for temporary New Traffic Pattern Ahead Signs, Municipality shall not remove or relocate any Sign nor install additional signs (warning or regulatory) with the limits of the Project without receiving

prior written approval from MassDOT. Temporary New Traffic Pattern Ahead Signs shall be removed by Municipality in the time frame indicated in Exhibit B. Failure on the part of Municipality to fulfill its responsibilities for the proper maintenance and operation of the Signs may disqualify Municipality from participation in future Federal Aid Projects in which Municipality has maintenance responsibility. Municipality's obligations under this Section shall survive the expiration or earlier termination of this Agreement.

5. **Term.** This Agreement shall be effective as of the date of full execution by Municipality and MassDOT and, unless terminated earlier as provided herein or otherwise agreed in writing by the Parties, shall remain in full force and effect for a period of 2 years after Municipality's receipt of the Sign Materials. This Agreement may be terminated by mutual agreement of the Parties, upon such terms and conditions as the Parties may mutually agree upon. Such termination shall be effective in accordance with a written agreement by the Parties.

In addition, MassDOT may, by written notice to Municipality, terminate this Agreement in any one of the following circumstances:

- (a) The Municipality neglects or fails to comply with any provision of this Agreement in accordance with its terms or within the time specified for performance herein, and Municipality fails to cure any such failure within thirty (30) calendar days after receipt of notice specifying such failure. In the event this Agreement is terminated pursuant to this provision, MassDOT shall not be liable to the Municipality for any costs incurred or burdens assumed upon or subsequent to, and associated with, such termination.
- (b) The applicable Federal funding source fails to appropriate or otherwise make available funds for the Agreement. In the event this Agreement is terminated pursuant to this provision, MassDOT shall not be liable to Municipality for any costs.

In the event that MassDOT terminates this MOA subsequent to the delivery of the Sign Materials to Municipality but prior to their installation, Municipality shall, at its expense, return the Sign Materials to the applicable MassDOT District Office.

6. **Compliance with Laws.** Municipality, in meeting its obligations hereunder, shall comply with all applicable federal, state, county, municipal and other governmental statutes, laws, rules, orders, regulations and ordinances. Municipality's obligations under this Section 6 shall survive the expiration or earlier termination of this Agreement.
7. **Indemnification.** To the extent permitted by the laws of the Commonwealth, Municipality shall indemnify, defend (at Municipality's sole expense and with counsel reasonably acceptable to MassDOT), and hold harmless MassDOT and all of MassDOT's officers, agents, and employees, from and against any and all suits, claims, proceedings, liabilities, losses

damages, penalties, charges and expenses (including attorneys' fees and experts' fees) of every name and nature, based on or arising out of any actual or alleged loss or injury (including death) to persons or damage to real or tangible property that are caused or alleged to be caused, in whole or in part, by, or to arise out of the acts or omissions of, Municipality, or its employees, contractors, subcontractors, or agents, in its performance of the obligations set forth herein. Municipality's obligations under this Section 7 shall survive the expiration or earlier termination of this Agreement.

8. **Notices.** Any notices required or permitted to be given hereunder shall be given in writing and shall be delivered (a) in person, (b) by certified or registered mail, postage prepaid, return receipt requested, or (c) by a commercial overnight courier that guarantees next day delivery and provides a receipt. Such notices shall be addressed as follows:

If to MassDOT: Massachusetts Department of Transportation
Highway Division of Traffic & Safety Engineering
10 Park Plaza, Suite 7520
Boston, MA 02116
Attention: Neil Boudreau

If to Municipality: _____

Attention: _____

or to such other address as either Party may from time to time specify in writing to the other Party. Any notice shall be effective only upon delivery.

9. **Authority.** The individuals executing this MOA represent that they are empowered and duly authorized to so execute this MOA on behalf of the Parties they represent.
10. **Miscellaneous.** This MOA represents the entire agreement between the Parties with respect to the subject matter hereof, superseding any prior oral or written agreements or understandings regarding the same, and any modification amendment or change to the terms and conditions hereof shall be binding only when expressed in writing and signed by both Parties hereto. This MOA may be signed in multiple counterparts each of which shall be deemed an original, but all of which when taken together shall constitute one and the same instrument. This MOA shall be governed by and interpreted in accordance with the laws of the Commonwealth of

Massachusetts, without regard to its choice of law rules. If any provision or condition of this MOA shall be deemed invalid or unenforceable, the remaining provisions and conditions shall remain in full force and effect and shall be valid and enforceable to the fullest extent permitted by law.

IN WITNESS WHEREOF, Municipality and MassDOT have caused this Agreement to be executed by their duly authorized officers or representatives as of the date first above written.

MASSACHUSETTS DEPARTMENT
OF TRANSPORTATION

MUNICIPALITY

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Attachment 8 – Traffic Volumes and Speeds



PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	2	20	5	0	27	0	10	7	0	17	17	21	2	0	40	2	6	0	0	8	92
7:15 AM	5	24	1	0	30	3	8	3	0	14	23	34	3	0	60	6	7	1	0	14	118
7:30 AM	1	27	4	0	32	2	8	9	0	19	31	35	1	0	67	3	7	1	0	11	129
7:45 AM	7	48	4	0	59	2	13	7	0	22	30	38	2	0	70	4	9	4	0	17	168
Total	15	119	14	0	148	7	39	26	0	72	101	128	8	0	237	15	29	6	0	50	507
8:00 AM	7	30	12	0	49	5	9	6	0	20	24	50	1	0	75	4	9	0	0	13	157
8:15 AM	6	37	6	0	49	5	9	5	0	19	33	52	2	0	87	3	12	1	0	16	171
8:30 AM	8	29	4	0	41	3	12	6	0	21	40	63	1	0	104	3	16	0	0	19	185
8:45 AM	9	41	12	0	62	8	8	4	0	20	27	64	1	0	92	3	19	6	0	28	202
Total	30	137	34	0	201	21	38	21	0	80	124	229	5	0	358	13	56	7	0	76	715
Grand Total	45	256	48	0	349	28	77	47	0	152	225	357	13	0	595	28	85	13	0	126	1222
Approach %	12.9	73.4	13.8	0.0		18.4	50.7	30.9	0.0		37.8	60.0	2.2	0.0		22.2	67.5	10.3	0.0		
Total %	3.7	20.9	3.9	0.0	28.6	2.3	6.3	3.8	0.0	12.4	18.4	29.2	1.1	0.0	48.7	2.3	7.0	1.1	0.0	10.3	
Exiting Leg Total	398					358					331					135					1222
Cars	45	252	47	0	344	24	77	41	0	142	220	348	12	0	580	26	83	13	0	122	1188
% Cars	100.0	98.4	97.9	0.0	98.6	85.7	100.0	87.2	0.0	93.4	97.8	97.5	92.3	0.0	97.5	92.9	97.6	100.0	0.0	96.8	97.2
Exiting Leg Total	385					350					319					134					1188
Heavy Vehicles	0	4	1	0	5	4	0	6	0	10	5	9	1	0	15	2	2	0	0	4	34
% Heavy Vehicles	0.0	1.6	2.1	0.0	1.4	14.3	0.0	12.8	0.0	6.6	2.2	2.5	7.7	0.0	2.5	7.1	2.4	0.0	0.0	3.2	2.8
Exiting Leg Total	13					8					12					1					34

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	St Paul Street					Dummer Street					St Paul Street					Dummer Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	7	30	12	0	49	5	9	6	0	20	24	50	1	0	75	4	9	0	0	13	157
8:15 AM	6	37	6	0	49	5	9	5	0	19	33	52	2	0	87	3	12	1	0	16	171
8:30 AM	8	29	4	0	41	3	12	6	0	21	40	63	1	0	104	3	16	0	0	19	185
8:45 AM	9	41	12	0	62	8	8	4	0	20	27	64	1	0	92	3	19	6	0	28	202
Total Volume	30	137	34	0	201	21	38	21	0	80	124	229	5	0	358	13	56	7	0	76	715
% Approach Total	14.9	68.2	16.9	0.0		26.3	47.5	26.3	0.0		34.6	64.0	1.4	0.0		17.1	73.7	9.2	0.0		
PHF	0.833	0.835	0.708	0.000	0.810	0.656	0.792	0.875	0.000	0.952	0.775	0.895	0.625	0.000	0.861	0.813	0.737	0.292	0.000	0.679	0.885
Cars	30	135	33	0	198	18	38	20	0	76	121	224	5	0	350	13	56	7	0	76	700
Cars %	100.0	98.5	97.1	0.0	98.5	85.7	100.0	95.2	0.0	95.0	97.6	97.8	100.0	0.0	97.8	100.0	100.0	100.0	0.0	100.0	97.9
Heavy Vehicles	0	2	1	0	3	3	0	1	0	4	3	5	0	0	8	0	0	0	0	0	15
Heavy Vehicles %	0.0	1.5	2.9	0.0	1.5	14.3	0.0	4.8	0.0	5.0	2.4	2.2	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	2.1
Cars Enter Leg	30	135	33	0	198	18	38	20	0	76	121	224	5	0	350	13	56	7	0	76	700
Heavy Enter Leg	0	2	1	0	3	3	0	1	0	4	3	5	0	0	8	0	0	0	0	0	15
Total Entering Leg	30	137	34	0	201	21	38	21	0	80	124	229	5	0	358	13	56	7	0	76	715
Cars Exiting Leg	249					210					168					73					700
Heavy Exiting Leg	8					4					3					0					15
Total Exiting Leg	257					214					171					73					715

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	2	20	5	0	27	0	10	6	0	16	17	20	2	0	39	2	6	0	0	8	90
7:15 AM	5	24	1	0	30	3	8	1	0	12	23	34	3	0	60	6	6	1	0	13	115
7:30 AM	1	26	4	0	31	2	8	7	0	17	30	34	1	0	65	2	7	1	0	10	123
7:45 AM	7	47	4	0	58	1	13	7	0	21	29	36	1	0	66	3	8	4	0	15	160
Total	15	117	14	0	146	6	39	21	0	66	99	124	7	0	230	13	27	6	0	46	488
8:00 AM	7	30	12	0	49	3	9	5	0	17	24	48	1	0	73	4	9	0	0	13	152
8:15 AM	6	36	6	0	48	5	9	5	0	19	31	51	2	0	84	3	12	1	0	16	167
8:30 AM	8	29	3	0	40	2	12	6	0	20	40	61	1	0	102	3	16	0	0	19	181
8:45 AM	9	40	12	0	61	8	8	4	0	20	26	64	1	0	91	3	19	6	0	28	200
Total	30	135	33	0	198	18	38	20	0	76	121	224	5	0	350	13	56	7	0	76	700
Grand Total	45	252	47	0	344	24	77	41	0	142	220	348	12	0	580	26	83	13	0	122	1188
Approach %	13.1	73.3	13.7	0.0		16.9	54.2	28.9	0.0		37.9	60.0	2.1	0.0		21.3	68.0	10.7	0.0		
Total %	3.8	21.2	4.0	0.0	29.0	2.0	6.5	3.5	0.0	12.0	18.5	29.3	1.0	0.0	48.8	2.2	7.0	1.1	0.0	10.3	
Exiting Leg Total	385					350					319					134					1188

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	7	30	12	0	49	3	9	5	0	17	24	48	1	0	73	4	9	0	0	13	152
8:15 AM	6	36	6	0	48	5	9	5	0	19	31	51	2	0	84	3	12	1	0	16	167
8:30 AM	8	29	3	0	40	2	12	6	0	20	40	61	1	0	102	3	16	0	0	19	181
8:45 AM	9	40	12	0	61	8	8	4	0	20	26	64	1	0	91	3	19	6	0	28	200
Total Volume	30	135	33	0	198	18	38	20	0	76	121	224	5	0	350	13	56	7	0	76	700
% Approach Total	15.2	68.2	16.7	0.0		23.7	50.0	26.3	0.0		34.6	64.0	1.4	0.0		17.1	73.7	9.2	0.0		
PHF	0.833	0.844	0.688	0.000	0.811	0.563	0.792	0.833	0.000	0.950	0.756	0.875	0.625	0.000	0.858	0.813	0.737	0.292	0.000	0.679	0.875
Entering Leg	30	135	33	0	198	18	38	20	0	76	121	224	5	0	350	13	56	7	0	76	700
Exiting Leg					249					210					168					73	700
Total					447					286					518					149	1400

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	3
7:30 AM	0	1	0	0	1	0	0	2	0	2	1	1	0	0	2	1	0	0	0	1	6
7:45 AM	0	1	0	0	1	1	0	0	0	1	1	2	1	0	4	1	1	0	0	2	8
Total	0	2	0	0	2	1	0	5	0	6	2	4	1	0	7	2	2	0	0	4	19
8:00 AM	0	0	0	0	0	2	0	1	0	3	0	2	0	0	2	0	0	0	0	0	5
8:15 AM	0	1	0	0	1	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	4
8:30 AM	0	0	1	0	1	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	4
8:45 AM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Total	0	2	1	0	3	3	0	1	0	4	3	5	0	0	8	0	0	0	0	0	15
Grand Total	0	4	1	0	5	4	0	6	0	10	5	9	1	0	15	2	2	0	0	4	34
Approach %	0.0	80.0	20.0	0.0		40.0	0.0	60.0	0.0		33.3	60.0	6.7	0.0		50.0	50.0	0.0	0.0		
Total %	0.0	11.8	2.9	0.0	14.7	11.8	0.0	17.6	0.0	29.4	14.7	26.5	2.9	0.0	44.1	5.9	5.9	0.0	0.0	11.8	
Exiting Leg Total	13					8					12					1					34
Buses	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	1	0	0	1	4
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	22.2	0.0	0.0	20.0	0.0	50.0	0.0	0.0	25.0	11.8
Exiting Leg Total	2					2					0					0					4
Single-Unit Trucks	0	4	1	0	5	4	0	6	0	10	4	7	1	0	12	2	1	0	0	3	30
% Single-Unit	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	80.0	77.8	100.0	0.0	80.0	100.0	50.0	0.0	0.0	75.0	88.2
Exiting Leg Total	11					6					12					1					30
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	0	1	0	0	1	0	0	2	0	2	1	1	0	0	2	1	0	0	0	1	6
7:45 AM	0	1	0	0	1	1	0	0	0	1	1	2	1	0	4	1	1	0	0	2	8
8:00 AM	0	0	0	0	0	2	0	1	0	3	0	2	0	0	2	0	0	0	0	0	5
8:15 AM	0	1	0	0	1	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	4
Total Volume	0	3	0	0	3	3	0	3	0	6	4	6	1	0	11	2	1	0	0	3	23
% Approach Total	0.0	100.0	0.0	0.0		50.0	0.0	50.0	0.0		36.4	54.5	9.1	0.0		66.7	33.3	0.0	0.0		
PHF	0.000	0.750	0.000	0.000	0.750	0.375	0.000	0.375	0.000	0.500	0.500	0.750	0.250	0.000	0.688	0.500	0.250	0.000	0.000	0.375	0.719
Buses	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	16.7	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	8.7
Single-Unit Trucks	0	3	0	0	3	3	0	3	0	6	3	5	1	0	9	2	1	0	0	3	21
Single-Unit %	0.0	100.0	0.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	75.0	83.3	100.0	0.0	81.8	100.0	100.0	0.0	0.0	100.0	91.3
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
Single-Unit Trucks	0	3	0	0	3	3	0	3	0	6	3	5	1	0	9	2	1	0	0	3	21
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	3	0	0	3	3	0	3	0	6	4	6	1	0	11	2	1	0	0	3	23
Buses	1					1					0					0					2
Single-Unit Trucks	8					4					8					1					21
Articulated Trucks	0					0					0					0					0
Total Exiting Leg	9					5					8					1					23

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	1	0	0	1	4
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		33.3	66.7	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	50.0	0.0	0.0	75.0	0.0	25.0	0.0	0.0	25.0	
Exiting Leg Total	2					2					0					0					4

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	St Paul Street					Dummer Street					St Paul Street					Dummer Street						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
Total Volume	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	3	
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.500	0.000	0.250	0.000	0.000	0.250	0.750	
Entering Leg	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	3	
Exiting Leg	1					2					0					0					3	
Total	1					2					2					1					6	

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	1	0	0	1	0	0	2	0	2	0	1	0	0	1	1	0	0	0	1	5
7:45 AM	0	1	0	0	1	1	0	0	0	1	1	2	1	0	4	1	1	0	0	2	8
Total	0	2	0	0	2	1	0	5	0	6	1	4	1	0	6	2	1	0	0	3	17
8:00 AM	0	0	0	0	0	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	4
8:15 AM	0	1	0	0	1	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	4
8:30 AM	0	0	1	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	3
8:45 AM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Total	0	2	1	0	3	3	0	1	0	4	3	3	0	0	6	0	0	0	0	0	13
Grand Total	0	4	1	0	5	4	0	6	0	10	4	7	1	0	12	2	1	0	0	3	30
Approach %	0.0	80.0	20.0	0.0		40.0	0.0	60.0	0.0		33.3	58.3	8.3	0.0		66.7	33.3	0.0	0.0		
Total %	0.0	13.3	3.3	0.0	16.7	13.3	0.0	20.0	0.0	33.3	13.3	23.3	3.3	0.0	40.0	6.7	3.3	0.0	0.0	10.0	
Exiting Leg Total	11					6					12					1					30

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	St Paul Street					Dummer Street					St Paul Street					Dummer Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	0	1	0	0	1	0	0	2	0	2	0	1	0	0	1	1	0	0	0	1	5
7:45 AM	0	1	0	0	1	1	0	0	0	1	1	2	1	0	4	1	1	0	0	2	8
8:00 AM	0	0	0	0	0	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	4
8:15 AM	0	1	0	0	1	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	4
Total Volume	0	3	0	0	3	3	0	3	0	6	3	5	1	0	9	2	1	0	0	3	21
% Approach Total	0.0	100.0	0.0	0.0		50.0	0.0	50.0	0.0		33.3	55.6	11.1	0.0		66.7	33.3	0.0	0.0		
PHF	0.000	0.750	0.000	0.000	0.750	0.375	0.000	0.375	0.000	0.500	0.375	0.625	0.250	0.000	0.563	0.500	0.250	0.000	0.000	0.375	0.656
Entering Leg	0	3	0	0	3	3	0	3	0	6	3	5	1	0	9	2	1	0	0	3	21
Exiting Leg					8					4					8					1	21
Total	11					10					17					4					42

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	St Paul Street					Dummer Street					St Paul Street					Dummer Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0					0					0					0					0
Total	0					0					0					0					0

PDI File #: 250954 (2)
 Location: N: St Paul Street S: St Paul Street
 Location: E: Dummer Street W: Dummer Street
 City, State: Brookline, MA
 Client: Jacobs/ W. Kwon
 Site Code: AWSC Project #3
 Count Date: Tuesday, January 6, 2026
 Start Time: 7:00 AM
 End Time: 9:00 AM



Bicycles (on Roadway and Crosswalks)

	St Paul Street							Dummer Street							St Paul Street							Dummer Street							Total	
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	3	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	2	0	0	0	0	1	2	4	
7:30 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:45 AM	0	1	0	0	0	0	1	1	0	0	0	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	4	
Total	0	4	0	0	0	0	4	1	0	0	0	0	0	1	0	5	0	0	0	0	0	5	1	0	0	0	0	1	2	12
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	2	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	4	0	0	0	0	0	0	4	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	4	0	0	0	0	0	4	0	0	0	0	0	0	5	
8:45 AM	0	2	0	0	0	0	2	0	0	0	0	0	1	1	1	3	0	0	0	0	0	4	0	0	0	0	0	0	7	
Total	0	2	0	0	0	0	2	0	0	0	0	0	2	2	2	12	0	0	0	0	0	14	0	0	0	0	0	0	18	
Grand Total	0	6	0	0	0	0	6	1	0	0	0	0	2	3	2	17	0	0	0	0	0	19	1	0	0	0	0	1	2	30
Approach %	0.0	100.0	0.0	0.0	0.0	0.0		33.3	0.0	0.0	0.0	0.0	66.7		10.5	89.5	0.0	0.0	0.0	0.0		50.0	0.0	0.0	0.0	0.0	50.0			
Total %	0.0	20.0	0.0	0.0	0.0	0.0	20.0	3.3	0.0	0.0	0.0	0.0	6.7	10.0	6.7	56.7	0.0	0.0	0.0	0.0	63.3	3.3	0.0	0.0	0.0	0.0	3.3	6.7		
Exiting Leg Total	18							4							7							1							30	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	St Paul Street							Dummer Street							St Paul Street							Dummer Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	4	0	0	0	0	0	0	4
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	4	0	0	0	0	0	4	0	0	0	0	0	0	5
8:45 AM	0	2	0	0	0	0	2	0	0	0	0	0	1	1	1	3	0	0	0	0	0	4	0	0	0	0	0	0	7
Total Volume	0	2	0	0	0	0	2	0	0	0	0	0	2	2	2	12	0	0	0	0	0	14	0	0	0	0	0	0	18
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		14.3	85.7	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.500	0.500		0.500	0.750	0.000	0.000	0.000	0.000	0.875	0.000	0.000	0.000	0.000	0.000	0.000	0.643	
Entering Leg	0	2	0	0	0	0	2	0	0	0	0	0	2	2	2	12	0	0	0	0	0	14	0	0	0	0	0	0	18
Exiting Leg	12							4							2							0							18
Total	14							6							16							0							36

PDI File #: 250954 (2)
 Location: N: St Paul Street S: St Paul Street
 Location: E: Dummer Street W: Dummer Street
 City, State: Brookline, MA
 Client: Jacobs/ W. Kwon
 Site Code: AWSC Project #3
 Count Date: Tuesday, January 6, 2026
 Start Time: 7:00 AM
 End Time: 9:00 AM
 Class:



Pedestrians

	St Paul Street							Dummer Street							St Paul Street							Dummer Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	5	5	0	0	0	0	0	4	4	0	0	0	0	3	3	6	0	0	0	0	3	2	5	20
7:15 AM	0	0	0	0	0	2	2	0	0	0	0	1	3	4	0	0	0	0	1	2	3	0	0	0	0	0	3	3	12
7:30 AM	0	0	0	0	2	1	3	0	0	0	0	4	1	5	0	0	0	0	3	4	7	0	0	0	0	5	4	9	24
7:45 AM	0	0	0	0	0	3	3	0	0	0	0	3	0	3	0	0	0	0	3	3	6	0	0	0	0	11	3	14	26
Total	0	0	0	0	2	11	13	0	0	0	0	8	8	16	0	0	0	0	10	12	22	0	0	0	0	19	12	31	82
8:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	4	4	0	0	0	0	0	1	1	0	0	0	0	3	1	4	10
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	9	11	0	0	0	0	2	0	2	0	0	0	0	6	3	9	22
8:30 AM	0	0	0	0	6	2	8	0	0	0	0	1	7	8	0	0	0	0	2	1	3	0	0	0	0	4	2	6	25
8:45 AM	0	0	0	0	4	0	4	0	0	0	0	1	2	3	0	0	0	0	2	0	2	0	0	0	0	9	2	11	20
Total	0	0	0	0	11	2	13	0	0	0	0	4	22	26	0	0	0	0	6	2	8	0	0	0	0	22	8	30	77
Grand Total	0	0	0	0	13	13	26	0	0	0	0	12	30	42	0	0	0	0	16	14	30	0	0	0	0	41	20	61	159
Approach %	0	0	0	0	50	50		0	0	0	0	28.6	71.4		0	0	0	0	53.3	46.7		0	0	0	0	67.2	32.8		
Total %	0	0	0	0	8.18	8.18	16.4	0	0	0	0	7.55	18.9	26.4	0	0	0	0	10.1	8.81	18.9	0	0	0	0	25.8	12.6	38.4	
Exiting Leg Total	26							42							30							61							159

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	St Paul Street							Dummer Street							St Paul Street							Dummer Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:45 AM	0	0	0	0	0	3	3	0	0	0	0	3	0	3	0	0	0	0	3	3	6	0	0	0	0	11	3	14	26
8:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	4	4	0	0	0	0	0	1	1	0	0	0	0	3	1	4	10
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	9	11	0	0	0	0	2	0	2	0	0	0	0	6	3	9	22
8:30 AM	0	0	0	0	6	2	8	0	0	0	0	1	7	8	0	0	0	0	2	1	3	0	0	0	0	4	2	6	25
Total Volume	0	0	0	0	7	5	12	0	0	0	0	6	20	26	0	0	0	0	7	5	12	0	0	0	0	24	9	33	83
% Approach Total	0.0	0.0	0.0	0.0	58.3	41.7		0.0	0.0	0.0	0.0	23.1	76.9		0.0	0.0	0.0	0.0	58.3	41.7		0.0	0.0	0.0	0.0	72.7	27.3		
PHF	0.000	0.000	0.000	0.000	0.292	0.417	0.375	0.000	0.000	0.000	0.000	0.500	0.556	0.591	0.000	0.000	0.000	0.000	0.583	0.417	0.500	0.000	0.000	0.000	0.000	0.545	0.750	0.589	0.798
Entering Leg	0	0	0	0	7	5	12	0	0	0	0	6	20	26	0	0	0	0	7	5	12	0	0	0	0	24	9	33	83
Exiting Leg	12							26							12							33							83
Total	24							52							24							66							166

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	4	50	7	2	63	8	24	10	0	42	25	47	2	0	74	5	11	3	0	19	198
4:15 PM	6	42	4	0	52	2	17	8	0	27	25	31	4	0	60	5	25	4	0	34	173
4:30 PM	3	45	6	0	54	5	9	9	0	23	18	37	3	0	58	5	14	1	0	20	155
4:45 PM	8	39	8	0	55	11	11	15	0	37	20	28	2	0	50	5	10	5	0	20	162
Total	21	176	25	2	224	26	61	42	0	129	88	143	11	0	242	20	60	13	0	93	688
5:00 PM	6	55	6	0	67	13	20	10	0	43	25	44	3	0	72	7	19	3	0	29	211
5:15 PM	8	60	6	0	74	10	17	9	0	36	11	41	4	0	56	5	6	2	0	13	179
5:30 PM	3	55	2	0	60	13	20	15	0	48	17	48	3	0	68	4	14	2	0	20	196
5:45 PM	8	38	5	0	51	11	9	11	0	31	32	38	2	0	72	3	14	5	0	22	176
Total	25	208	19	0	252	47	66	45	0	158	85	171	12	0	268	19	53	12	0	84	762
Grand Total	46	384	44	2	476	73	127	87	0	287	173	314	23	0	510	39	113	25	0	177	1450
Approach %	9.7	80.7	9.2	0.4		25.4	44.3	30.3	0.0		33.9	61.6	4.5	0.0		22.0	63.8	14.1	0.0		
Total %	3.2	26.5	3.0	0.1	32.8	5.0	8.8	6.0	0.0	19.8	11.9	21.7	1.6	0.0	35.2	2.7	7.8	1.7	0.0	12.2	
Exiting Leg Total	414					330					510					196					1450
Cars	46	379	43	2	470	72	125	86	0	283	171	309	23	0	503	39	113	25	0	177	1433
% Cars	100.0	98.7	97.7	100.0	98.7	98.6	98.4	98.9	0.0	98.6	98.8	98.4	100.0	0.0	98.6	100.0	100.0	100.0	0.0	100.0	98.8
Exiting Leg Total	408					327					504					194					1433
Heavy Vehicles	0	5	1	0	6	1	2	1	0	4	2	5	0	0	7	0	0	0	0	0	17
% Heavy Vehicles	0.0	1.3	2.3	0.0	1.3	1.4	1.6	1.1	0.0	1.4	1.2	1.6	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.2
Exiting Leg Total	6					3					6					2					17

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
5:00 PM	6	55	6	0	67	13	20	10	0	43	25	44	3	0	72	7	19	3	0	29	211
5:15 PM	8	60	6	0	74	10	17	9	0	36	11	41	4	0	56	5	6	2	0	13	179
5:30 PM	3	55	2	0	60	13	20	15	0	48	17	48	3	0	68	4	14	2	0	20	196
5:45 PM	8	38	5	0	51	11	9	11	0	31	32	38	2	0	72	3	14	5	0	22	176
Total Volume	25	208	19	0	252	47	66	45	0	158	85	171	12	0	268	19	53	12	0	84	762
% Approach Total	9.9	82.5	7.5	0.0		29.7	41.8	28.5	0.0		31.7	63.8	4.5	0.0		22.6	63.1	14.3	0.0		
PHF	0.781	0.867	0.792	0.000	0.851	0.904	0.825	0.750	0.000	0.823	0.664	0.891	0.750	0.000	0.931	0.679	0.697	0.600	0.000	0.724	0.903
Cars	25	203	19	0	247	46	65	45	0	156	85	168	12	0	265	19	53	12	0	84	752
Cars %	100.0	97.6	100.0	0.0	98.0	97.9	98.5	100.0	0.0	98.7	100.0	98.2	100.0	0.0	98.9	100.0	100.0	100.0	0.0	100.0	98.7
Heavy Vehicles	0	5	0	0	5	1	1	0	0	2	0	3	0	0	3	0	0	0	0	0	10
Heavy Vehicles %	0.0	2.4	0.0	0.0	2.0	2.1	1.5	0.0	0.0	1.3	0.0	1.8	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	1.3
Cars Enter Leg	25	203	19	0	247	46	65	45	0	156	85	168	12	0	265	19	53	12	0	84	752
Heavy Enter Leg	0	5	0	0	5	1	1	0	0	2	0	3	0	0	3	0	0	0	0	0	10
Total Entering Leg	25	208	19	0	252	47	66	45	0	158	85	171	12	0	268	19	53	12	0	84	762
Cars Exiting Leg	226					157					267					102					752
Heavy Exiting Leg	4					0					5					1					10
Total Exiting Leg	230					157					272					103					762

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	4	50	7	2	63	8	24	10	0	42	24	47	2	0	73	5	11	3	0	19	197
4:15 PM	6	42	4	0	52	2	17	8	0	27	24	30	4	0	58	5	25	4	0	34	171
4:30 PM	3	45	5	0	53	5	8	8	0	21	18	36	3	0	57	5	14	1	0	20	151
4:45 PM	8	39	8	0	55	11	11	15	0	37	20	28	2	0	50	5	10	5	0	20	162
Total	21	176	24	2	223	26	60	41	0	127	86	141	11	0	238	20	60	13	0	93	681
5:00 PM	6	55	6	0	67	13	20	10	0	43	25	42	3	0	70	7	19	3	0	29	209
5:15 PM	8	57	6	0	71	10	16	9	0	35	11	41	4	0	56	5	6	2	0	13	175
5:30 PM	3	55	2	0	60	12	20	15	0	47	17	47	3	0	67	4	14	2	0	20	194
5:45 PM	8	36	5	0	49	11	9	11	0	31	32	38	2	0	72	3	14	5	0	22	174
Total	25	203	19	0	247	46	65	45	0	156	85	168	12	0	265	19	53	12	0	84	752
Grand Total	46	379	43	2	470	72	125	86	0	283	171	309	23	0	503	39	113	25	0	177	1433
Approach %	9.8	80.6	9.1	0.4		25.4	44.2	30.4	0.0		34.0	61.4	4.6	0.0		22.0	63.8	14.1	0.0		
Total %	3.2	26.4	3.0	0.1	32.8	5.0	8.7	6.0	0.0	19.7	11.9	21.6	1.6	0.0	35.1	2.7	7.9	1.7	0.0	12.4	
Exiting Leg Total	408					327					504					194					1433

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
5:00 PM	6	55	6	0	67	13	20	10	0	43	25	42	3	0	70	7	19	3	0	29	209
5:15 PM	8	57	6	0	71	10	16	9	0	35	11	41	4	0	56	5	6	2	0	13	175
5:30 PM	3	55	2	0	60	12	20	15	0	47	17	47	3	0	67	4	14	2	0	20	194
5:45 PM	8	36	5	0	49	11	9	11	0	31	32	38	2	0	72	3	14	5	0	22	174
Total Volume	25	203	19	0	247	46	65	45	0	156	85	168	12	0	265	19	53	12	0	84	752
% Approach Total	10.1	82.2	7.7	0.0		29.5	41.7	28.8	0.0		32.1	63.4	4.5	0.0		22.6	63.1	14.3	0.0		
PHF	0.781	0.890	0.792	0.000	0.870	0.885	0.813	0.750	0.000	0.830	0.664	0.894	0.750	0.000	0.920	0.679	0.697	0.600	0.000	0.724	0.900
Entering Leg	25	203	19	0	247	46	65	45	0	156	85	168	12	0	265	19	53	12	0	84	752
Exiting Leg	226					157					267					102					752
Total	473					313					532					186					1504

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
4:30 PM	0	0	1	0	1	0	1	1	0	2	0	1	0	0	1	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	1	1	0	2	2	2	0	0	4	0	0	0	0	0	7
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
5:15 PM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2
5:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	5	0	0	5	1	1	0	0	2	0	3	0	0	3	0	0	0	0	0	10
Grand Total	0	5	1	0	6	1	2	1	0	4	2	5	0	0	7	0	0	0	0	0	17
Approach %	0.0	83.3	16.7	0.0		25.0	50.0	25.0	0.0		28.6	71.4	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	29.4	5.9	0.0	35.3	5.9	11.8	5.9	0.0	23.5	11.8	29.4	0.0	0.0	41.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	6					3					6					2					17
Buses	0	3	0	0	3	0	1	1	0	2	1	1	0	0	2	0	0	0	0	0	7
% Buses	0.0	60.0	0.0	0.0	50.0	0.0	50.0	100.0	0.0	50.0	50.0	20.0	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	41.2
Exiting Leg Total	1					1					4					1					7
Single-Unit Trucks	0	2	1	0	3	1	1	0	0	2	1	4	0	0	5	0	0	0	0	0	10
% Single-Unit	0.0	40.0	100.0	0.0	50.0	100.0	50.0	0.0	0.0	50.0	50.0	80.0	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	58.8
Exiting Leg Total	5					2					2					1					10
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	St Paul Street					Dummer Street					St Paul Street					Dummer Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	0	0	1	0	1	0	1	1	0	2	0	1	0	0	1	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
5:15 PM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	3	1	0	4	0	2	1	0	3	0	3	0	0	3	0	0	0	0	0	10
% Approach Total	0.0	75.0	25.0	0.0		0.0	66.7	33.3	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.250	0.000	0.333	0.000	0.500	0.250	0.000	0.375	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.625
Buses	0	3	0	0	3	0	1	1	0	2	0	1	0	0	1	0	0	0	0	0	6
Buses %	0.0	100.0	0.0	0.0	75.0	0.0	50.0	100.0	0.0	66.7	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	60.0
Single-Unit Trucks	0	0	1	0	1	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	4
Single-Unit %	0.0	0.0	100.0	0.0	25.0	0.0	50.0	0.0	0.0	33.3	0.0	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	40.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	3	0	0	3	0	1	1	0	2	0	1	0	0	1	0	0	0	0	0	6
Single-Unit Trucks	0	0	1	0	1	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	3	1	0	4	0	2	1	0	3	0	3	0	0	3	0	0	0	0	0	10
Buses	1					0					4					1					6
Single-Unit Trucks	2					1					0					1					4
Articulated Trucks	0					0					0					0					0
Total Exiting Leg	3					1					4					2					10

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total		
	from North					from East					from South					from West							
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total			
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Grand Total	0	3	0	0	3	0	1	1	0	2	1	1	0	0	2	0	0	0	0	0	0	0	7
Approach %	0.0	100.0	0.0	0.0		0.0	50.0	50.0	0.0		50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0				
Total %	0.0	42.9	0.0	0.0	42.9	0.0	14.3	14.3	0.0	28.6	14.3	14.3	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0			
Exiting Leg Total	1					1					4					1					7		

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	St Paul Street					Dummer Street					St Paul Street					Dummer Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:30 PM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	3	0	0	3	0	1	1	0	2	0	1	0	0	1	0	0	0	0	0	6
% Approach Total	0.0	100.0	0.0	0.0		0.0	50.0	50.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.250	0.000	0.500	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	3	0	0	3	0	1	1	0	2	0	1	0	0	1	0	0	0	0	0	6
Exiting Leg					1					0					4					1	6
Total					4					2					5					1	12

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
4:30 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	1	0	0	1	1	1	0	0	2	0	0	0	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2
5:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	0	0	2	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	6
Grand Total	0	2	1	0	3	1	1	0	0	2	1	4	0	0	5	0	0	0	0	0	10
Approach %	0.0	66.7	33.3	0.0		50.0	50.0	0.0	0.0		20.0	80.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	20.0	10.0	0.0	30.0	10.0	10.0	0.0	0.0	20.0	10.0	40.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	5					2					2					1					10

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	St Paul Street					Dummer Street					St Paul Street					Dummer Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
4:30 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Volume	0	0	1	0	1	0	1	0	0	1	1	3	0	0	4	0	0	0	0	0	6
% Approach Total	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		25.0	75.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.250	0.000	0.250	0.000	0.250	0.000	0.000	0.250	0.250	0.375	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	0	1	0	1	0	1	0	0	1	1	3	0	0	4	0	0	0	0	0	6
Exiting Leg					3					2					0					1	6
Total					4					3					4					1	12

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	St Paul Street					Dummer Street					St Paul Street					Dummer Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	St Paul Street					Dummer Street					St Paul Street					Dummer Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0					0					0					0					0
Total	0					0					0					0					0

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Bicycles (on Roadway and Crosswalks)**

	St Paul Street							Dummer Street							St Paul Street							Dummer Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	1	0	0	0	0	1	0	2	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:15 PM	0	3	0	0	1	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	1	6
4:30 PM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	7	0	0	1	0	8	0	2	2	0	0	0	4	1	1	0	0	0	0	0	2	0	0	0	0	1	1	15
5:00 PM	0	3	0	0	0	0	3	0	0	1	0	0	0	1	1	1	0	0	0	0	0	2	0	0	0	0	0	0	6
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2
5:30 PM	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	6
5:45 PM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	4
Total	0	11	0	0	0	0	11	0	0	2	0	0	0	2	1	4	0	0	0	0	0	5	0	0	0	0	0	0	18
Grand Total	0	18	0	0	1	0	19	0	2	4	0	0	0	6	2	5	0	0	0	0	7	0	0	0	0	0	1	1	33
Approach %	0.0	94.7	0.0	0.0	5.3	0.0		0.0	33.3	66.7	0.0	0.0	0.0		28.6	71.4	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		
Total %	0.0	54.5	0.0	0.0	3.0	0.0	57.6	0.0	6.1	12.1	0.0	0.0	0.0	18.2	6.1	15.2	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	0.0	3.0	3.0	
Exiting Leg Total	6							2							22							3							33

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St Paul Street							Dummer Street							St Paul Street							Dummer Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
5:00 PM	0	3	0	0	0	0	3	0	0	1	0	0	0	1	1	1	0	0	0	0	2	0	0	0	0	0	0	0	6
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
5:30 PM	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	6
5:45 PM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	4
Total Volume	0	11	0	0	0	0	11	0	0	2	0	0	0	2	1	4	0	0	0	0	5	0	0	0	0	0	0	0	18
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0	0.0		20.0	80.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.550	0.000	0.000	0.000	0.000	0.550	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.250	1.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	11	0	0	0	0	11	0	0	2	0	0	0	2	1	4	0	0	0	0	5	0	0	0	0	0	0	0	18
Exiting Leg	4							1							13							0							18
Total	15							3							18							0							36

PDI File #: **250954 (2)**
 Location: **N: St Paul Street S: St Paul Street**
 Location: **E: Dummer Street W: Dummer Street**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	St Paul Street							Dummer Street							St Paul Street							Dummer Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	1	2	3	0	0	0	0	8	5	13	0	0	0	0	0	2	2	0	0	0	0	10	13	23	41
4:15 PM	0	0	0	0	3	1	4	0	0	0	0	2	4	6	0	0	0	0	1	2	3	0	0	0	0	7	9	16	29
4:30 PM	0	0	0	0	1	0	1	0	0	0	0	5	3	8	0	0	0	0	1	0	1	0	0	0	0	1	4	5	15
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	5	6	11	0	0	0	0	1	0	1	0	0	0	0	5	3	8	20
Total	0	0	0	0	5	3	8	0	0	0	0	20	18	38	0	0	0	0	3	4	7	0	0	0	0	23	29	52	105
5:00 PM	0	0	0	0	3	1	4	0	0	0	0	7	2	9	0	0	0	0	1	3	4	0	0	0	0	3	8	11	28
5:15 PM	0	0	0	0	2	2	4	0	0	0	0	2	1	3	0	0	0	0	1	1	2	0	0	0	0	3	8	11	20
5:30 PM	0	0	0	0	6	1	7	0	0	0	0	3	4	7	0	0	0	0	0	1	1	0	0	0	0	7	7	14	29
5:45 PM	0	0	0	0	0	1	1	0	0	0	0	5	2	7	0	0	0	0	1	0	1	0	0	0	0	5	5	10	19
Total	0	0	0	0	11	5	16	0	0	0	0	17	9	26	0	0	0	0	3	5	8	0	0	0	0	18	28	46	96
Grand Total	0	0	0	0	16	8	24	0	0	0	0	37	27	64	0	0	0	0	6	9	15	0	0	0	0	41	57	98	201
Approach %	0	0	0	0	66.7	33.3		0	0	0	0	57.8	42.2		0	0	0	0	40	60		0	0	0	0	41.8	58.2		
Total %	0	0	0	0	7.96	3.98	11.9	0	0	0	0	18.4	13.4	31.8	0	0	0	0	2.99	4.48	7.46	0	0	0	0	20.4	28.4	48.8	
Exiting Leg Total	24							64							15							98							201

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	St Paul Street							Dummer Street							St Paul Street							Dummer Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	1	2	3	0	0	0	0	8	5	13	0	0	0	0	0	2	2	0	0	0	0	10	13	23	41
4:15 PM	0	0	0	0	3	1	4	0	0	0	0	2	4	6	0	0	0	0	1	2	3	0	0	0	0	7	9	16	29
4:30 PM	0	0	0	0	1	0	1	0	0	0	0	5	3	8	0	0	0	0	1	0	1	0	0	0	0	1	4	5	15
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	5	6	11	0	0	0	0	1	0	1	0	0	0	0	5	3	8	20
Total Volume	0	0	0	0	5	3	8	0	0	0	0	20	18	38	0	0	0	0	3	4	7	0	0	0	0	23	29	52	105
% Approach Total	0.0	0.0	0.0	0.0	62.5	37.5		0.0	0.0	0.0	0.0	52.6	47.4		0.0	0.0	0.0	0.0	42.9	57.1		0.0	0.0	0.0	0.0	44.2	55.8		
PHF	0.000	0.000	0.000	0.000	0.417	0.375	0.500	0.000	0.000	0.000	0.000	0.625	0.750	0.731	0.000	0.000	0.000	0.000	0.750	0.500	0.583	0.000	0.000	0.000	0.000	0.575	0.558	0.565	0.640
Entering Leg	0	0	0	0	5	3	8	0	0	0	0	20	18	38	0	0	0	0	3	4	7	0	0	0	0	23	29	52	105
Exiting Leg	8							38							7							52							105
Total	16							76							14							104							210

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	3	3	11	0	17	14	72	22	6	114	11	5	3	0	19	1	100	0	0	101	251
7:15 AM	1	1	2	0	4	8	75	22	1	106	17	4	19	0	40	6	107	0	0	113	263
7:30 AM	0	0	2	0	2	14	99	31	3	147	19	1	19	0	39	2	127	0	0	129	317
7:45 AM	0	1	4	0	5	13	122	51	6	192	18	3	16	0	37	6	143	0	0	149	383
Total	4	5	19	0	28	49	368	126	16	559	65	13	57	0	135	15	477	0	0	492	1214
8:00 AM	0	1	6	0	7	20	122	31	3	176	27	7	23	0	57	10	197	0	0	207	447
8:15 AM	1	1	5	0	7	18	99	44	9	170	34	4	22	0	60	8	175	0	0	183	420
8:30 AM	3	4	3	0	10	22	94	31	4	151	32	11	18	0	61	6	218	0	0	224	446
8:45 AM	0	1	6	0	7	10	122	55	2	189	50	6	21	0	77	7	166	0	0	173	446
Total	4	7	20	0	31	70	437	161	18	686	143	28	84	0	255	31	756	0	0	787	1759
Grand Total	8	12	39	0	59	119	805	287	34	1245	208	41	141	0	390	46	1233	0	0	1279	2973
Approach %	13.6	20.3	66.1	0.0		9.6	64.7	23.1	2.7		53.3	10.5	36.2	0.0		3.6	96.4	0.0	0.0		
Total %	0.3	0.4	1.3	0.0	2.0	4.0	27.1	9.7	1.1	41.9	7.0	1.4	4.7	0.0	13.1	1.5	41.5	0.0	0.0	43.0	
Exiting Leg Total	160					1514					345					954					2973
Cars	8	12	34	0	54	113	727	283	33	1156	204	40	132	0	376	44	1162	0	0	1206	2792
% Cars	100.0	100.0	87.2	0.0	91.5	95.0	90.3	98.6	97.1	92.9	98.1	97.6	93.6	0.0	96.4	95.7	94.2	0.0	0.0	94.3	93.9
Exiting Leg Total	153					1433					339					867					2792
Heavy Vehicles	0	0	5	0	5	6	78	4	1	89	4	1	9	0	14	2	71	0	0	73	181
% Heavy Vehicles	0.0	0.0	12.8	0.0	8.5	5.0	9.7	1.4	2.9	7.1	1.9	2.4	6.4	0.0	3.6	4.3	5.8	0.0	0.0	5.7	6.1
Exiting Leg Total	7					81					6					87					181

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Buick Street						Commonwealth Avenue					St Paul Street					Commonwealth Avenue								
	from North						from East					from South					from West								
	Right	Thru	Left	U-Turn	Total		Right	Thru	Left	U-Turn	Total		Right	Thru	Left	U-Turn	Total		Right	Thru	Left	U-Turn		Total	Total
8:00 AM	0	1	6	0	7		20	122	31	3	176		27	7	23	0	57		10	197	0	0	207	447	
8:15 AM	1	1	5	0	7		18	99	44	9	170		34	4	22	0	60		8	175	0	0	183	420	
8:30 AM	3	4	3	0	10		22	94	31	4	151		32	11	18	0	61		6	218	0	0	224	446	
8:45 AM	0	1	6	0	7		10	122	55	2	189		50	6	21	0	77		7	166	0	0	173	446	
Total Volume	4	7	20	0	31		70	437	161	18	686		143	28	84	0	255		31	756	0	0	787	1759	
% Approach Total	12.9	22.6	64.5	0.0			10.2	63.7	23.5	2.6			56.1	11.0	32.9	0.0			3.9	96.1	0.0	0.0			
PHF	0.333	0.438	0.833	0.000	0.775		0.795	0.895	0.732	0.500	0.907		0.715	0.636	0.913	0.000	0.828		0.775	0.867	0.000	0.000	0.878	0.984	
Cars	4	7	18	0	29		68	396	159	17	640		142	28	76	0	246		30	719	0	0	749	1664	
Cars %	100.0	100.0	90.0	0.0	93.5		97.1	90.6	98.8	94.4	93.3		99.3	100.0	90.5	0.0	96.5		96.8	95.1	0.0	0.0	95.2	94.6	
Heavy Vehicles	0	0	2	0	2		2	41	2	1	46		1	0	8	0	9		1	37	0	0	38	95	
Heavy Vehicles %	0.0	0.0	10.0	0.0	6.5		2.9	9.4	1.2	5.6	6.7		0.7	0.0	9.5	0.0	3.5		3.2	4.9	0.0	0.0	4.8	5.4	
Cars Enter Leg	4	7	18	0	29		68	396	159	17	640		142	28	76	0	246		30	719	0	0	749	1664	
Heavy Enter Leg	0	0	2	0	2		2	41	2	1	46		1	0	8	0	9		1	37	0	0	38	95	
Total Entering Leg	4	7	20	0	31		70	437	161	18	686		143	28	84	0	255		31	756	0	0	787	1759	
Cars Exiting Leg						96						896						196						476	1664
Heavy Exiting Leg						2						41						3						49	95
Total Exiting Leg						98						937						199						525	1759

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	3	3	10	0	16	13	66	21	6	106	11	4	3	0	18	1	88	0	0	89	229
7:15 AM	1	1	1	0	3	8	63	22	1	94	16	4	19	0	39	6	97	0	0	103	239
7:30 AM	0	0	1	0	1	12	89	31	3	135	18	1	19	0	38	1	122	0	0	123	297
7:45 AM	0	1	4	0	5	12	113	50	6	181	17	3	15	0	35	6	136	0	0	142	363
Total	4	5	16	0	25	45	331	124	16	516	62	12	56	0	130	14	443	0	0	457	1128
8:00 AM	0	1	5	0	6	18	111	31	3	163	26	7	20	0	53	10	187	0	0	197	419
8:15 AM	1	1	4	0	6	18	89	43	8	158	34	4	20	0	58	8	165	0	0	173	395
8:30 AM	3	4	3	0	10	22	88	31	4	145	32	11	15	0	58	5	209	0	0	214	427
8:45 AM	0	1	6	0	7	10	108	54	2	174	50	6	21	0	77	7	158	0	0	165	423
Total	4	7	18	0	29	68	396	159	17	640	142	28	76	0	246	30	719	0	0	749	1664
Grand Total	8	12	34	0	54	113	727	283	33	1156	204	40	132	0	376	44	1162	0	0	1206	2792
Approach %	14.8	22.2	63.0	0.0		9.8	62.9	24.5	2.9		54.3	10.6	35.1	0.0		3.6	96.4	0.0	0.0		
Total %	0.3	0.4	1.2	0.0	1.9	4.0	26.0	10.1	1.2	41.4	7.3	1.4	4.7	0.0	13.5	1.6	41.6	0.0	0.0	43.2	
Exiting Leg Total	153					1433					339					867					2792

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	0	1	5	0	6	18	111	31	3	163	26	7	20	0	53	10	187	0	0	197	419
8:15 AM	1	1	4	0	6	18	89	43	8	158	34	4	20	0	58	8	165	0	0	173	395
8:30 AM	3	4	3	0	10	22	88	31	4	145	32	11	15	0	58	5	209	0	0	214	427
8:45 AM	0	1	6	0	7	10	108	54	2	174	50	6	21	0	77	7	158	0	0	165	423
Total Volume	4	7	18	0	29	68	396	159	17	640	142	28	76	0	246	30	719	0	0	749	1664
% Approach Total	13.8	24.1	62.1	0.0		10.6	61.9	24.8	2.7		57.7	11.4	30.9	0.0		4.0	96.0	0.0	0.0		
PHF	0.333	0.438	0.750	0.000	0.725	0.773	0.892	0.736	0.531	0.920	0.710	0.636	0.905	0.000	0.799	0.750	0.860	0.000	0.000	0.875	0.974
Entering Leg	4	7	18	0	29	68	396	159	17	640	142	28	76	0	246	30	719	0	0	749	1664
Exiting Leg	96					896					196					476					1664
Total	125					1536					442					1225					3328

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	1	0	1	1	6	1	0	8	0	1	0	0	1	0	12	0	0	12	22
7:15 AM	0	0	1	0	1	0	12	0	0	12	1	0	0	0	1	0	10	0	0	10	24
7:30 AM	0	0	1	0	1	2	10	0	0	12	1	0	0	0	1	1	5	0	0	6	20
7:45 AM	0	0	0	0	0	1	9	1	0	11	1	0	1	0	2	0	7	0	0	7	20
Total	0	0	3	0	3	4	37	2	0	43	3	1	1	0	5	1	34	0	0	35	86
8:00 AM	0	0	1	0	1	2	11	0	0	13	1	0	3	0	4	0	10	0	0	10	28
8:15 AM	0	0	1	0	1	0	10	1	1	12	0	0	2	0	2	0	10	0	0	10	25
8:30 AM	0	0	0	0	0	0	6	0	0	6	0	0	3	0	3	1	9	0	0	10	19
8:45 AM	0	0	0	0	0	0	14	1	0	15	0	0	0	0	0	0	8	0	0	8	23
Total	0	0	2	0	2	2	41	2	1	46	1	0	8	0	9	1	37	0	0	38	95
Grand Total	0	0	5	0	5	6	78	4	1	89	4	1	9	0	14	2	71	0	0	73	181
Approach %	0.0	0.0	100.0	0.0		6.7	87.6	4.5	1.1		28.6	7.1	64.3	0.0		2.7	97.3	0.0	0.0		
Total %	0.0	0.0	2.8	0.0	2.8	3.3	43.1	2.2	0.6	49.2	2.2	0.6	5.0	0.0	7.7	1.1	39.2	0.0	0.0	40.3	
Exiting Leg Total	7					81					6					87					181
Buses	0	0	4	0	4	0	43	0	0	43	1	0	1	0	2	0	35	0	0	35	84
% Buses	0.0	0.0	80.0	0.0	80.0	0.0	55.1	0.0	0.0	48.3	25.0	0.0	11.1	0.0	14.3	0.0	49.3	0.0	0.0	47.9	46.4
Exiting Leg Total	0					40					0					44					84
Single-Unit Trucks	0	0	0	0	0	5	33	4	1	43	3	1	8	0	12	2	35	0	0	37	92
% Single-Unit	0.0	0.0	0.0	0.0	0.0	83.3	42.3	100.0	100.0	48.3	75.0	100.0	88.9	0.0	85.7	100.0	49.3	0.0	0.0	50.7	50.8
Exiting Leg Total	6					39					6					41					92
Articulated Trucks	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	5
% Articulated	0.0	0.0	20.0	0.0	20.0	16.7	2.6	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.4	2.8
Exiting Leg Total	1					2					0					2					5

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	0	0	1	0	1	2	11	0	0	13	1	0	3	0	4	0	10	0	0	10	28
8:15 AM	0	0	1	0	1	0	10	1	1	12	0	0	2	0	2	0	10	0	0	10	25
8:30 AM	0	0	0	0	0	0	6	0	0	6	0	0	3	0	3	1	9	0	0	10	19
8:45 AM	0	0	0	0	0	0	14	1	0	15	0	0	0	0	0	0	8	0	0	8	23
Total Volume	0	0	2	0	2	2	41	2	1	46	1	0	8	0	9	1	37	0	0	38	95
% Approach Total	0.0	0.0	100.0	0.0		4.3	89.1	4.3	2.2		11.1	0.0	88.9	0.0		2.6	97.4	0.0	0.0		
PHF	0.000	0.000	0.500	0.000	0.500	0.250	0.732	0.500	0.250	0.767	0.250	0.000	0.667	0.000	0.563	0.250	0.925	0.000	0.000	0.950	0.848
Buses	0	0	2	0	2	0	19	0	0	19	1	0	1	0	2	0	17	0	0	17	40
Buses %	0.0	0.0	100.0	0.0	100.0	0.0	46.3	0.0	0.0	41.3	100.0	0.0	12.5	0.0	22.2	0.0	45.9	0.0	0.0	44.7	42.1
Single-Unit Trucks	0	0	0	0	0	1	21	2	1	25	0	0	7	0	7	1	20	0	0	21	53
Single-Unit %	0.0	0.0	0.0	0.0	0.0	50.0	51.2	100.0	100.0	54.3	0.0	0.0	87.5	0.0	77.8	100.0	54.1	0.0	0.0	55.3	55.8
Articulated Trucks	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Articulated %	0.0	0.0	0.0	0.0	0.0	50.0	2.4	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
Buses	0	0	2	0	2	0	19	0	0	19	1	0	1	0	2	0	17	0	0	17	40
Single-Unit Trucks	0	0	0	0	0	1	21	2	1	25	0	0	7	0	7	1	20	0	0	21	53
Articulated Trucks	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total Entering Leg	0	0	2	0	2	2	41	2	1	46	1	0	8	0	9	1	37	0	0	38	95
Buses	0					20					0					20					40
Single-Unit Trucks	1					21					3					28					53
Articulated Trucks	1					0					0					1					2
Total Exiting Leg	2					41					3					49					95

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	10
7:15 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	11
7:30 AM	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3	12
7:45 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	11
Total	0	0	2	0	2	0	24	0	0	24	0	0	0	0	0	0	18	0	0	18	44
8:00 AM	0	0	1	0	1	0	8	0	0	8	1	0	0	0	1	0	3	0	0	3	13
8:15 AM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	9
8:30 AM	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	0	3	0	0	3	9
8:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	9
Total	0	0	2	0	2	0	19	0	0	19	1	0	1	0	2	0	17	0	0	17	40
Grand Total	0	0	4	0	4	0	43	0	0	43	1	0	1	0	2	0	35	0	0	35	84
Approach %	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		50.0	0.0	50.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	4.8	0.0	4.8	0.0	51.2	0.0	0.0	51.2	1.2	0.0	1.2	0.0	2.4	0.0	41.7	0.0	0.0	41.7	
Exiting Leg Total	0					40					0					44					84

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	11
7:30 AM	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3	12
7:45 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	11
8:00 AM	0	0	1	0	1	0	8	0	0	8	1	0	0	0	1	0	3	0	0	3	13
Total Volume	0	0	2	0	2	0	28	0	0	28	1	0	0	0	1	0	16	0	0	16	47
% Approach Total	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.500	0.000	0.500	0.000	0.875	0.000	0.000	0.875	0.250	0.000	0.000	0.000	0.250	0.000	0.800	0.000	0.000	0.800	0.904
Entering Leg	0	0	2	0	2	0	28	0	0	28	1	0	0	0	1	0	16	0	0	16	47
Exiting Leg	0					19					0					28					47
Total	2					47					1					44					94

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	1	2	1	0	4	0	1	0	0	1	0	7	0	0	7	12
7:15 AM	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	0	4	0	0	4	11
7:30 AM	0	0	0	0	0	2	1	0	0	3	1	0	0	0	1	1	2	0	0	3	7
7:45 AM	0	0	0	0	0	1	3	1	0	5	1	0	1	0	2	0	2	0	0	2	9
Total	0	0	0	0	0	4	12	2	0	18	3	1	1	0	5	1	15	0	0	16	39
8:00 AM	0	0	0	0	0	1	3	0	0	4	0	0	3	0	3	0	7	0	0	7	14
8:15 AM	0	0	0	0	0	0	7	1	1	9	0	0	2	0	2	0	5	0	0	5	16
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	1	6	0	0	7	10
8:45 AM	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	0	2	0	0	2	13
Total	0	0	0	0	0	1	21	2	1	25	0	0	7	0	7	1	20	0	0	21	53
Grand Total	0	0	0	0	0	5	33	4	1	43	3	1	8	0	12	2	35	0	0	37	92
Approach %	0.0	0.0	0.0	0.0		11.6	76.7	9.3	2.3		25.0	8.3	66.7	0.0		5.4	94.6	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	5.4	35.9	4.3	1.1	46.7	3.3	1.1	8.7	0.0	13.0	2.2	38.0	0.0	0.0	40.2	
Exiting Leg Total	6					39					6					41					92

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	0	0	0	0	0	1	3	0	0	4	0	0	3	0	3	0	7	0	0	7	14
8:15 AM	0	0	0	0	0	0	7	1	1	9	0	0	2	0	2	0	5	0	0	5	16
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	1	6	0	0	7	10
8:45 AM	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	0	2	0	0	2	13
Total Volume	0	0	0	0	0	1	21	2	1	25	0	0	7	0	7	1	20	0	0	21	53
% Approach Total	0.0	0.0	0.0	0.0		4.0	84.0	8.0	4.0		0.0	0.0	100.0	0.0		4.8	95.2	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.525	0.500	0.250	0.568	0.000	0.000	0.583	0.000	0.583	0.250	0.714	0.000	0.000	0.750	0.828
Entering Leg	0	0	0	0	0	1	21	2	1	25	0	0	7	0	7	1	20	0	0	21	53
Exiting Leg	1					21					3					28					53
Total	1					46					10					49					106

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
7:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3
8:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1	5
Approach %	0.0	0.0	100.0	0.0		33.3	66.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	20.0	0.0	20.0	20.0	40.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	20.0	
Exiting Leg Total	1					2					0					2					5

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total	
7:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
7:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	4	
% Approach Total	0.0	0.0	100.0	0.0		50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.000	0.250	0.000	0.250	0.250	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.500	
Entering Leg	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	4	
Exiting Leg					1					2					0					1	4	
Total					2					4					0					2	8	

PDI File #: 250954 (3)
 Location: N: Buick Street S: St Paul Street
 Location: E: Commonwealth Avenue W: Commonwealth Avenue
 City, State: Brookline, MA
 Client: Jacobs/ W. Kwon
 Site Code: AWSC Project #3
 Count Date: Tuesday, January 6, 2026
 Start Time: 7:00 AM
 End Time: 9:00 AM



Bicycles (on Roadway and Crosswalks)

	Buick Street							Commonwealth Avenue							St Paul Street							Commonwealth Avenue							Total	
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	3	1	8	0	0	0	0	9	12
7:15 AM	0	0	0	0	0	0	2	2	0	3	0	0	0	0	3	2	0	0	0	0	0	2	0	5	0	0	0	1	6	13
7:30 AM	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	0	0	0	0	0	0	0	0	12	0	0	0	0	12	15
7:45 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	0	3	1	11	0	0	0	0	12	18
Total	0	0	0	0	0	0	2	2	1	8	0	0	0	0	9	6	0	0	0	0	2	8	2	36	0	0	0	1	39	58
8:00 AM	0	0	0	0	0	0	1	1	0	1	0	0	0	0	1	1	0	0	0	0	1	2	0	10	0	0	0	1	11	15
8:15 AM	0	0	0	0	0	0	0	0	1	2	0	0	1	0	4	0	0	0	0	0	0	0	0	22	0	0	0	0	22	26
8:30 AM	0	0	0	0	1	0	1	1	1	2	0	0	0	0	3	0	0	1	0	0	1	2	0	19	0	0	0	0	19	25
8:45 AM	0	1	0	0	1	0	2	2	0	5	0	0	0	0	5	1	0	0	0	0	0	1	0	22	0	0	1	0	23	31
Total	0	1	0	0	2	1	4	4	2	10	0	0	1	0	13	2	0	1	0	0	2	5	0	73	0	0	1	1	75	97
Grand Total	0	1	0	0	2	3	6	6	3	18	0	0	1	0	22	8	0	1	0	0	4	13	2	109	0	0	1	2	114	155
Approach %	0.0	16.7	0.0	0.0	33.3	50.0			13.6	81.8	0.0	0.0	4.5	0.0		61.5	0.0	7.7	0.0	0.0	30.8		1.8	95.6	0.0	0.0	0.9	1.8		
Total %	0.0	0.6	0.0	0.0	1.3	1.9	3.9		1.9	11.6	0.0	0.0	0.6	0.0	14.2	5.2	0.0	0.6	0.0	0.0	2.6	8.4	1.3	70.3	0.0	0.0	0.6	1.3	73.5	
Exiting Leg Total	8							118							7							22							155	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Buick Street							Commonwealth Avenue							St Paul Street							Commonwealth Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
8:00 AM	0	0	0	0	0	1	1	0	1	0	0	0	0	1	1	0	0	0	0	1	2	0	10	0	0	0	1	11	15
8:15 AM	0	0	0	0	0	0	0	1	2	0	0	1	0	4	0	0	0	0	0	0	0	0	22	0	0	0	0	22	26
8:30 AM	0	0	0	0	1	0	1	1	2	0	0	0	0	3	0	0	1	0	0	1	2	0	19	0	0	0	0	19	25
8:45 AM	0	1	0	0	1	0	2	0	5	0	0	0	0	5	1	0	0	0	0	0	1	0	22	0	0	1	0	23	31
Total Volume	0	1	0	0	2	1	4	2	10	0	0	1	0	13	2	0	1	0	0	2	5	0	73	0	0	1	1	75	97
% Approach Total	0.0	25.0	0.0	0.0	50.0	25.0		15.4	76.9	0.0	0.0	7.7	0.0		40.0	0.0	20.0	0.0	0.0	40.0		0.0	97.3	0.0	0.0	1.3	1.3		
PHF	0.000	0.250	0.000	0.000	0.500	0.250	0.500	0.500	0.500	0.000	0.000	0.250	0.000	0.650	0.500	0.000	0.250	0.000	0.000	0.500	0.625	0.000	0.830	0.000	0.000	0.250	0.250	0.815	0.782
Entering Leg	0	1	0	0	2	1	4	2	10	0	0	1	0	13	2	0	1	0	0	2	5	0	73	0	0	1	1	75	97
Exiting Leg	5							76							3							13							97
Total	9							89							8							88							194

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Buick Street							Commonwealth Avenue							St Paul Street							Commonwealth Avenue							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	9	7	16	0	0	0	0	4	3	7	0	0	0	0	4	4	8	0	0	0	0	1	0	1	32
7:15 AM	0	0	0	0	4	6	10	0	0	0	0	6	4	10	0	0	0	0	7	5	12	0	0	0	0	1	2	3	35
7:30 AM	0	0	0	0	5	4	9	0	0	0	0	3	3	6	0	0	0	0	4	10	14	0	0	0	0	1	0	1	30
7:45 AM	0	0	0	0	8	11	19	0	0	0	0	13	5	18	0	0	0	0	10	8	18	0	0	0	0	5	5	10	65
Total	0	0	0	0	26	28	54	0	0	0	0	26	15	41	0	0	0	0	25	27	52	0	0	0	0	8	7	15	162
8:00 AM	0	0	0	0	9	10	19	0	0	0	0	11	6	17	0	0	0	0	9	14	23	0	0	0	0	4	5	9	68
8:15 AM	0	0	0	0	22	4	26	0	0	0	0	5	2	7	0	0	0	0	9	12	21	0	0	0	0	3	5	8	62
8:30 AM	0	0	0	0	19	11	30	0	0	0	0	14	7	21	0	0	0	0	12	18	30	0	0	0	0	5	4	9	90
8:45 AM	0	0	0	0	18	3	21	0	0	0	0	15	5	20	0	0	0	0	7	16	23	0	0	0	0	4	6	10	74
Total	0	0	0	0	68	28	96	0	0	0	0	45	20	65	0	0	0	0	37	60	97	0	0	0	0	16	20	36	294
Grand Total	0	0	0	0	94	56	150	0	0	0	0	71	35	106	0	0	0	0	62	87	149	0	0	0	0	24	27	51	456
Approach %	0	0	0	0	62.7	37.3		0	0	0	0	67	33		0	0	0	0	41.6	58.4		0	0	0	0	47.1	52.9		
Total %	0	0	0	0	20.6	12.3	32.9	0	0	0	0	15.6	7.68	23.2	0	0	0	0	13.6	19.1	32.7	0	0	0	0	5.26	5.92	11.2	
Exiting Leg Total	150							106							149							51							456

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Buick Street							Commonwealth Avenue							St Paul Street							Commonwealth Avenue							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
8:00 AM	0	0	0	0	9	10	19	0	0	0	0	11	6	17	0	0	0	0	9	14	23	0	0	0	0	4	5	9	68
8:15 AM	0	0	0	0	22	4	26	0	0	0	0	5	2	7	0	0	0	0	9	12	21	0	0	0	0	3	5	8	62
8:30 AM	0	0	0	0	19	11	30	0	0	0	0	14	7	21	0	0	0	0	12	18	30	0	0	0	0	5	4	9	90
8:45 AM	0	0	0	0	18	3	21	0	0	0	0	15	5	20	0	0	0	0	7	16	23	0	0	0	0	4	6	10	74
Total Volume	0	0	0	0	68	28	96	0	0	0	0	45	20	65	0	0	0	0	37	60	97	0	0	0	0	16	20	36	294
% Approach Total	0.0	0.0	0.0	0.0	70.8	29.2		0.0	0.0	0.0	0.0	69.2	30.8		0.0	0.0	0.0	0.0	38.1	61.9		0.0	0.0	0.0	0.0	44.4	55.6		
PHF	0.000	0.000	0.000	0.000	0.773	0.636	0.800	0.000	0.000	0.000	0.000	0.750	0.714	0.774	0.000	0.000	0.000	0.000	0.771	0.833	0.808	0.000	0.000	0.000	0.000	0.800	0.833	0.900	0.817
Entering Leg	0	0	0	0	68	28	96	0	0	0	0	45	20	65	0	0	0	0	37	60	97	0	0	0	0	16	20	36	294
Exiting Leg	96							65							97							36							294
Total	192							130							194							72							588

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	7	7	23	0	37	4	138	42	9	193	30	2	27	0	59	12	106	0	0	118	407
4:15 PM	6	8	7	0	21	5	137	32	4	178	23	1	12	0	36	15	121	0	0	136	371
4:30 PM	4	5	12	0	21	4	170	40	6	220	25	1	19	0	45	9	121	0	0	130	416
4:45 PM	6	7	7	0	20	0	145	42	9	196	24	1	18	0	43	7	135	0	0	142	401
Total	23	27	49	0	99	13	590	156	28	787	102	5	76	0	183	43	483	0	0	526	1595
5:00 PM	10	5	21	0	36	2	180	47	3	232	33	3	21	0	57	19	135	0	0	154	479
5:15 PM	5	9	10	0	24	3	194	53	10	260	36	3	14	0	53	9	112	0	0	121	458
5:30 PM	3	2	13	0	18	7	137	56	11	211	31	2	29	0	62	5	122	0	0	127	418
5:45 PM	6	2	8	0	16	7	148	42	2	199	24	5	23	0	52	7	126	0	0	133	400
Total	24	18	52	0	94	19	659	198	26	902	124	13	87	0	224	40	495	0	0	535	1755
Grand Total	47	45	101	0	193	32	1249	354	54	1689	226	18	163	0	407	83	978	0	0	1061	3350
Approach %	24.4	23.3	52.3	0.0		1.9	73.9	21.0	3.2		55.5	4.4	40.0	0.0		7.8	92.2	0.0	0.0		
Total %	1.4	1.3	3.0	0.0	5.8	1.0	37.3	10.6	1.6	50.4	6.7	0.5	4.9	0.0	12.1	2.5	29.2	0.0	0.0	31.7	
Exiting Leg Total	50					1359					482					1459					3350
Cars	47	42	96	0	185	32	1208	353	53	1646	224	17	162	0	403	80	945	0	0	1025	3259
% Cars	100.0	93.3	95.0	0.0	95.9	100.0	96.7	99.7	98.1	97.5	99.1	94.4	99.4	0.0	99.0	96.4	96.6	0.0	0.0	96.6	97.3
Exiting Leg Total	49					1318					475					1417					3259
Heavy Vehicles	0	3	5	0	8	0	41	1	1	43	2	1	1	0	4	3	33	0	0	36	91
% Heavy Vehicles	0.0	6.7	5.0	0.0	4.1	0.0	3.3	0.3	1.9	2.5	0.9	5.6	0.6	0.0	1.0	3.6	3.4	0.0	0.0	3.4	2.7
Exiting Leg Total	1					41					7					42					91

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	6	7	7	0	20	0	145	42	9	196	24	1	18	0	43	7	135	0	0	142	401
5:00 PM	10	5	21	0	36	2	180	47	3	232	33	3	21	0	57	19	135	0	0	154	479
5:15 PM	5	9	10	0	24	3	194	53	10	260	36	3	14	0	53	9	112	0	0	121	458
5:30 PM	3	2	13	0	18	7	137	56	11	211	31	2	29	0	62	5	122	0	0	127	418
Total Volume	24	23	51	0	98	12	656	198	33	899	124	9	82	0	215	40	504	0	0	544	1756
% Approach Total	24.5	23.5	52.0	0.0		1.3	73.0	22.0	3.7		57.7	4.2	38.1	0.0		7.4	92.6	0.0	0.0		
PHF	0.600	0.639	0.607	0.000	0.681	0.429	0.845	0.884	0.750	0.864	0.861	0.750	0.707	0.000	0.867	0.526	0.933	0.000	0.000	0.883	0.916
Cars	24	22	49	0	95	12	639	197	33	881	123	9	82	0	214	39	485	0	0	524	1714
Cars %	100.0	95.7	96.1	0.0	96.9	100.0	97.4	99.5	100.0	98.0	99.2	100.0	100.0	0.0	99.5	97.5	96.2	0.0	0.0	96.3	97.6
Heavy Vehicles	0	1	2	0	3	0	17	1	0	18	1	0	0	0	1	1	19	0	0	20	42
Heavy Vehicles %	0.0	4.3	3.9	0.0	3.1	0.0	2.6	0.5	0.0	2.0	0.8	0.0	0.0	0.0	0.5	2.5	3.8	0.0	0.0	3.7	2.4
Cars Enter Leg	24	22	49	0	95	12	639	197	33	881	123	9	82	0	214	39	485	0	0	524	1714
Heavy Enter Leg	0	1	2	0	3	0	17	1	0	18	1	0	0	0	1	1	19	0	0	20	42
Total Entering Leg	24	23	51	0	98	12	656	198	33	899	124	9	82	0	215	40	504	0	0	544	1756
Cars Exiting Leg	21					690					258					745					1714
Heavy Exiting Leg	0					22					3					17					42
Total Exiting Leg	21					712					261					762					1756

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	7	7	22	0	36	4	134	42	8	188	30	2	27	0	59	11	101	0	0	112	395
4:15 PM	6	8	7	0	21	5	132	32	4	173	23	0	12	0	35	15	118	0	0	133	362
4:30 PM	4	5	11	0	20	4	161	40	6	211	24	1	19	0	44	8	119	0	0	127	402
4:45 PM	6	7	7	0	20	0	141	42	9	192	24	1	18	0	43	7	131	0	0	138	393
Total	23	27	47	0	97	13	568	156	27	764	101	4	76	0	181	41	469	0	0	510	1552
5:00 PM	10	5	20	0	35	2	176	47	3	228	33	3	21	0	57	19	131	0	0	150	470
5:15 PM	5	8	9	0	22	3	190	52	10	255	36	3	14	0	53	8	107	0	0	115	445
5:30 PM	3	2	13	0	18	7	132	56	11	206	30	2	29	0	61	5	116	0	0	121	406
5:45 PM	6	0	7	0	13	7	142	42	2	193	24	5	22	0	51	7	122	0	0	129	386
Total	24	15	49	0	88	19	640	197	26	882	123	13	86	0	222	39	476	0	0	515	1707
Grand Total	47	42	96	0	185	32	1208	353	53	1646	224	17	162	0	403	80	945	0	0	1025	3259
Approach %	25.4	22.7	51.9	0.0		1.9	73.4	21.4	3.2		55.6	4.2	40.2	0.0		7.8	92.2	0.0	0.0		
Total %	1.4	1.3	2.9	0.0	5.7	1.0	37.1	10.8	1.6	50.5	6.9	0.5	5.0	0.0	12.4	2.5	29.0	0.0	0.0	31.5	
Exiting Leg Total	49					1318					475					1417					3259

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	6	7	7	0	20	0	141	42	9	192	24	1	18	0	43	7	131	0	0	138	393
5:00 PM	10	5	20	0	35	2	176	47	3	228	33	3	21	0	57	19	131	0	0	150	470
5:15 PM	5	8	9	0	22	3	190	52	10	255	36	3	14	0	53	8	107	0	0	115	445
5:30 PM	3	2	13	0	18	7	132	56	11	206	30	2	29	0	61	5	116	0	0	121	406
Total Volume	24	22	49	0	95	12	639	197	33	881	123	9	82	0	214	39	485	0	0	524	1714
% Approach Total	25.3	23.2	51.6	0.0		1.4	72.5	22.4	3.7		57.5	4.2	38.3	0.0		7.4	92.6	0.0	0.0		
PHF	0.600	0.688	0.613	0.000	0.679	0.429	0.841	0.879	0.750	0.864	0.854	0.750	0.707	0.000	0.877	0.513	0.926	0.000	0.000	0.873	0.912
Entering Leg	24	22	49	0	95	12	639	197	33	881	123	9	82	0	214	39	485	0	0	524	1714
Exiting Leg	21					690					258					745					1714
Total	116					1571					472					1269					3428

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	1	0	1	0	4	0	1	5	0	0	0	0	0	1	5	0	0	6	12
4:15 PM	0	0	0	0	0	0	5	0	0	5	0	1	0	0	1	0	3	0	0	3	9
4:30 PM	0	0	1	0	1	0	9	0	0	9	1	0	0	0	1	1	2	0	0	3	14
4:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	8
Total	0	0	2	0	2	0	22	0	1	23	1	1	0	0	2	2	14	0	0	16	43
5:00 PM	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	9
5:15 PM	0	1	1	0	2	0	4	1	0	5	0	0	0	0	0	1	5	0	0	6	13
5:30 PM	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	0	6	0	0	6	12
5:45 PM	0	2	1	0	3	0	6	0	0	6	0	0	1	0	1	0	4	0	0	4	14
Total	0	3	3	0	6	0	19	1	0	20	1	0	1	0	2	1	19	0	0	20	48
Grand Total	0	3	5	0	8	0	41	1	1	43	2	1	1	0	4	3	33	0	0	36	91
Approach %	0.0	37.5	62.5	0.0		0.0	95.3	2.3	2.3		50.0	25.0	25.0	0.0		8.3	91.7	0.0	0.0		
Total %	0.0	3.3	5.5	0.0	8.8	0.0	45.1	1.1	1.1	47.3	2.2	1.1	1.1	0.0	4.4	3.3	36.3	0.0	0.0	39.6	
Exiting Leg Total	1					41					7					42					91
Buses	0	1	5	0	6	0	34	1	1	36	1	0	0	0	1	1	27	0	0	28	71
% Buses	0.0	33.3	100.0	0.0	75.0	0.0	82.9	100.0	100.0	83.7	50.0	0.0	0.0	0.0	25.0	33.3	81.8	0.0	0.0	77.8	78.0
Exiting Leg Total	0					34					3					34					71
Single-Unit Trucks	0	2	0	0	2	0	7	0	0	7	0	1	1	0	2	2	6	0	0	8	19
% Single-Unit	0.0	66.7	0.0	0.0	25.0	0.0	17.1	0.0	0.0	16.3	0.0	100.0	100.0	0.0	50.0	66.7	18.2	0.0	0.0	22.2	20.9
Exiting Leg Total	1					6					4					8					19
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	1.1
Exiting Leg Total	0					1					0					0					1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
5:00 PM	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	0	4	0	0	0	4	9
5:15 PM	0	1	1	0	2	0	4	1	0	5	0	0	0	0	0	1	5	0	0	0	6	13
5:30 PM	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	0	6	0	0	0	6	12
5:45 PM	0	2	1	0	3	0	6	0	0	6	0	0	1	0	1	0	4	0	0	0	4	14
Total Volume	0	3	3	0	6	0	19	1	0	20	1	0	1	0	2	1	19	0	0	0	20	48
% Approach Total	0.0	50.0	50.0	0.0		0.0	95.0	5.0	0.0		50.0	0.0	50.0	0.0		5.0	95.0	0.0	0.0			
PHF	0.000	0.375	0.750	0.000	0.500	0.000	0.792	0.250	0.000	0.833	0.250	0.000	0.250	0.000	0.500	0.250	0.792	0.000	0.000	0.833	0.857	
Buses	0	1	3	0	4	0	17	1	0	18	0	0	0	0	0	1	14	0	0	0	15	37
Buses %	0.0	33.3	100.0	0.0	66.7	0.0	89.5	100.0	0.0	90.0	0.0	0.0	0.0	0.0	0.0	100.0	73.7	0.0	0.0	75.0	77.1	
Single-Unit Trucks	0	2	0	0	2	0	2	0	0	2	0	0	1	0	1	0	5	0	0	0	5	10
Single-Unit %	0.0	66.7	0.0	0.0	33.3	0.0	10.5	0.0	0.0	10.0	0.0	0.0	100.0	0.0	50.0	0.0	26.3	0.0	0.0	25.0	20.8	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
Buses	0	1	3	0	4	0	17	1	0	18	0	0	0	0	0	1	14	0	0	0	15	37
Single-Unit Trucks	0	2	0	0	2	0	2	0	0	2	0	0	1	0	1	0	5	0	0	0	5	10
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
Total Entering Leg	0	3	3	0	6	0	19	1	0	20	1	0	1	0	2	1	19	0	0	0	20	48
Buses	0					17					3					17					37	
Single-Unit Trucks	0					5					2					3					10	
Articulated Trucks	0					1					0					0					1	
Total Exiting Leg	0					23					5					20					48	

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	1	0	1	0	2	0	1	3	0	0	0	0	0	0	5	0	0	0	5	9
4:15 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	0	2	7
4:30 PM	0	0	1	0	1	0	7	0	0	7	1	0	0	0	1	0	2	0	0	0	2	11
4:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	0	4	7
Total	0	0	2	0	2	0	17	0	1	18	1	0	0	0	1	0	13	0	0	0	13	34
5:00 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	0	3	7
5:15 PM	0	1	1	0	2	0	4	1	0	5	0	0	0	0	0	1	2	0	0	0	3	10
5:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	5	0	0	0	5	10
5:45 PM	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	0	4	0	0	0	4	10
Total	0	1	3	0	4	0	17	1	0	18	0	0	0	0	0	1	14	0	0	0	15	37
Grand Total	0	1	5	0	6	0	34	1	1	36	1	0	0	0	1	1	27	0	0	0	28	71
Approach %	0.0	16.7	83.3	0.0		0.0	94.4	2.8	2.8		100.0	0.0	0.0	0.0		3.6	96.4	0.0	0.0			
Total %	0.0	1.4	7.0	0.0	8.5	0.0	47.9	1.4	1.4	50.7	1.4	0.0	0.0	0.0	1.4	1.4	38.0	0.0	0.0		39.4	
Exiting Leg Total	0					34					3					34					71	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total	
5:00 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	0	3	7
5:15 PM	0	1	1	0	2	0	4	1	0	5	0	0	0	0	0	1	2	0	0	0	3	10
5:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	5	0	0	0	5	10
5:45 PM	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	0	4	0	0	0	4	10
Total Volume	0	1	3	0	4	0	17	1	0	18	0	0	0	0	0	1	14	0	0	15	37	
% Approach Total	0.0	25.0	75.0	0.0		0.0	94.4	5.6	0.0		0.0	0.0	0.0	0.0		6.7	93.3	0.0	0.0			
PHF	0.000	0.250	0.750	0.000	0.500	0.000	0.850	0.250	0.000	0.900	0.000	0.000	0.000	0.000	0.000	0.250	0.700	0.000	0.000	0.750	0.925	
Entering Leg	0	1	3	0	4	0	17	1	0	18	0	0	0	0	0	1	14	0	0	15	37	
Exiting Leg	0					17					3					17					37	
Total	4					35					3					32					74	

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	0	1	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	2
4:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	0	1	3
4:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	5	0	0	5	0	1	0	0	1	2	1	0	0	0	3	9
5:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:45 PM	0	2	0	0	2	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	4
Total	0	2	0	0	2	0	2	0	0	2	0	0	1	0	1	0	5	0	0	0	5	10
Grand Total	0	2	0	0	2	0	7	0	0	7	0	1	1	0	2	2	6	0	0	0	8	19
Approach %	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	50.0	50.0	0.0		25.0	75.0	0.0	0.0			
Total %	0.0	10.5	0.0	0.0	10.5	0.0	36.8	0.0	0.0	36.8	0.0	5.3	5.3	0.0	10.5	10.5	31.6	0.0	0.0	42.1		
Exiting Leg Total	1					6					4					8					19	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total	
5:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:45 PM	0	2	0	0	2	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	4
Total Volume	0	2	0	0	2	0	2	0	0	2	0	0	1	0	1	0	5	0	0	0	5	10
% Approach Total	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.250	0.000	0.250	0.000	0.417	0.000	0.000	0.417	0.625	
Entering Leg	0	2	0	0	2	0	2	0	0	2	0	0	1	0	1	0	5	0	0	0	5	10
Exiting Leg	0					5					2					3					10	
Total	2					7					3					8					20	

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					1					0					0					1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Buick Street					Commonwealth Avenue					St Paul Street					Commonwealth Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Exiting Leg	0					1					0					0					1
Total	0					1					1					0					2

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Bicycles (on Roadway and Crosswalks)**

	Buick Street							Commonwealth Avenue							St Paul Street							Commonwealth Avenue							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	2	0	0	0	0	2	0	9	0	0	4	0	13	0	0	0	0	0	2	2	0	5	0	0	0	1	6	23
4:15 PM	0	1	0	0	0	1	2	0	11	0	0	1	0	12	0	0	1	0	1	0	2	0	5	0	0	0	0	5	21
4:30 PM	0	0	0	0	0	0	0	0	13	0	0	0	0	13	0	0	1	0	0	0	1	0	2	0	0	1	1	4	18
4:45 PM	0	0	0	0	0	0	0	0	13	0	0	1	0	14	1	0	0	0	0	0	1	0	4	0	0	0	0	4	19
Total	0	3	0	0	0	1	4	0	46	0	0	6	0	52	1	0	2	0	1	2	6	0	16	0	0	1	2	19	81
5:00 PM	0	3	0	0	1	1	5	0	17	0	0	0	0	17	0	1	0	0	0	0	1	0	0	0	0	0	0	0	23
5:15 PM	0	1	1	0	0	0	2	0	20	0	0	0	0	20	0	0	0	0	0	0	0	0	2	0	0	1	0	3	25
5:30 PM	0	5	0	0	0	0	5	0	14	0	0	0	1	15	0	0	0	0	0	0	0	0	6	0	0	0	0	6	26
5:45 PM	0	1	0	0	0	0	1	0	10	0	0	0	0	10	0	0	2	0	0	0	2	0	2	0	0	0	2	4	17
Total	0	10	1	0	1	1	13	0	61	0	0	0	1	62	0	1	2	0	0	0	3	0	10	0	0	1	2	13	91
Grand Total	0	13	1	0	1	2	17	0	107	0	0	6	1	114	1	1	4	0	1	2	9	0	26	0	0	2	4	32	172
Approach %	0.0	76.5	5.9	0.0	5.9	11.8		0.0	93.9	0.0	0.0	5.3	0.9		11.1	11.1	44.4	0.0	11.1	22.2		0.0	81.3	0.0	0.0	6.3	12.5		
Total %	0.0	7.6	0.6	0.0	0.6	1.2	9.9	0.0	62.2	0.0	0.0	3.5	0.6	66.3	0.6	0.6	2.3	0.0	0.6	1.2	5.2	0.0	15.1	0.0	0.0	1.2	2.3	18.6	
Exiting Leg Total	4							35							16							117							172

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Buick Street							Commonwealth Avenue							St Paul Street							Commonwealth Avenue							Total	
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:45 PM	0	0	0	0	0	0	0	0	13	0	0	1	0	14	1	0	0	0	0	0	0	1	0	4	0	0	0	0	4	19
5:00 PM	0	3	0	0	1	1	5	0	17	0	0	0	0	17	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	23
5:15 PM	0	1	1	0	0	0	2	0	20	0	0	0	0	20	0	0	0	0	0	0	0	0	0	2	0	0	1	0	3	25
5:30 PM	0	5	0	0	0	0	5	0	14	0	0	0	1	15	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	26
Total Volume	0	9	1	0	1	1	12	0	64	0	0	1	1	66	1	1	0	0	0	0	0	2	0	12	0	0	1	0	13	93
% Approach Total	0.0	75.0	8.3	0.0	8.3	8.3		0.0	97.0	0.0	0.0	1.5	1.5		50.0	50.0	0.0	0.0	0.0	0.0		0.0	92.3	0.0	0.0	7.7	0.0			
PHF	0.000	0.450	0.250	0.000	0.250	0.250	0.600	0.000	0.800	0.000	0.000	0.250	0.250	0.825	0.250	0.250	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.000	0.250	0.000	0.542		0.894
Entering Leg	0	9	1	0	1	1	12	0	64	0	0	1	1	66	1	1	0	0	0	0	2	0	12	0	0	1	0	13	93	
Exiting Leg	3							16							9							65							93	
Total	15							82							11							78							186	

PDI File #: **250954 (3)**
 Location: **N: Buick Street S: St Paul Street**
 Location: **E: Commonwealth Avenue W: Commonwealth Avenue**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Buick Street							Commonwealth Avenue							St Paul Street							Commonwealth Avenue							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	15	25	40	0	0	0	0	24	20	44	0	0	0	0	31	29	60	0	0	0	0	10	8	18	162
4:15 PM	0	0	0	0	14	25	39	0	0	0	0	11	15	26	0	0	0	0	23	30	53	0	0	0	0	11	3	14	132
4:30 PM	0	0	0	0	10	25	35	0	0	0	0	31	16	47	0	0	0	0	20	30	50	0	0	0	0	6	10	16	148
4:45 PM	0	0	0	0	17	29	46	0	0	0	0	12	17	29	0	0	0	0	24	15	39	0	0	0	0	4	9	13	127
Total	0	0	0	0	56	104	160	0	0	0	0	78	68	146	0	0	0	0	98	104	202	0	0	0	0	31	30	61	569
5:00 PM	0	0	0	0	25	29	54	0	0	0	0	30	28	58	0	0	0	0	17	14	31	0	0	0	0	9	12	21	164
5:15 PM	0	0	0	0	16	28	44	0	0	0	0	15	15	30	0	0	0	0	26	25	51	0	0	0	0	9	10	19	144
5:30 PM	0	0	0	0	14	13	27	0	0	0	0	14	10	24	0	0	0	0	18	25	43	0	0	0	0	5	12	17	111
5:45 PM	0	0	0	0	14	17	31	0	0	0	0	19	20	39	0	0	0	0	23	29	52	0	0	0	0	8	3	11	133
Total	0	0	0	0	69	87	156	0	0	0	0	78	73	151	0	0	0	0	84	93	177	0	0	0	0	31	37	68	552
Grand Total	0	0	0	0	125	191	316	0	0	0	0	156	141	297	0	0	0	0	182	197	379	0	0	0	0	62	67	129	1121
Approach %	0	0	0	0	39.6	60.4		0	0	0	0	52.5	47.5		0	0	0	0	48	52		0	0	0	0	48.1	51.9		
Total %	0	0	0	0	11.2	17	28.2	0	0	0	0	13.9	12.6	26.5	0	0	0	0	16.2	17.6	33.8	0	0	0	0	5.53	5.98	11.5	
Exiting Leg Total	316							297							379							129							1121

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Buick Street							Commonwealth Avenue							St Paul Street							Commonwealth Avenue							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:30 PM	0	0	0	0	10	25	35	0	0	0	0	31	16	47	0	0	0	0	20	30	50	0	0	0	0	6	10	16	148
4:45 PM	0	0	0	0	17	29	46	0	0	0	0	12	17	29	0	0	0	0	24	15	39	0	0	0	0	4	9	13	127
5:00 PM	0	0	0	0	25	29	54	0	0	0	0	30	28	58	0	0	0	0	17	14	31	0	0	0	0	9	12	21	164
5:15 PM	0	0	0	0	16	28	44	0	0	0	0	15	15	30	0	0	0	0	26	25	51	0	0	0	0	9	10	19	144
Total Volume	0	0	0	0	68	111	179	0	0	0	0	88	76	164	0	0	0	0	87	84	171	0	0	0	0	28	41	69	583
% Approach Total	0.0	0.0	0.0	0.0	38.0	62.0		0.0	0.0	0.0	0.0	53.7	46.3		0.0	0.0	0.0	0.0	50.9	49.1		0.0	0.0	0.0	0.0	40.6	59.4		
PHF	0.000	0.000	0.000	0.000	0.680	0.957	0.829	0.000	0.000	0.000	0.000	0.710	0.679	0.707	0.000	0.000	0.000	0.000	0.837	0.700	0.838	0.000	0.000	0.000	0.000	0.778	0.854	0.821	0.889
Entering Leg	0	0	0	0	68	111	179	0	0	0	0	88	76	164	0	0	0	0	87	84	171	0	0	0	0	28	41	69	583
Exiting Leg	179							164							171							69							583
Total	358							328							342							138							1166

St Paul Street
north of Dummer Street
City, State: Brookline, MA
Client: Jacobs/ W. Kwon
Site Code: AWSC Project #3



PDI File #: 250954 ATR (2) Speed

Count Date
Tuesday, January 6, 2026

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	4	7	1	2	0	1	0	0	0	0	0	0	0	15	25.8	19.6
1:00 AM	3	8	6	0	0	0	0	0	0	0	0	0	0	17	22.0	17.7
2:00 AM	1	5	2	0	0	0	0	0	0	0	0	0	0	8	20.0	18.4
3:00 AM	2	3	4	0	0	0	0	0	0	0	0	0	0	9	22.8	18.2
4:00 AM	2	2	2	0	1	0	0	0	0	0	0	0	0	7	24.9	19.0
5:00 AM	13	9	11	5	1	0	0	0	0	0	0	0	0	39	23.6	18.0
6:00 AM	17	21	16	10	3	1	1	0	0	0	0	0	0	69	26.0	19.5
7:00 AM	23	37	23	11	4	1	0	0	0	0	0	0	0	99	25.0	18.9
8:00 AM	45	75	41	9	12	3	0	0	0	0	0	0	0	185	23.4	18.6
9:00 AM	39	44	38	11	14	5	0	0	0	0	0	0	0	151	27.5	19.1
10:00 AM	33	37	21	6	5	0	1	0	0	0	0	0	0	103	24.0	18.0
11:00 AM	31	42	23	7	4	1	0	0	0	0	0	0	0	108	23.0	17.5
12:00 PM	37	42	27	5	3	3	1	0	0	0	0	0	0	118	22.5	17.9
1:00 PM	40	47	22	4	4	1	0	0	0	0	0	0	0	118	21.0	16.9
2:00 PM	37	63	28	4	6	3	1	0	0	0	0	0	0	142	22.9	18.1
3:00 PM	45	73	35	11	5	3	1	0	0	0	0	0	0	173	23.0	17.8
4:00 PM	47	48	27	4	3	2	0	0	0	0	0	0	0	131	21.0	16.8
5:00 PM	49	53	35	9	7	3	0	0	0	0	0	0	0	156	23.0	18.0
6:00 PM	36	38	29	3	3	1	0	0	0	0	0	0	0	110	22.0	17.4
7:00 PM	32	34	26	9	0	1	0	0	0	0	0	0	0	102	23.0	17.6
8:00 PM	14	23	18	6	2	2	0	0	0	0	0	0	0	65	24.4	19.0
9:00 PM	25	21	10	3	1	1	0	0	0	0	0	0	0	61	22.0	16.8
10:00 PM	8	15	10	1	1	0	0	0	0	0	0	0	0	35	22.0	18.3
11:00 PM	9	8	3	1	0	1	0	0	0	0	0	0	0	22	20.9	17.0
Total	592	755	458	121	79	33	5	0	0	0	0	0	0	2043	23.0	18.0
Percent	28.98%	36.96%	22.42%	5.92%	3.87%	1.62%	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	8:00 AM	8:00 AM	8:00 AM	7:00 AM	9:00 AM	9:00 AM	6:00 AM							8:00 AM
Volume	45	75	41	11	14	5	1	0	0	0	0	0	0	185
PM Peak	5:00 PM	3:00 PM	3:00 PM	3:00 PM	5:00 PM	12:00 PM	12:00 PM							3:00 PM
Volume	49	73	35	11	7	3	1	0	0	0	0	0	0	173

15th Percentile:	13.0 MPH	Average Speed:	18.0 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	17.0 MPH	10 MPH Pace:	12 to 21 MPH	Number of Vehicles > 25 MPH:	203
85th Percentile:	23.0 MPH	Number in Pace:	1389	Percent of Vehicles > 25 MPH:	9.9%
95th Percentile:	31.0 MPH	Percent in Pace:	68.0%		

St Paul Street
north of Dummer Street
City, State: Brookline, MA
Client: Jacobs/ W. Kwon
Site Code: AWSC Project #3



PDI File #: 250954 ATR (2) Speed

Count Date
Tuesday, January 6, 2026

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	1	16	10	2	0	0	0	0	0	0	0	0	0	29	21.8	19.1
1:00 AM	1	7	10	1	0	0	0	0	0	0	0	0	0	19	23.3	20.2
2:00 AM	2	3	2	0	0	0	0	0	0	0	0	0	0	7	21.3	18.3
3:00 AM	0	5	3	0	1	0	0	0	0	0	0	0	0	9	23.8	20.8
4:00 AM	1	6	5	1	0	0	0	0	0	0	0	0	0	13	22.0	18.6
5:00 AM	0	10	17	0	0	0	1	0	0	0	0	0	0	28	24.0	21.1
6:00 AM	7	18	27	3	2	0	0	0	0	0	0	0	0	57	23.0	19.6
7:00 AM	6	20	30	2	3	0	0	0	0	0	0	0	0	61	23.0	19.6
8:00 AM	9	29	25	3	1	0	1	0	0	0	0	0	0	68	24.0	19.0
9:00 AM	8	33	24	3	0	0	0	0	0	0	0	0	0	68	21.0	18.2
10:00 AM	4	45	40	11	0	0	0	0	0	0	0	0	0	100	23.0	19.6
11:00 AM	8	31	32	5	1	0	0	0	0	0	0	0	0	77	23.0	19.2
12:00 PM	11	38	37	3	1	0	0	0	0	0	0	0	0	90	23.0	18.8
1:00 PM	14	43	30	3	2	0	1	0	0	0	0	0	0	93	22.0	18.6
2:00 PM	10	35	37	10	2	1	0	0	0	0	0	0	0	95	24.0	19.9
3:00 PM	10	22	38	3	4	0	0	0	0	0	0	0	0	77	24.0	20.1
4:00 PM	9	51	52	9	0	1	0	0	0	0	0	0	0	122	23.0	19.7
5:00 PM	13	59	30	2	0	0	0	0	0	0	0	0	0	104	22.0	18.3
6:00 PM	5	38	43	8	1	0	0	0	0	0	0	0	0	95	24.0	20.0
7:00 PM	8	29	33	2	0	0	0	0	0	0	0	0	0	72	23.0	19.3
8:00 PM	4	22	32	4	2	0	0	0	0	0	0	0	0	64	22.6	20.0
9:00 PM	9	32	23	2	0	0	0	0	0	0	0	0	0	66	23.0	18.8
10:00 PM	5	14	25	2	1	0	0	0	0	0	0	0	0	47	23.0	19.6
11:00 PM	3	15	19	0	1	0	0	0	0	0	0	0	0	38	22.0	19.5
Total	148	621	624	79	22	2	3	0	0	0	0	0	0	1499	23.0	19.3
Percent	9.87%	41.43%	41.63%	5.27%	1.47%	0.13%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	8:00 AM	10:00 AM	10:00 AM	10:00 AM	7:00 AM		5:00 AM								10:00 AM	
Volume	9	45	40	11	3	0	1	0	0	0	0	0	0	0	100	
PM Peak	1:00 PM	5:00 PM	4:00 PM	2:00 PM	3:00 PM	2:00 PM	1:00 PM								4:00 PM	
Volume	14	59	52	10	4	1	1	0	0	0	0	0	0	0	122	

15th Percentile:	16.0 MPH	Average Speed:	19.3 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	19.0 MPH	10 MPH Pace:	15 to 24 MPH	Number of Vehicles > 25 MPH:	74
85th Percentile:	23.0 MPH	Number in Pace:	1245	Percent of Vehicles > 25 MPH:	4.9%
95th Percentile:	25.0 MPH	Percent in Pace:	83.1%		

St Paul Street
north of Dummer Street
City, State: Brookline, MA
Client: Jacobs/ W. Kwon
Site Code: AWSC Project #3



PDI File #: 250954 ATR (2) Speed

Count Date
Tuesday, January 6, 2026

Speed (60-minute)																
Combined NB and SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	5	23	11	4	0	1	0	0	0	0	0	0	0	44	23.0	19.3
1:00 AM	4	15	16	1	0	0	0	0	0	0	0	0	0	36	23.0	19.0
2:00 AM	3	8	4	0	0	0	0	0	0	0	0	0	0	15	20.9	18.3
3:00 AM	2	8	7	0	1	0	0	0	0	0	0	0	0	18	23.5	19.5
4:00 AM	3	8	7	1	1	0	0	0	0	0	0	0	0	20	22.3	18.8
5:00 AM	13	19	28	5	1	0	1	0	0	0	0	0	0	67	24.0	19.3
6:00 AM	24	39	43	13	5	1	1	0	0	0	0	0	0	126	25.0	19.6
7:00 AM	29	57	53	13	7	1	0	0	0	0	0	0	0	160	24.0	19.1
8:00 AM	54	104	66	12	13	3	1	0	0	0	0	0	0	253	24.0	18.7
9:00 AM	47	77	62	14	14	5	0	0	0	0	0	0	0	219	24.3	18.8
10:00 AM	37	82	61	17	5	0	1	0	0	0	0	0	0	203	23.0	18.8
11:00 AM	39	73	55	12	5	1	0	0	0	0	0	0	0	185	23.0	18.2
12:00 PM	48	80	64	8	4	3	1	0	0	0	0	0	0	208	23.0	18.3
1:00 PM	54	90	52	7	6	1	1	0	0	0	0	0	0	211	22.0	17.6
2:00 PM	47	98	65	14	8	4	1	0	0	0	0	0	0	237	24.0	18.8
3:00 PM	55	95	73	14	9	3	1	0	0	0	0	0	0	250	23.0	18.5
4:00 PM	56	99	79	13	3	3	0	0	0	0	0	0	0	253	22.0	18.2
5:00 PM	62	112	65	11	7	3	0	0	0	0	0	0	0	260	22.0	18.1
6:00 PM	41	76	72	11	4	1	0	0	0	0	0	0	0	205	23.0	18.6
7:00 PM	40	63	59	11	0	1	0	0	0	0	0	0	0	174	23.0	18.3
8:00 PM	18	45	50	10	4	2	0	0	0	0	0	0	0	129	24.0	19.5
9:00 PM	34	53	33	5	1	1	0	0	0	0	0	0	0	127	22.1	17.8
10:00 PM	13	29	35	3	2	0	0	0	0	0	0	0	0	82	22.9	19.0
11:00 PM	12	23	22	1	1	1	0	0	0	0	0	0	0	60	22.0	18.6
Total	740	1376	1082	200	101	35	8	0	0	0	0	0	0	3542	23.0	18.6
Percent	20.89%	38.85%	30.55%	5.65%	2.85%	0.99%	0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
AM Peak	8:00 AM	8:00 AM	8:00 AM	10:00 AM	9:00 AM	9:00 AM	5:00 AM							8:00 AM		
Volume	54	104	66	17	14	5	1	0	0	0	0	0	0	253		
PM Peak	5:00 PM	5:00 PM	4:00 PM	2:00 PM	3:00 PM	2:00 PM	12:00 PM							5:00 PM		
Volume	62	112	79	14	9	4	1	0	0	0	0	0	0	260		

15th Percentile:	13.0 MPH	Average Speed:	18.6 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	18.0 MPH	10 MPH Pace:	14 to 23 MPH	Number of Vehicles > 25 MPH:	277
85th Percentile:	23.0 MPH	Number in Pace:	2552	Percent of Vehicles > 25 MPH:	7.8%
95th Percentile:	28.0 MPH	Percent in Pace:	72.0%		

St Paul Street
north of Dummer Street
City, State: Brookline, MA
Client: Jacobs/ W. Kwon
Site Code: AWSC Project #3



Count Date: Tuesday, January 6, 2026
Direction: NB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	2	0	0	2
12:15 AM	9	0	0	9
12:30 AM	3	0	0	3
12:45 AM	3	0	0	3
1:00 AM	3	0	0	3
1:15 AM	3	0	0	3
1:30 AM	5	0	0	5
1:45 AM	6	0	0	6
2:00 AM	4	0	0	4
2:15 AM	2	0	0	2
2:30 AM	3	0	0	3
2:45 AM	0	0	0	0
3:00 AM	1	0	0	1
3:15 AM	4	0	0	4
3:30 AM	0	0	0	0
3:45 AM	2	0	0	2
4:00 AM	2	0	0	2
4:15 AM	0	1	0	1
4:30 AM	4	0	0	4
4:45 AM	1	0	0	1
5:00 AM	4	0	0	4
5:15 AM	5	2	0	7
5:30 AM	8	1	0	9
5:45 AM	19	1	0	20
6:00 AM	13	0	0	13
6:15 AM	18	3	0	21
6:30 AM	21	1	0	22
6:45 AM	31	1	0	32
7:00 AM	19	1	0	20
7:15 AM	37	0	0	37
7:30 AM	38	1	0	39
7:45 AM	42	2	1	45
8:00 AM	49	4	0	53
8:15 AM	57	1	0	58
8:30 AM	66	3	0	69
8:45 AM	79	0	0	79
9:00 AM	64	3	0	67
9:15 AM	37	2	0	39
9:30 AM	37	2	0	39
9:45 AM	34	4	0	38
10:00 AM	43	1	0	44
10:15 AM	30	1	0	31
10:30 AM	29	1	0	30
10:45 AM	33	0	0	33
11:00 AM	38	2	0	40
11:15 AM	31	3	0	34
11:30 AM	41	3	0	44
11:45 AM	46	1	1	48

AM Total	1026	45	2	1073
Percentage	95.62%	4.19%	0.19%	
AM Peak	8:15 AM	9:00 AM	7:00 AM	8:15 AM
Volume	266	11	1	273

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	42	0	0	42
12:15 PM	30	2	0	32
12:30 PM	49	0	0	49
12:45 PM	19	1	0	20
1:00 PM	52	1	0	53
1:15 PM	46	0	0	46
1:30 PM	45	3	0	48
1:45 PM	28	0	0	28
2:00 PM	44	3	0	47
2:15 PM	41	2	0	43
2:30 PM	49	4	0	53
2:45 PM	52	0	0	52
3:00 PM	41	1	0	42
3:15 PM	64	1	0	65
3:30 PM	64	0	0	64
3:45 PM	74	2	0	76
4:00 PM	60	0	0	60
4:15 PM	38	1	0	39
4:30 PM	44	1	0	45
4:45 PM	42	0	0	42
5:00 PM	59	0	0	59
5:15 PM	51	0	0	51
5:30 PM	60	2	0	62
5:45 PM	54	0	0	54
6:00 PM	48	1	0	49
6:15 PM	39	1	0	40
6:30 PM	38	0	0	38
6:45 PM	26	2	0	28
7:00 PM	34	0	0	34
7:15 PM	30	0	0	30
7:30 PM	38	1	0	39
7:45 PM	26	1	0	27
8:00 PM	20	0	0	20
8:15 PM	28	0	0	28
8:30 PM	19	0	0	19
8:45 PM	20	1	0	21
9:00 PM	19	0	0	19
9:15 PM	19	0	0	19
9:30 PM	19	1	0	20
9:45 PM	14	0	0	14
10:00 PM	15	0	0	15
10:15 PM	6	1	0	7
10:30 PM	15	0	0	15
10:45 PM	17	1	0	18
11:00 PM	8	0	0	8
11:15 PM	5	0	0	5
11:30 PM	11	0	1	12
11:45 PM	6	0	0	6

PM Total	1668	34	1	1703
Percentage	97.94%	2.00%	0.06%	
PM Peak	3:15 PM	1:45 PM	10:45 PM	3:15 PM
Volume	262	9	1	265

Day Total	2694	79	3	2776
Percentage	97.05%	2.85%	0.11%	

St Paul Street
north of Dummer Street
City, State: Brookline, MA
Client: Jacobs/ W. Kwon
Site Code: AWSC Project #3



Count Date: Tuesday, January 6, 2026
Direction: SB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total	PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	15	0	0	15	12:00 PM	33	2	0	35
12:15 AM	5	0	0	5	12:15 PM	31	3	0	34
12:30 AM	3	0	0	3	12:30 PM	28	0	0	28
12:45 AM	4	0	0	4	12:45 PM	46	1	0	47
1:00 AM	10	0	0	10	1:00 PM	31	0	0	31
1:15 AM	5	0	0	5	1:15 PM	31	0	0	31
1:30 AM	0	0	0	0	1:30 PM	55	1	0	56
1:45 AM	4	0	0	4	1:45 PM	52	0	0	52
2:00 AM	0	0	0	0	2:00 PM	40	0	0	40
2:15 AM	3	0	0	3	2:15 PM	46	0	0	46
2:30 AM	0	0	0	0	2:30 PM	43	0	0	43
2:45 AM	1	1	0	2	2:45 PM	45	1	0	46
3:00 AM	3	1	0	4	3:00 PM	41	0	0	41
3:15 AM	4	0	0	4	3:15 PM	41	1	0	42
3:30 AM	1	0	0	1	3:30 PM	40	1	0	41
3:45 AM	0	0	0	0	3:45 PM	52	1	0	53
4:00 AM	1	0	0	1	4:00 PM	65	1	0	66
4:15 AM	4	0	0	4	4:15 PM	57	0	0	57
4:30 AM	4	0	0	4	4:30 PM	53	1	0	54
4:45 AM	2	1	0	3	4:45 PM	56	0	0	56
5:00 AM	6	0	0	6	5:00 PM	68	0	0	68
5:15 AM	6	0	0	6	5:15 PM	72	3	0	75
5:30 AM	6	2	0	8	5:30 PM	60	0	0	60
5:45 AM	10	0	0	10	5:45 PM	49	2	0	51
6:00 AM	8	0	0	8	6:00 PM	41	0	0	41
6:15 AM	19	1	0	20	6:15 PM	56	0	0	56
6:30 AM	22	0	0	22	6:30 PM	38	0	0	38
6:45 AM	22	1	0	23	6:45 PM	46	0	0	46
7:00 AM	28	0	0	28	7:00 PM	40	0	0	40
7:15 AM	29	0	0	29	7:15 PM	19	0	0	19
7:30 AM	31	1	0	32	7:30 PM	29	0	0	29
7:45 AM	56	1	0	57	7:45 PM	14	0	0	14
8:00 AM	49	0	0	49	8:00 PM	16	0	0	16
8:15 AM	51	0	0	51	8:15 PM	20	0	0	20
8:30 AM	41	1	0	42	8:30 PM	23	1	0	24
8:45 AM	61	1	0	62	8:45 PM	22	0	0	22
9:00 AM	25	1	0	26	9:00 PM	23	0	0	23
9:15 AM	28	0	0	28	9:15 PM	15	0	0	15
9:30 AM	30	1	0	31	9:30 PM	16	0	0	16
9:45 AM	42	2	0	44	9:45 PM	21	0	0	21
10:00 AM	41	0	0	41	10:00 PM	9	0	0	9
10:15 AM	47	2	0	49	10:15 PM	11	0	0	11
10:30 AM	28	1	1	30	10:30 PM	14	0	0	14
10:45 AM	38	0	0	38	10:45 PM	11	0	0	11
11:00 AM	30	4	0	34	11:00 PM	8	0	0	8
11:15 AM	27	0	0	27	11:15 PM	14	0	0	14
11:30 AM	33	0	0	33	11:30 PM	7	1	0	8
11:45 AM	26	2	0	28	11:45 PM	4	0	0	4

AM Total	909	24	1	934	PM Total	1652	20	0	1672
Percentage	97.32%	2.57%	0.11%		Percentage	98.80%	1.20%	0.00%	
AM Peak	8:00 AM	10:15 AM	9:45 AM	8:00 AM	PM Peak	4:45 PM	12:00 PM	12:00 PM	4:45 PM
Volume	202	7	1	204	Volume	256	6	0	259
Day Total					2561	44	1	2606	
Percentage					98.27%	1.69%	0.04%		

MEMORANDUM OF AGREEMENT ALL WAY STOP CONTROL (AWSC) PROGRAM

This Memorandum of Agreement (“**Agreement**”) is made and entered into this _____ day of _____, 2026, by and between the Massachusetts Department of Transportation, established pursuant to Chapter 6C of the General Laws, as amended, having its principal place of business at Ten Park Plaza, Boston, Massachusetts, 02116 (“**MassDOT**”), and the CITY/TOWN of _____ Brookline _____, a municipal corporation and political subdivision of the Commonwealth of Massachusetts located in _____ Norfolk _____ County (“**Municipality**”). The Municipality and MassDOT are each sometimes referred to individually herein as a “Party”, and collectively as the “Parties.”

RECITALS

WHEREAS, to enhance pedestrian and driver safety in the Commonwealth of Massachusetts, MassDOT intends to procure sign materials as part of a program to assist municipalities with the conversion certain high-risk intersections on municipally owned roadways from two-way stop control (“**TWSC**”) to all-way stop control (“**AWSC**”); and

WHEREAS, Municipality desires to convert the intersections(s) identified in Exhibit A (the “**Locations**”), which are within the geographical jurisdiction of Municipality, from TWSC to AWSC, and has requested that MassDOT provide Municipality with the AWSC sign materials identified in Exhibit B (the “**Sign Materials**”); and

WHEREAS, MassDOT has confirmed that the Location(s) are eligible for the AWSC materials program and has approved Municipality’s request for Sign Materials; and

WHEREAS, Municipality has agreed to install the Sign Materials and convert the Location(s) from TWSC to AWSC at Municipality’s own expense; and

WHEREAS, MassDOT and Municipality seek to confirm their respective rights and obligations in connection with the Sign Materials as set forth in this Agreement.

NOW, THEREFORE, in consideration of the premises herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. **Recitals.** The recitals in this Agreement are true and correct, and are incorporated herein by reference and made part of his Agreement.
2. **Sign Materials.** MassDOT agrees to provide Municipality with the Sign Materials identified in Exhibit B. MassDOT will fund the entire cost of the Sign Materials, including the cost of delivery to Municipality. Upon delivery, ownership of the Sign Materials will transfer to Municipality.

It is understood and agreed that MassDOT’s procurement of the Sign Materials is contingent upon availability and continued appropriation of federal funds, and if for any

reason whatsoever, such funds are terminated or reduced or otherwise become unavailable, MassDOT may terminate this Agreement immediately.

3. **Project.** Municipality, at its sole expense, shall convert the Locations from TWSC to AWSC in accordance with Exhibit A and Exhibit B (the “**Project**”). As part of the conversion, Municipality shall install the Sign Materials provided by MassDOT at the location(s) indicated in the Project plans. Aside from the Sign Materials, Municipality shall provide all necessary labor, materials (including pavement marking materials, if applicable), equipment, and other services necessary to complete the Project. Municipality shall also be solely responsible for evaluating the specific site constraints for each Location and providing all necessary temporary traffic control devices and/or police details necessary to safely complete the Project. Traffic control plans, signs, devices, and police details shall conform to the Official Standards of MassDOT. Prior to installation, Municipality shall obtain, at its sole cost and expense, any and all applicable permits, approvals, including local approvals, and/or clearances required by local and state agencies, commissions, or bodies necessary for the conversion of the Location(s) to AWSC and for the completion of the Project. Municipality’s failure to comply with any requirement of this paragraph shall constitute a material breach of this Agreement and MassDOT may require Municipality to correct the deficiency at its own expense.

Municipality shall install the Sign Materials and complete the Project within ninety (90) days of their delivery to Municipality. If Municipality fails to install the Sign Materials and complete the Project within the ninety-day period, ownership of the Sign Materials shall revert to MassDOT and Municipality must return the Sign Materials to MassDOT at its sole expense.

Within a week of completing the Project, Municipality shall provide written notice to MassDOT that the Project has been completed. The notice shall include the Project’s completion date. Municipality shall also provide MassDOT with photograph(s) depicting each sign installed pursuant to this Agreement (“**Sign**”) and documentation, in a form acceptable to MassDOT, evidencing each Sign’s location and date of installation.

4. **Operation and Maintenance.** Municipality, at its own expense, shall be solely responsible for the proper operation, maintenance, and repair of the Signs for the duration of the Signs’ useful life. The Signs shall be operated and maintained in accordance with the applicable provisions of the most recent edition of the *Manual on Uniform Traffic Control Devices* (MUTCD) and the Massachusetts Amendments to the MUTCD published by MassDOT. In addition to annual preventative maintenance, Municipality’s maintenance obligation also includes the replacement of major components and miscellaneous parts due to damage or wear and any tree trimming that may be necessary for the proper functioning of a solar-powered Sign. Except for temporary New Traffic Pattern Ahead Signs, Municipality shall not remove or relocate any Sign nor install additional signs (warning or regulatory) with the limits of the Project without receiving

prior written approval from MassDOT. Temporary New Traffic Pattern Ahead Signs shall be removed by Municipality in the time frame indicated in Exhibit B. Failure on the part of Municipality to fulfill its responsibilities for the proper maintenance and operation of the Signs may disqualify Municipality from participation in future Federal Aid Projects in which Municipality has maintenance responsibility. Municipality's obligations under this Section shall survive the expiration or earlier termination of this Agreement.

5. **Term.** This Agreement shall be effective as of the date of full execution by Municipality and MassDOT and, unless terminated earlier as provided herein or otherwise agreed in writing by the Parties, shall remain in full force and effect for a period of 2 years after Municipality's receipt of the Sign Materials. This Agreement may be terminated by mutual agreement of the Parties, upon such terms and conditions as the Parties may mutually agree upon. Such termination shall be effective in accordance with a written agreement by the Parties.

In addition, MassDOT may, by written notice to Municipality, terminate this Agreement in any one of the following circumstances:

- (a) The Municipality neglects or fails to comply with any provision of this Agreement in accordance with its terms or within the time specified for performance herein, and Municipality fails to cure any such failure within thirty (30) calendar days after receipt of notice specifying such failure. In the event this Agreement is terminated pursuant to this provision, MassDOT shall not be liable to the Municipality for any costs incurred or burdens assumed upon or subsequent to, and associated with, such termination.
- (b) The applicable Federal funding source fails to appropriate or otherwise make available funds for the Agreement. In the event this Agreement is terminated pursuant to this provision, MassDOT shall not be liable to Municipality for any costs.

In the event that MassDOT terminates this MOA subsequent to the delivery of the Sign Materials to Municipality but prior to their installation, Municipality shall, at its expense, return the Sign Materials to the applicable MassDOT District Office.

6. **Compliance with Laws.** Municipality, in meeting its obligations hereunder, shall comply with all applicable federal, state, county, municipal and other governmental statutes, laws, rules, orders, regulations and ordinances. Municipality's obligations under this Section 6 shall survive the expiration or earlier termination of this Agreement.
7. **Indemnification.** To the extent permitted by the laws of the Commonwealth, Municipality shall indemnify, defend (at Municipality's sole expense and with counsel reasonably acceptable to MassDOT), and hold harmless MassDOT and all of MassDOT's officers, agents, and employees, from and against any and all suits, claims, proceedings, liabilities, losses

damages, penalties, charges and expenses (including attorneys' fees and experts' fees) of every name and nature, based on or arising out of any actual or alleged loss or injury (including death) to persons or damage to real or tangible property that are caused or alleged to be caused, in whole or in part, by, or to arise out of the acts or omissions of, Municipality, or its employees, contractors, subcontractors, or agents, in its performance of the obligations set forth herein. Municipality's obligations under this Section 7 shall survive the expiration or earlier termination of this Agreement.

8. **Notices.** Any notices required or permitted to be given hereunder shall be given in writing and shall be delivered (a) in person, (b) by certified or registered mail, postage prepaid, return receipt requested, or (c) by a commercial overnight courier that guarantees next day delivery and provides a receipt. Such notices shall be addressed as follows:

If to MassDOT: Massachusetts Department of Transportation
Highway Division of Traffic & Safety Engineering
10 Park Plaza, Suite 7520
Boston, MA 02116
Attention: Neil Boudreau

If to Municipality: Engineering and Transportation
333 Washington Street
Brookline MA 01701
Attention: Director of Engineering

or to such other address as either Party may from time to time specify in writing to the other Party. Any notice shall be effective only upon delivery.

9. **Authority.** The individuals executing this MOA represent that they are empowered and duly authorized to so execute this MOA on behalf of the Parties they represent.
10. **Miscellaneous.** This MOA represents the entire agreement between the Parties with respect to the subject matter hereof, superseding any prior oral or written agreements or understandings regarding the same, and any modification amendment or change to the terms and conditions hereof shall be binding only when expressed in writing and signed by both Parties hereto. This MOA may be signed in multiple counterparts each of which shall be deemed an original, but all of which when taken together shall constitute one and the same instrument. This MOA shall be governed by and interpreted in accordance with the laws of the Commonwealth of

Massachusetts, without regard to its choice of law rules. If any provision or condition of this MOA shall be deemed invalid or unenforceable, the remaining provisions and conditions shall remain in full force and effect and shall be valid and enforceable to the fullest extent permitted by law.

IN WITNESS WHEREOF, Municipality and MassDOT have caused this Agreement to be executed by their duly authorized officers or representatives as of the date first above written.

MASSACHUSETTS DEPARTMENT
OF TRANSPORTATION

MUNICIPALITY

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Exhibit A Location



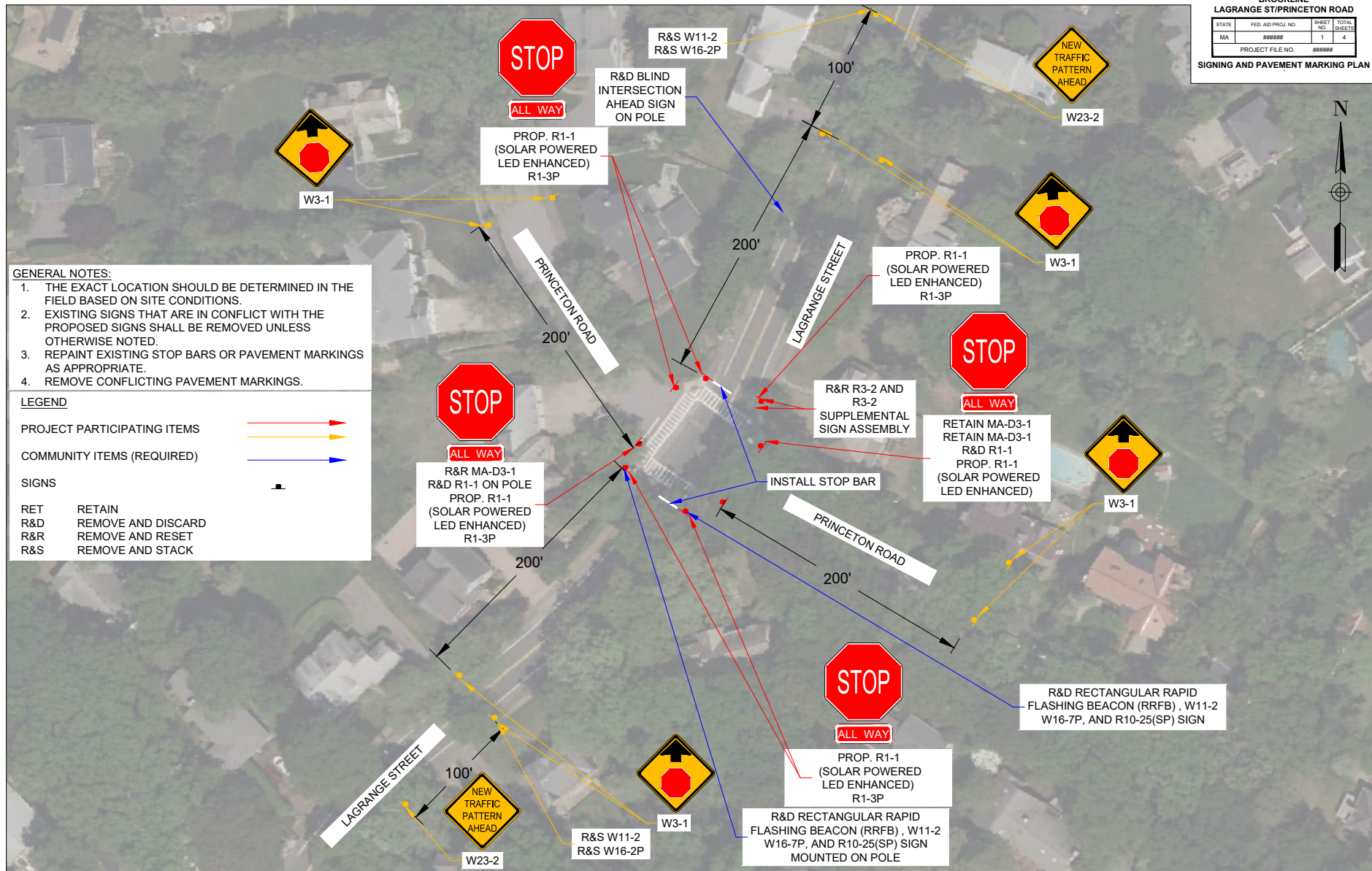


Exhibit B

Sign Materials



TRAFFIC SIGN SUMMARY

BROOKLINE LAGRANGE RD/PRINCETON RD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	#####	4	4
PROJECT FILE NO. #####			
SIGN SUMMARY			

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
LED ENHANCED R1-1	30"	30"		MUTCD 2023 STANDARDS			8	RED	WHITE	WHITE	P5*, 8	6.25	50
R1-3P	18"	6"		MUTCD 2023 STANDARDS			7	RED	WHITE	WHITE	0, MNT w/ R1-1	0.75	5.25
W3-1	30"	30"		MUTCD 2023 STANDARDS			8	YELLOW	BLACK	BLACK	P5*, 8	6.25	50
W23-2	36"	36"		MUTCD 2023 STANDARDS			4	YELLOW	BLACK	BLACK	P5*, 4	9	36

* VERTICAL RETROREFLECTIVE SHEETING STRIPS ON ALL P5 SIGN SUPPORTS FRONTS FOR ENHANCED SIGN CONSPICUITY PER MUTCD 2023 STANDARDS TO BE INSTALLED. STRIPS SHALL BE AT LEAST 2 INCHES WIDE AND MATCH THE BACKGROUND COLOR OF THE SIGN.

GENERAL NOTES:

1. REFER TO INTERSECTION LAYOUT PLAN AND THE EVALUATION REPORT FOR COMPLETE LIST OF REQUIRED AND OPTIONAL ITEMS AND MEASURES TO BE DONE.
2. NEW TRAFFIC PATTERN AHEAD SIGNS ARE TEMPORARY AND SHOULD BE REMOVED WHEN THE TRAFFIC PATTERN RETURN TO NORMAL, WHEN THE CHANGED PATTERN IS NO LONGER CONSIDERED TO BE NEW, OR WITHIN 12 MONTHS.
3. SIGNS SHALL BE INSTALLED MINIMUM OF 6' FROM THE EDGE OF ROADWAY AND AT A MOUNTING HEIGHT OF 7' FROM THE BOTTOM EDGE OF THE SIGN TO THE ROADWAY SURFACE. SIGN POSITIONS SHALL CONFORM TO MUTCD FIGURES 2A-2 AND 2A-3.

June 16, 2026

Dan Martin
Sustainable Transportation Engineer
Town of Brookline
333 Washington Street, 4th Floor
Brookline, MA 02445

Subject: **All-Way Stop Control (AWSC)**
 [Lagrange Street and Princeton Road](#)
 Feasibility Analysis

Dear Dan:

Jacobs Engineering Group Inc. (Jacobs) is pleased to provide you with the results of our evaluation for the intersection of Lagrange Street and Princeton Road in the Town of Brookline.

MassDOT is partnering with Commonwealth municipalities to identify and investigate municipal intersections that would potentially benefit from All-Way Stop-Control (AWSC) conversion. On behalf of MassDOT, under their **All-Way Stop Control Material Procurement Program – Round 2**, Jacobs has reviewed the traffic data, including volumes, turning movements, speeds and recent crash history as well as site conditions to evaluate whether this location is suitable for conversion to AWSC.

Based on the analysis, the intersection is recommended for moving forward with conversion to AWSC. The results of the analysis are summarized in the technical memorandum included with this letter. ***Should the Town decide to move forward with the conversion, the existing rectangular rapid flashing beacon at the crosswalk will need to be removed as it would be a violation of federal regulations for it to be located at a stop condition.***

Under this program, MassDOT will provide STOP signs at recommended locations for the conversion. It shall be up to the municipality to decide whether they should prefer to receive LED STOP signs or traditional static STOP signs. Studies have shown that LED STOP signs can be an effective tool to improve safety by increasing conspicuity and driver compliance. LED STOP signs are recommended to enhance visibility both during the daytime and nighttime and during adverse weather conditions like fog and rain. The lighted signs will also aid the drivers during the transition period when they need to become accustomed to stopping at a location where they did not have to stop prior to the conversion. The LED lights on the STOP sign are solar-powered, and the municipality will be responsible for maintenance. This may include regular vegetation clearing to ensure adequate sunlight for solar power. In some cases, municipalities have opted to use the LED STOP signs on the mainline approaches and the static signs on the minor approaches. Site-specific conditions should be taken into consideration, such as proximity to residences and tree cover. We are more than happy to discuss the pros and cons with you if you need assistance in making the decision.

Additionally, Doubled-Up STOP signs are recommended. This means installing STOP signs on both the left and right sides of the roadway. This is considered a low-cost, effective, safety countermeasure to increase driver awareness and recognition of the intersection and potential conflicts. These may be either LED or traditional static signs, as preferred by the municipality.

To summarize, the Conversion Plan encompasses two key safety enhancements, implementation of LED-illuminated STOP signs and installation of doubled-up STOP signs at all intersection approaches. For your

convenience, we have included a form for confirming sign options as Attachment 5 to this memorandum. Your selections will directly inform the list of sign materials to be included in the Memorandum of Agreement (MOA) package that will be prepared for signature should the town choose to move forward with the conversion.

Within the memorandum you will find important details concerning the requirements and next steps for implementing the AWSC conversion. The information includes necessary procedures and expectations for the successful implementation of the conversion project. We kindly request that you review this document in its entirety.

Should you have any questions or require further clarification on any aspect of the information provided, please do not hesitate to contact me at Erika.Lindeberg@Jacobs.com or 959-900-5397.

Your attention to this matter is greatly appreciated, and we look forward to working together to ensure a smooth and compliant conversion process.

Sincerely,



Erika B Lindeberg
2026.06.17
13:39:22-04'00'

Erika Lindeberg, PE, PTOE, RSP1
Senior Project Manager
Jacobs

Introduction

The Massachusetts Department of Transportation (MassDOT) is considering the conversion of municipally owned Two-Way Stop Control (TWSC) intersections to All-Way Stop Control (AWSC) to improve safety. A preliminary screening process based on a systemic analysis of 2022–2024 crash data has identified a list of candidate intersections. Through this preliminary screening process and confirmed interest from your community, Lagrange Street and Princeton Road intersection in Brookline has been selected to proceed with a feasibility analysis performed by Jacobs Engineering Group Inc. The assessment is based on engineering judgement of site conditions and an analysis of traffic operations. A warrant analysis was conducted utilizing methodologies outlined in the Manual for Uniform Traffic Control Devices (MUTCD)¹. This memorandum summarizes the feasibility analysis (study area description and traffic operations), warrant analysis, recommendations, and next steps.

Intersection Study Area

Figure 1 shows the intersection while Table 1 summarizes details about the surrounding area. The intersection is in a residential suburban area.

The intersection of Lagrange Street and Princeton Road is a four-way unsignalized intersection with stop control on the west and east (Princeton Road) approaches. Lagrange Road functions as the major street and is functionally classified as a minor arterial. Princeton Road operates as the minor street and is east-west under stop control. The stop signs are static and the stop sign on the westbound approach is affixed to a utility pole. An MA-R2-9B townwide 25 MPH speed limit sign is installed approximately 700ft south of the intersection on Lagrange Street facing northbound traffic. Princeton Road curves on the eastbound approach to the intersection; Lagrange Street curves slightly just prior to the northbound approach as well. The area is relatively flat.

There are sidewalks at all corners of the intersection. High visibility ladder-style crosswalks are provided on all approaches with pedestrian crossing sign (W11-2 & W16-7P) across Lagrange St. There is a Rectangular Rapid Flashing Beacon (RRFB) for the crosswalk on the northbound Lagrange Street approach.

There are “No Left Turn 7AM-9AM Mon.-Fri.” signs on northbound Lagrange Street approximately 100 feet before and immediately after the intersection, presumably to discourage cut-through traffic. There is also a pedestrian warning sign with a “200 FT” plaque on the northbound Lagrange Street approach. On the southbound approach, there is a pedestrian warning sign with a “300 FT” plaque, followed by a “BLIND INTERSECTION AHEAD” warning sign approximately 150 feet from the intersection. On the northwest corner of the intersection there is a “DRIVE SLOW CHILDREN” sign facing southbound traffic.

For the minor street (Princeton Road) stop-controlled approaches, sight distance is based on assumed design speed of 40 MPH (85th percentile speed data collected) on Lagrange Street despite the speed limit of 25 MPH. The required sight distance to complete turns from Princeton Road is 445 feet minimum for left turns and 385 feet minimum for right turns. Eastbound drivers on Princeton Road have restricted sight distance to northbound traffic on Lagrange Street, while westbound drivers have restricted visibility to both northbound and southbound traffic. These limitations are due to the skewed intersection geometry and vegetation within the sight triangle.

¹ US Department of Transportation Federal Highway Administration. *Manual on Uniform Traffic Control Devices*. 11th edition, December 2023.



Figure 1: Intersection Study Area

Table 1: Intersection Characteristics (based on desktop review and MassDOT Roadway Inventory)

	Northbound Approach: Lagrange Street	Southbound Approach: Lagrange Street	Eastbound Approach: Princeton Street	Westbound Approach: Princeton Street
Functional Classification	Minor Arterial	Minor Arterial	Local	Local
Geometry/Turn Lanes	LTR	LTR	LTR	LTR
Speeds*				
Posted Speed Limit (mph)	25	25	N/A	N/A
85th% Speed (mph)	38	40	Not applicable on stop-controlled approaches	
50th% Speed (mph)	33	35		
Statutory Speed (mph)	N/A	N/A	25	25
Design Speed (mph)	40	40	N/A	N/A
Is there a crosswalk?	Yes (RRFB)	Yes	Yes	Yes
Is there a sidewalk?	Yes	Yes	Yes	Yes
Is there a bike lane?	No	No	No	No

*Speed data for Lagrange Street collected on January 6th, 2026, by Precision Data Industries.
LTR (Combined-Lane Left-Through-Right)

Site Observations

A field visit was not performed for this location. The site conditions summarized in Table 2 are based on a desktop review of images captured in June 2025.

Table 2: Site Conditions

Condition	Observation
Are speed limit signs posted?	Yes, 25 mph townwide speed limit sign posted approximately 700 ft south of the intersection on Lagrange Street.
Are signs faded, turned, defaced?	No
Are there any obstructions blocking the view of opposing or conflicting vehicles?	Skew and vegetation blocking the view for eastbound and westbound drivers
Are there any site conditions that could impact sign placement? (Limited ROW, physical obstructions, shaded area for LED, etc.)	No
Are drivers complying with intersection controls?	N/A
Is vehicle delay causing a safety problem?	N/A
Is there an intersection where spillback occurs? (Could be a result of AWSC queuing or adjacent intersection queues impacting AWSC location)	No
Would AWSC likely hinder any adjacent driveways or street?	No
Do pavement markings have to be refurbished? (e.g. "STOP", STOP lines, Lane lines, Crosswalks, etc.)	Yes, crosswalks on Lagrange approaches starting to wear
Is the minor road at an awkward skew or are there any other issues requiring widely separated STOP positions?	Yes, Princeton Rd eastbound has an awkward skew relative to Lagrange Street
Is there a need to install channelization to reduce conflict areas?	No

Crash History

Between 2022 and 2024, there were 11 reported crashes. Of these, ten were of a type potentially preventable by converting to AWSC. The crash history meets the minimum MUTCD Warrant A (Crash Experience) for AWSC conversion.

Traffic Operations

Unadjusted peak hour turning movements were analyzed to determine how the intersection would perform as ASWC. The analysis was performed using Synchro² software based on methodologies outlined in the *Highway Capacity Manual 7th Edition (HCM)*³. The HCM defines Level of Service (LOS) for unsignalized intersections according to Table 3.

Table 3: HCM LOS Criteria for Unsignalized Intersections

LOS	Average Control Delay (sec/vehicle)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Table 4, below, indicates the predicted AM and PM peak hour LOS if the intersection were converted to AWSC. The full traffic operations analysis outputs and traffic count data are attached to this memorandum (Attachments 2 and 8). The results are interpreted as follows:

- When all approaches perform at LOS D or better, the intersection is considered suitable for AWSC conversion.
- If a major street approach is currently free flowing under TWSC but operates at LOS E as AWSC, then additional assessment is needed.
- If a major street approach is currently free flowing under TWSC but operates at LOS F as AWSC, then the intersection is considered unsuitable for AWSC conversion, however it will not be automatically ruled out as other factors shall be considered.

² CUBIC Transportation Systems. *Synchro Studio 12*. Software, 2023.

³ Transportation Research Board. *Highway Capacity Manual*, 7th edition, 2022.

Table 4: Level of Service Operations (under existing peak hour volumes)

Intersection Approach	Existing				AWSC			
	AM LOS	AM Control Delay (s/veh)	PM LOS	PM Control Delay (s/veh)	AM LOS	AM Control Delay (s/veh)	PM LOS	PM Control Delay (s/veh)
Northbound Approach (Lagrange Street)	A	0.8	A	0.24	D	27.4	B	14.1
Southbound Approach (Lagrange Street)	A	0.2	A	0.16	C	16.1	C	22.6
Eastbound Approach (Princeton Road)	D	27.7	C	17.02	B	10.1	A	9.4
Westbound Approach (Princeton Road)	E	41.7	D	25.74	B	10.9	A	9.7
Overall Intersection LOS	A		A		C		C	

Existing conditions were evaluated based on vehicle volumes collected in January 2026. Based on the existing condition, Lagrange Street is estimated to operate at LOS A and Princeton Road at LOS C, D and E in both AM and PM peaks.

Comparably, when the intersection is converted to the build condition (All-Way Stop Controlled), the delay that Princeton Road experiences under existing conditions is redistributed around the intersection so that Lagrange Street begins to experience more delay while Princeton Road experiences less. All approaches would operate LOS D or better.

The overall intersection LOS will see a minimal intersection delay and operate at LOS C for both AM and PM peaks. This indicates that the AWSC configuration is not anticipated to introduce capacity reduction at this location. While LOS results suggest that both the existing TWSC and AWSC configuration operate acceptably, it is important to recognize Level of Service alone does not determine the suitability of an AWSC conversion. A full operational results summary is included in Attachment 2.

AWSC Conversion Recommendation

Based on engineering judgement at this location, conversion to AWSC is recommended given that 1) Crash Experience Warrant A and Sight Distance Warrant B are satisfied; and 2) that there are no negative impacts to operational performance anticipated based on the Synchro analysis. A detailed AWSC warrant analysis is included in Attachment 1.

Implementing AWSC at this location is anticipated to establish a consistent level of control across all approaches reducing the potential for angle crashes and eliciting consistent driver behavior at an intersection where visibility varies by direction. The introduction of uniform stopping requirements is anticipated to enhance safety for all movements.

Refer to the Conversion Plan for Details. The following items shall be completed by the municipality just prior to the conversion:

- Remove existing RRFB (Section 4L.01 of the [MUTCD](#) states that RRFBs shall not be used for crosswalks across approaches controlled by STOP signs.)
- Remove conflicting pavement markings
- Remove existing Intersection Ahead signs
- Install new STOP bars

Next Steps

STEP ONE Review the attachments that follow and contact Jacobs with any questions or concerns:

- Attachment 1 - AWSC Warrant Analysis
- Attachment 2 – Synchro Reports
- Attachment 3 – Conversion Plan (includes sign installation guidance and proposed pavement markings, as well as required work items – some of which are to be supplied by MassDOT- Installed by the municipality, and others which are to be supplied by the municipality - Installed by the municipality.

Note: All improvements shown on the enclosed Conversion Plan are required for the AWSC conversion, with the exception of doubled up signs and LED signs which are recommended but not required.

- Attachment 4 – Sign Summary (details proposed signage and quantities)
- Attachment 5 – Form for Confirming Sign Options
- Attachment 6 – Community Informational Flyer
- Attachment 7 – Sample MOA
- Attachment 8 - Traffic Volumes and Speeds

The Conversion Plan outlines all improvements mandated by the terms of the MOA. These are essential modifications that must be implemented. The Conversion Plan includes:

1. The locations of the new signs, removal of existing signage and, if applicable, any signs that are to be retained and reused.
2. New pavement markings and removal of any conflicting pavement markings that are necessary.

Required items that may not appear on the Conversion Plan:

1. Areas of vegetation and tree trimming necessary to ensure proper visibility of signs.
2. Areas of vegetation and tree trimming necessary to ensure adequate sunlight exposure for any LED STOP sign solar panels.

The information shown on the Conversion Plan regarding placement of signs and pavement markings shall be field verified by the town prior to installation. Sign locations may be adjusted as needed to avoid roadside features and appurtenances; however, any significant adjustments shall be brought to the attention of the engineer for further review.

If the community has any concerns or requests for changes to the proposed design, please bring them to our attention within 5 days of receipt of this report as this project is advancing on a tight timeline.

- STEP TWO** Determine whether the **LED stop signs and doubled-up STOP signs** as shown on the Conversion Plan are preferred and notify Jacobs of your decision utilizing the form provided (Attachment 5).
- The standard AWSC conversion sign package includes LED STOP signs on both major and minor street intersection approaches. LED STOP signs are effective tools for improving intersection safety by gaining driver attention and increasing the intersection's conspicuity. LED STOP signs require continuing maintenance to ensure effective operation including battery and solar panel maintenance and routine vegetation clearing to ensure adequate sunlight for charging. Traditional static STOP signs are acceptable (or a combination of LED and static if desired) as an alternative if requested by municipality. **It is necessary that communities review the LED STOP signs proposed in the attached plan to ensure that they are feasible (for example, that there is adequate sunlight to power sign solar panels) and preferred for this location.**
- Additionally, doubled-up STOP signs are also being shown on the Conversion Plan. This is a low-cost countermeasure being used systemically to improve intersection safety nationwide. Maintenance includes routine vegetation clearing to ensure visibility of the sign.
- STEP THREE** Review the **Optional Work Items** described in the Community Informational Flyer and determine whether the city would like to include any of the items in the conversion. These optional treatments listed in the section below are supplementary measures that can be taken to alert drivers to the traffic control modifications and increase safety at the intersection particularly during the transitional period when drivers are still becoming aware of the need to stop. Any costs associated with the optional work items would be borne by the municipality.
- STEP FOUR** Execute a **Memorandum of Agreement (MOA)** If the community agrees with the recommendation for conversion to AWSC, it must perform the necessary internal steps to gain local approval. Once formal approval is submitted to Jacobs (on behalf of MassDOT), Jacobs will then prepare the Memorandum of Agreement (MOA) for signatures. The MOA will establish the agreed-upon conditions which the assets provided by MassDOT to Brookline will be installed, and agreement to complete the required work items identified in the attached plan.
- Upon executing the MOA, MassDOT will procure the necessary signage and materials for the conversion, including STOP signs (with option for flashing LED Stop Signs), "All Way Stop" placards, warning signs such as "Stop Ahead", and red retroreflective signpost strips. Delivery of the materials is expected during Federal Fiscal Year (FFY) 2026.
- STEP FIVE** Notify Jacobs of the preferred sign **delivery location** and provide a contact person's name and phone number for delivery arrangements.
- STEP SIX** Complete the conversion within **90 days**, beginning when you receive the new signs. Proof of installation is required. **Within a week of completing the project, the municipality shall provide written notice to MassDOT that the project has been completed. The notice shall include the project's completion date. The municipality shall also provide MassDOT with photographs depicting each sign installed as evidence of each sign's location.**

Optional Work Items:

- “NEW” plaques on the STOP signs at newly controlled approaches
- “NEW TRAFFIC PATTERN AHEAD” signs on minor approaches – recommend removal after 6 months
- Warning flags on STOP AHEAD signs on new control approaches
- Pavement Markings – install STOP and STOP AHEAD stencils
- Changeable message signs – install prior to conversion for advance notice to drivers
 - Recommended 2 weeks in advance and 2 weeks after installation
- Optical speed bars – install for speed management on intersection approaches
- Speed study – perform speed measurements after the acclimatization period to determine if a speed limit change on the new stopped approaches would be supported

Lastly, an Informational Flyer (Attachment 6) is attached to provide best practices and recommendations for converting an intersection to AWSC. The municipality is encouraged to work with the community about the upcoming change in traffic control prior to implementing the change.

Jacobs is available to answer any questions about this assessment and will be coordinating with the city to ensure that the conversion is completed according to the Conversion Plan and enclosed MassDOT standards in a timely manner.

Attachment 1

AWSC Warrant Analysis



All-Way Stop Control Warrant Analysis Checklist

Based on [US Department of Transportation Federal Highway Administration. Manual on Uniform Traffic Control Devices. 11th edition, December 2023.](#) Sections 2B.12-17:

*The decision to install all-way stop control on site roadways may be based on engineering judgement. **Satisfying an all-way stop control warrant or warrants shall not in itself require the installation of all-way stop control at an unsignalized intersection.***

☒ Warrant A: Crash Experience

Year	Total Crashes	Preventable Crashes
2022	1	1
2023	4	3
2024	6	6

AWSC may be installed at an intersection where an engineering study indicates that:	Warrant compliance
A. <u>For a 4-leg intersection:</u> There are 5 or more reported crashes in a 12-month period OR 6 or more reported crashes in a 36-month period that were of a type susceptible to correction by the installation of all-way stop control*	☒ Satisfied ☐ Not Satisfied
B. <u>For a 3-leg intersection:</u> There are 4 or more reported crashes in a 12-month period OR 5 or more reported crashes in a 36-month period that were of a type susceptible to correction by the installation of all-way stop control*	

☒ **Warrant B: Sight Distance**

Sight distance observations are based on desktop evaluation not a site visit.

<i>All-way stop control may be installed at an intersection</i>	Warrant compliance
<i>Where an engineering study indicates that:</i>	
<i>Sight distance on the minor-road approaches controlled by a STOP sign is not adequate for a vehicle to turn onto or cross the major (uncontrolled) road</i>	☒ Satisfied
<i>At such a location, a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop</i>	☐ Not Satisfied

☐ **Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection**

<i>All-way stop control may be installed at an intersection</i>	Warrant Compliance
<i>Where an engineering study indicates that:</i>	
<i>All-way stop control may be installed at locations where all-way stop control is an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal (see Chapter 4C) at the intersection</i>	☐ Satisfied
<i>OR</i>	☐ Not Satisfied
<i>for the installation of yield control at a circular intersection.</i>	

Information regarding planned future improvements for this intersection was not available at the time of evaluation; therefore, this warrant cannot be assessed.

☐ Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

Volume counts for this project were collected over the highest four hours of the day during the AM and PM peaks. Therefore, the 8th highest hour required by this warrant was not available and the warrant is not evaluated. However, volume data are reported for the peak hour of the day.

Direction	Street Name	Motor vehicle, bicycle, and pedestrian volume	Date
Major approaches	Lagrange St	1,000 units/hour (UPH)	January 6, 2026
Minor approaches	Princeton Rd	41 UPH	4:45PM

* Note: All-way stop controls at intersections with substantially differing approach volumes can reduce the effectiveness of these devices for all roadway users.

All-way stop control may be installed at an intersection Where an engineering study indicates that:	Warrant Compliance
A. The combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major-street approaches is <u>at least 300 units per hour for each of any 8 hours</u> of a typical day. AND B. The combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor street approaches <u>is at least 200 units per hour</u> for each of any of the same 8 hours	☐ Satisfied ☒ Not Satisfied
1. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants may be reduced to 70 percent of the values given in Items A and B in Paragraph 1 of this Section.	☐ Satisfied ☒ Not Satisfied

□ Warrant E: Other Factors

<i>All-way stop control may be installed at an intersection where an engineering study indicates that all-way stop control is needed due to other factors not addressed in the other all-way stop control warrants. Such other factors may include, but are not limited to, the following:</i>	Warrant Compliance
<i>The need to control left-turn conflicts</i>	☐ Satisfied ☒ Not Satisfied
<i>An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where all-way stop control would improve traffic operational characteristics of the intersection, or</i>	☐ Satisfied ☒ Not Satisfied
<i>Where pedestrian and/or bicyclist movements support the installation of all-way stop control</i>	☐ Satisfied ☒ Not Satisfied

Attachment 2

Synchro Reports



Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	12	6	3	72	0	41	451	29	3	319	10
Future Vol, veh/h	1	12	6	3	72	0	41	451	29	3	319	10
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	43	50	75	78	75	68	89	72	25	79	62
Heavy Vehicles, %	0	17	0	0	3	0	0	2	0	0	2	0
Mvmt Flow	4	28	12	4	92	0	60	507	40	12	404	16

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1110	1106	413	1091	1094	529	421	0	0	549	0	0
Stage 1	437	437	-	649	649	-	-	-	-	-	-	-
Stage 2	673	670	-	442	445	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.67	6.2	7.1	6.53	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.67	-	6.1	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.67	-	6.1	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.153	3.3	3.5	4.027	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	188	198	644	194	213	554	1149	-	-	1031	-	-
Stage 1	602	555	-	462	464	-	-	-	-	-	-	-
Stage 2	448	433	-	599	573	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	93	179	643	148	193	553	1148	-	-	1029	-	-
Mov Cap-2 Maneuver	93	179	-	148	193	-	-	-	-	-	-	-
Stage 1	592	546	-	426	428	-	-	-	-	-	-	-
Stage 2	324	400	-	549	564	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	27.68	41.68	0.82	0.24
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	176	-	-	202	191	50	-
HCM Lane V/C Ratio	0.053	-	-	0.217	0.505	0.012	-
HCM Ctrl Dly (s/v)	8.3	0	-	27.7	41.7	8.5	0
HCM Lane LOS	A	A	-	D	E	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.8	2.5	0	-

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	5	27	3	5	0	5	381	6	7	595	6
Future Vol, veh/h	1	5	27	3	5	0	5	381	6	7	595	6
Conflicting Peds, #/hr	1	0	0	1	0	1	0	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	42	68	38	62	25	42	94	38	58	99	75
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	0	17
Mvmt Flow	4	12	40	8	8	0	12	405	16	12	601	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1065	1076	608	1069	1072	414	611	0	0	421	0	0
Stage 1	631	631	-	437	437	-	-	-	-	-	-	-
Stage 2	434	445	-	632	635	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	202	221	499	201	222	642	978	-	-	1149	-	-
Stage 1	472	477	-	602	583	-	-	-	-	-	-	-
Stage 2	604	578	-	472	475	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	188	214	498	169	215	642	976	-	-	1149	-	-
Mov Cap-2 Maneuver	188	214	-	169	215	-	-	-	-	-	-	-
Stage 1	464	469	-	592	573	-	-	-	-	-	-	-
Stage 2	586	569	-	416	467	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	17.02	25.74	0.24	0.16
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	49	-	-	355	189	35	-
HCM Lane V/C Ratio	0.012	-	-	0.157	0.084	0.011	-
HCM Ctrl Dly (s/v)	8.7	0	-	17	25.7	8.2	0
HCM Lane LOS	A	A	-	C	D	A	A
HCM 95th %tile Q(veh)	0	-	-	0.5	0.3	0	-

Intersection	
Intersection Delay, s/veh	21.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	12	6	3	72	0	41	451	29	3	319	10
Future Vol, veh/h	1	12	6	3	72	0	41	451	29	3	319	10
Peak Hour Factor	0.25	0.43	0.50	0.75	0.78	0.75	0.68	0.89	0.72	0.25	0.79	0.62
Heavy Vehicles, %	0	17	0	0	3	0	0	2	0	0	2	0
Mvmt Flow	4	28	12	4	92	0	60	507	40	12	404	16
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10.1	10.9	27.4	16.1
HCM LOS	B	B	D	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	5%	4%	1%
Vol Thru, %	87%	63%	96%	96%
Vol Right, %	6%	32%	0%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	521	19	75	332
LT Vol	41	1	3	3
Through Vol	451	12	72	319
RT Vol	29	6	0	10
Lane Flow Rate	607	44	96	432
Geometry Grp	1	1	1	1
Degree of Util (X)	0.831	0.079	0.174	0.615
Departure Headway (Hd)	4.926	6.475	6.488	5.129
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	735	551	552	704
Service Time	2.957	4.538	4.544	3.164
HCM Lane V/C Ratio	0.826	0.08	0.174	0.614
HCM Control Delay, s/veh	27.4	10.1	10.9	16.1
HCM Lane LOS	D	B	B	C
HCM 95th-tile Q	9.2	0.3	0.6	4.3

Intersection	
Intersection Delay, s/veh	18.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	5	27	3	5	0	5	381	6	7	595	6
Future Vol, veh/h	1	5	27	3	5	0	5	381	6	7	595	6
Peak Hour Factor	0.25	0.42	0.68	0.38	0.62	0.25	0.42	0.94	0.38	0.58	0.99	0.75
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	0	17
Mvmt Flow	4	12	40	8	8	0	12	405	16	12	601	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.4	9.7	14.1	22.6
HCM LOS	A	A	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	3%	38%	1%
Vol Thru, %	97%	15%	63%	98%
Vol Right, %	2%	82%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	392	33	8	608
LT Vol	5	1	3	7
Through Vol	381	5	5	595
RT Vol	6	27	0	6
Lane Flow Rate	433	56	16	621
Geometry Grp	1	1	1	1
Degree of Util (X)	0.572	0.09	0.029	0.789
Departure Headway (Hd)	4.756	5.812	6.497	4.574
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	753	620	554	789
Service Time	2.824	3.814	4.5	2.635
HCM Lane V/C Ratio	0.575	0.09	0.029	0.787
HCM Control Delay, s/veh	14.1	9.4	9.7	22.6
HCM Lane LOS	B	A	A	C
HCM 95th-tile Q	3.7	0.3	0.1	8.1

Attachment 3

Conversion Plan



GENERAL NOTES:

1. THE EXACT LOCATION SHOULD BE DETERMINED IN THE FIELD BASED ON SITE CONDITIONS.
2. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE PROPOSED SIGNS SHALL BE REMOVED UNLESS OTHERWISE NOTED.
3. REPAINT EXISTING STOP BARS OR PAVEMENT MARKINGS AS APPROPRIATE.
4. REMOVE CONFLICTING PAVEMENT MARKINGS.

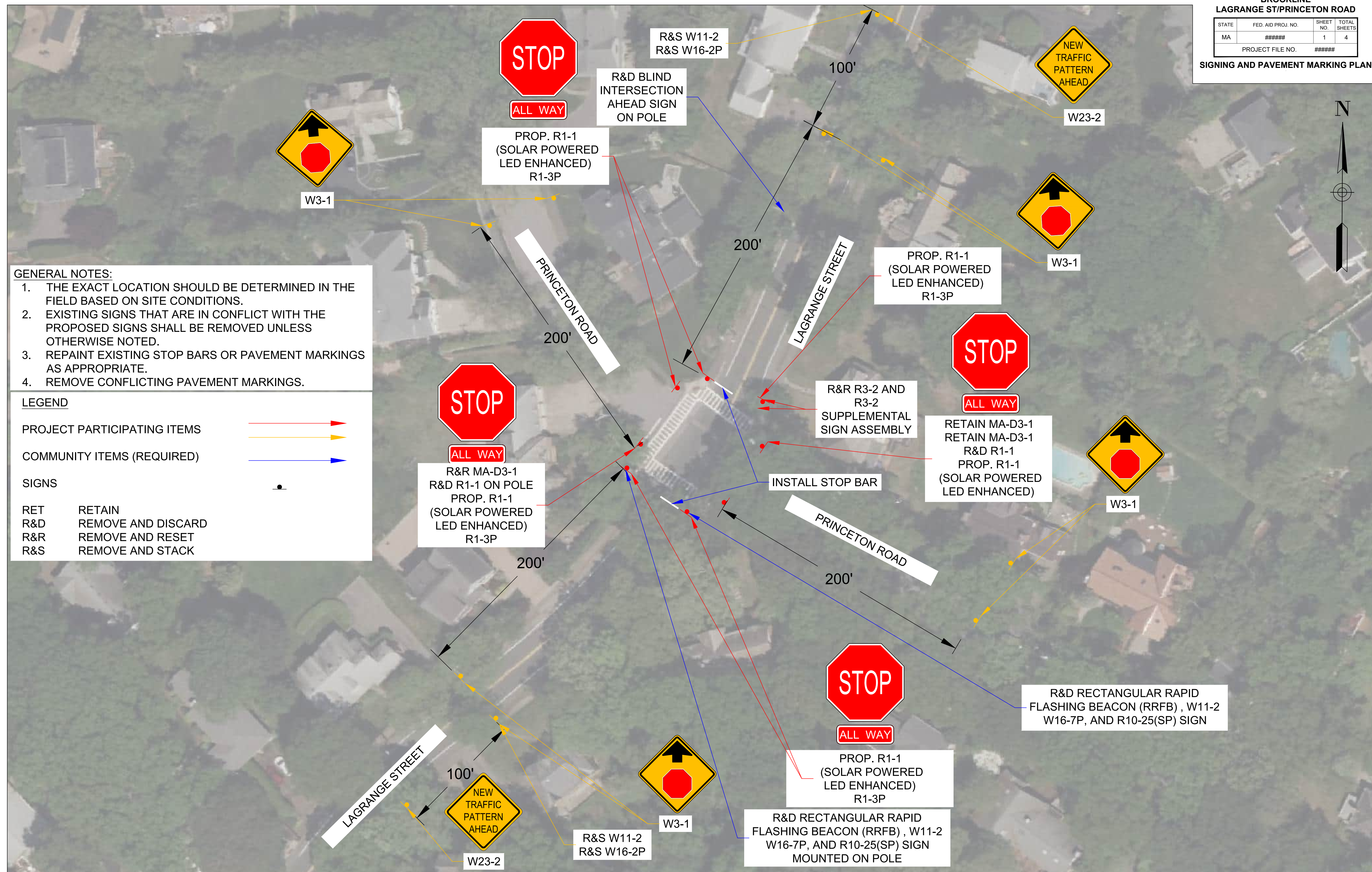
LEGEND

PROJECT PARTICIPATING ITEMS

COMMUNITY ITEMS (REQUIRED)

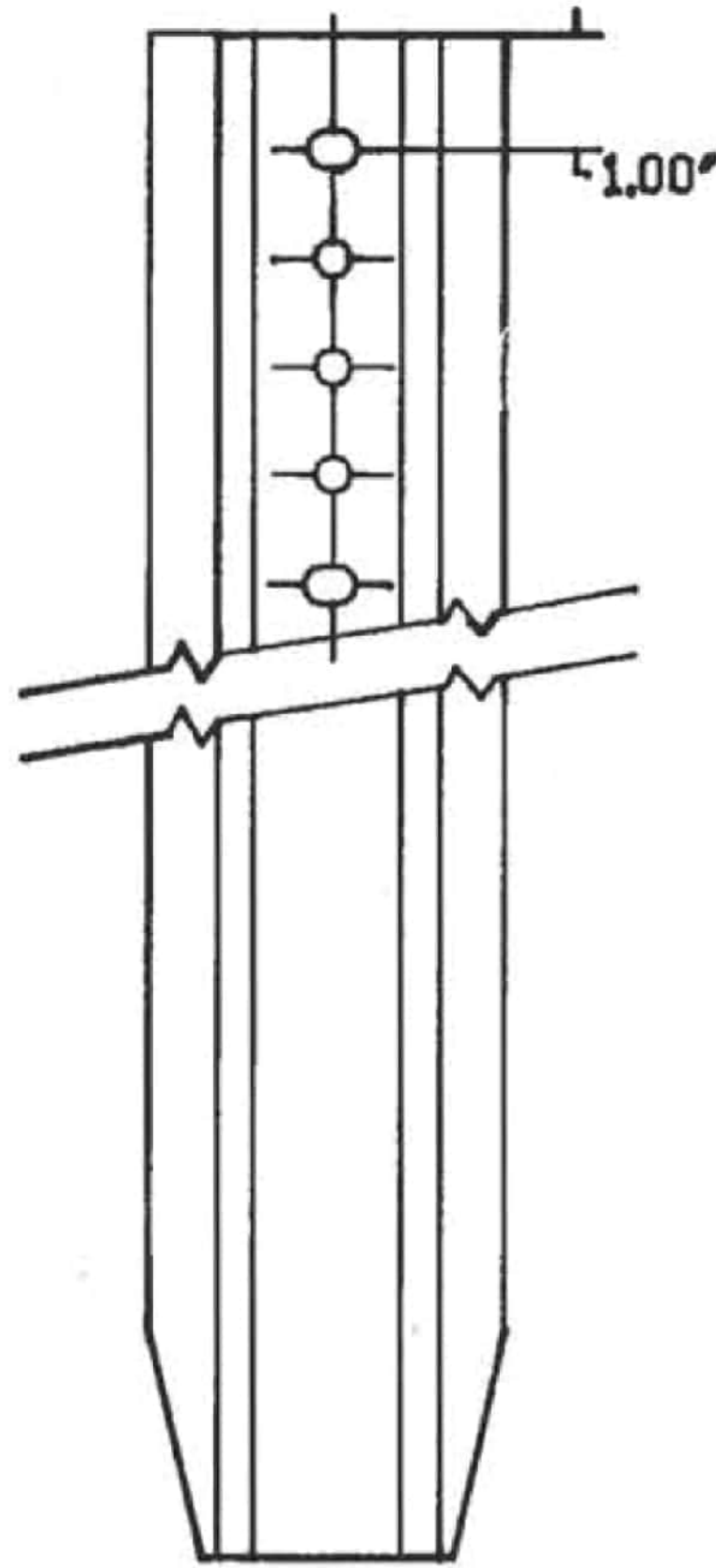
SIGNS

RET RETAIN
R&D REMOVE AND DISCARD
R&R REMOVE AND RESET
R&S REMOVE AND STACK



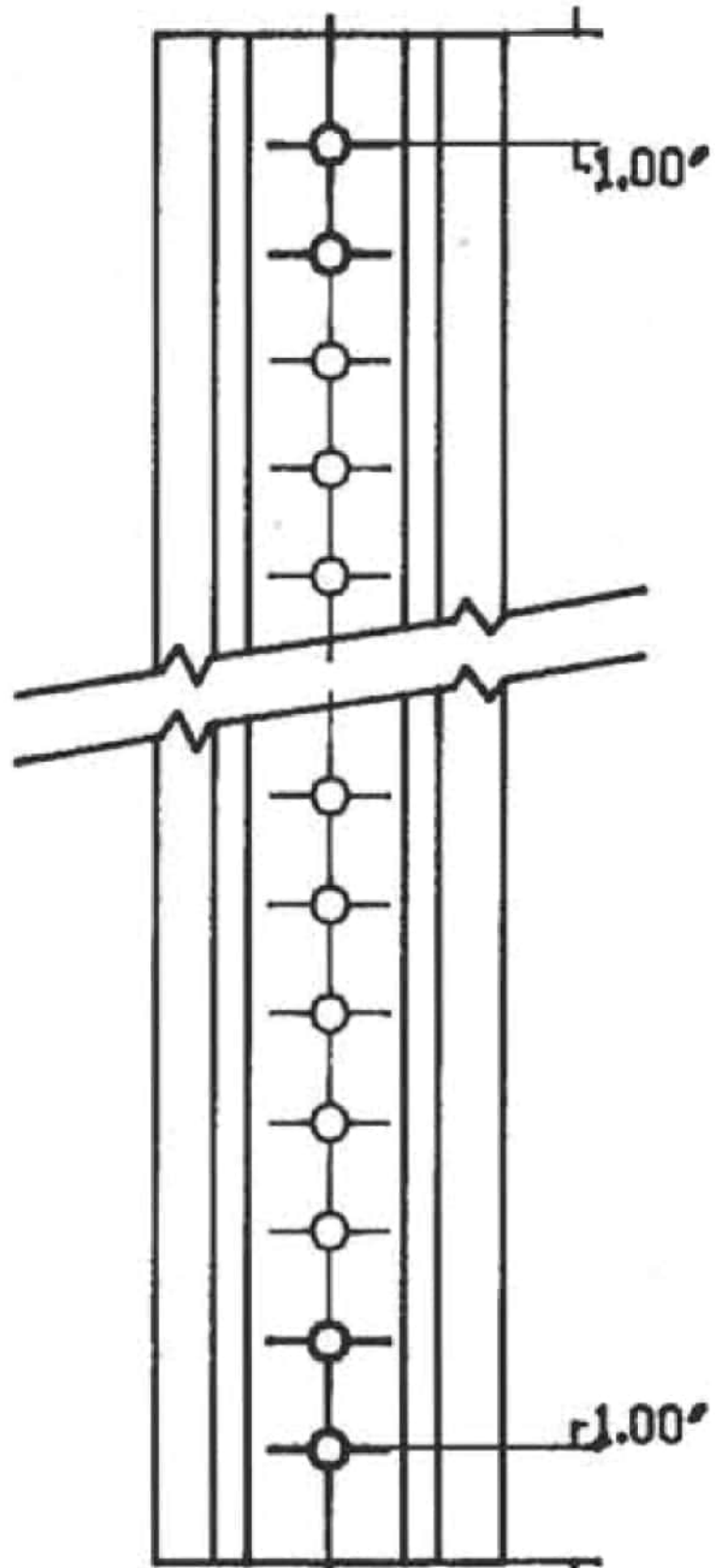
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	#####	3	4
PROJECT FILE NO. #####			

STANDARD SIGN INSTATLLATION DETAILS
SHEET 1 OF 2



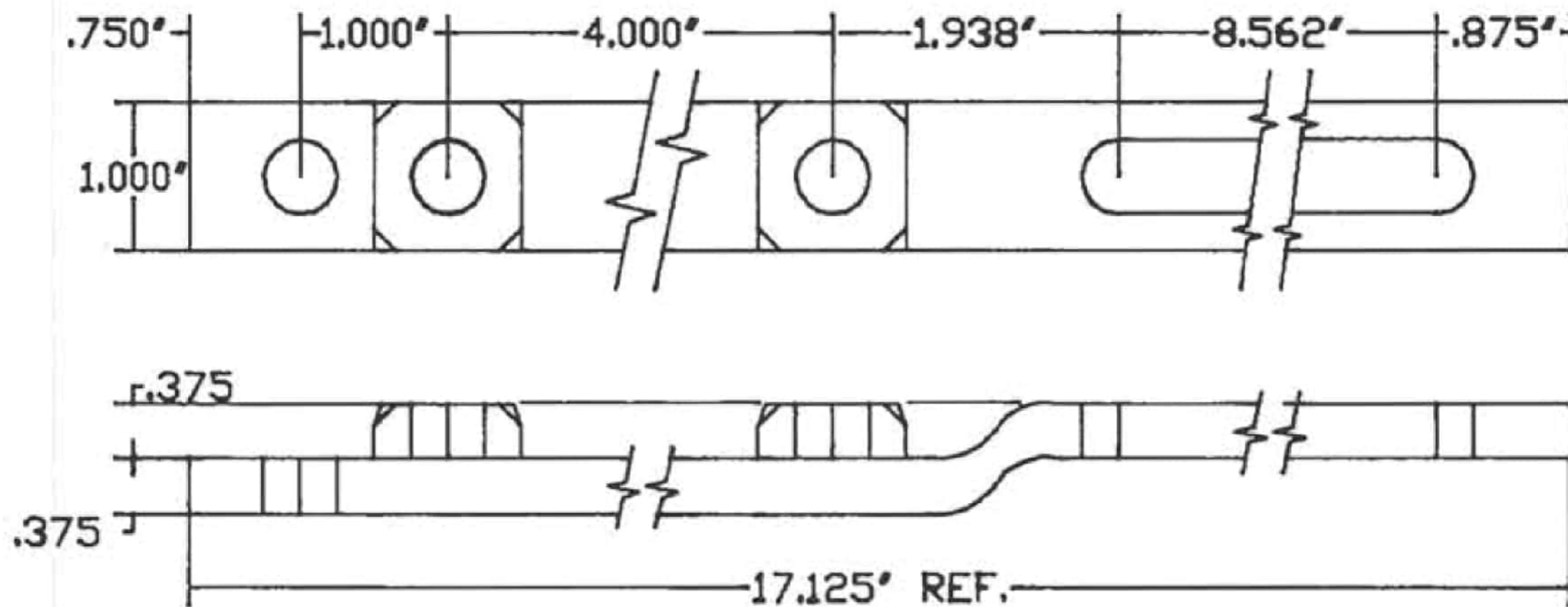
EZE-ERECT BASE POST

3/8" Dia. Holes on 1.00' Center, Excerpt
First and Fifth are 3/8" x 1/2" slots
Punched 18 Holes
Bottom Pointed
Available in 2.5, 3.0 & 4.0 lb/ft
Lenght -3'6" and 4'0"



EZE-ERECT SIGN POST

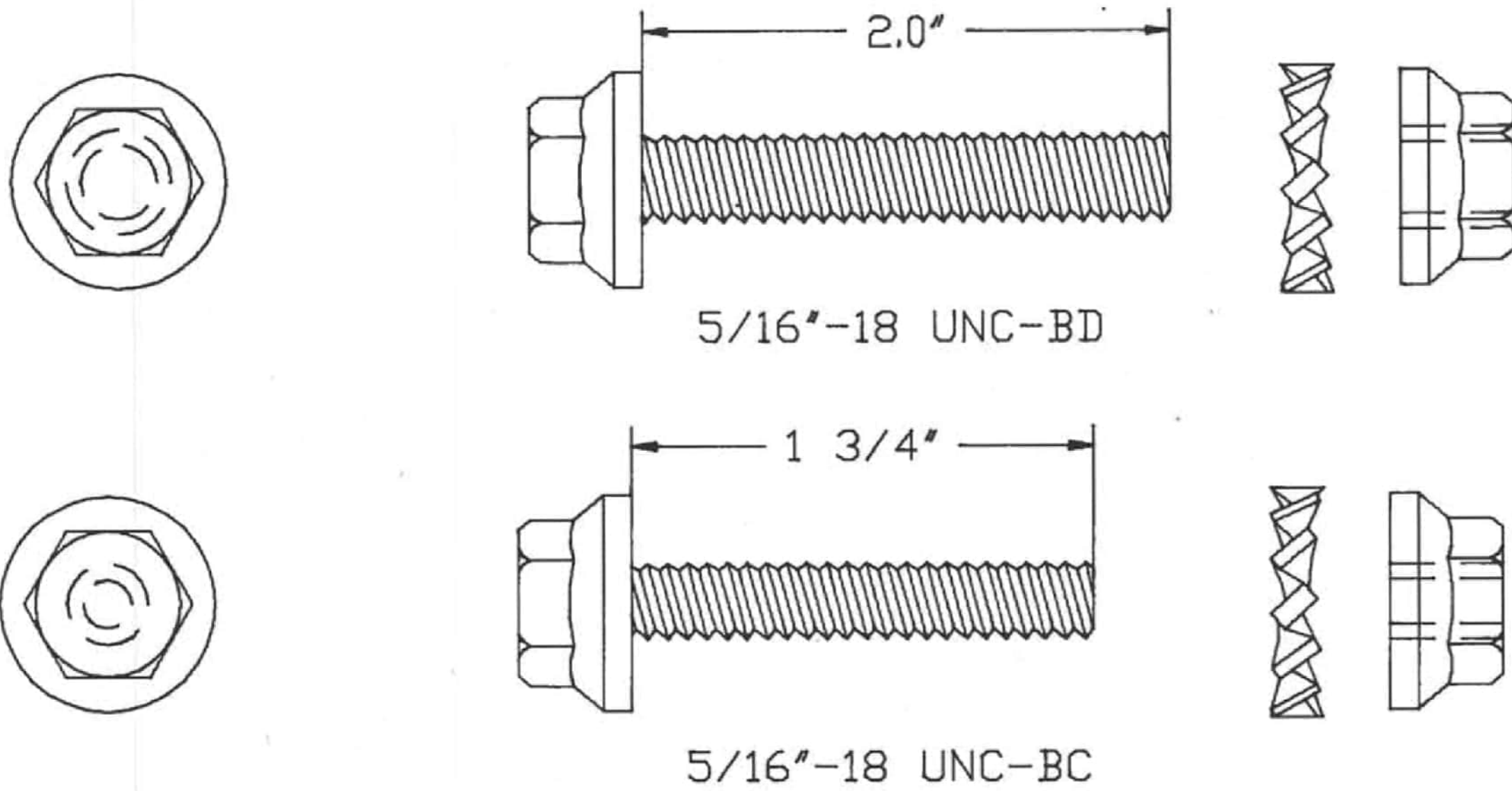
3/8" Dia. Holes on 1.00' Centers
Punched Full Length Available
in 2.0, 2.25, 2.5, 3.0 & 4.0 lb/ft
Length -6'0", 7'0", 8'0", 9'0",
10'0", 11'0", and 12'0"



RETAINER-SPACER STRAP

For All Weights of Sign Posts
Material-Mild Steel
Finish-Hot Dip Galvanize Per ASTM A-123

HEX HEAD-INTEGRAL FLANGE BOLT, NUT AND LOCKWASHER



5/16"-18 UNC x 2.0" Long (for 4.0 lb. posts) or 5/16"-
18 UNC x 1 3/4" (for 2.0, 2.25, 2.5 & 3.0 lb. posts)
Bolt per ASTM A354, Grade BD or Grade BC
Nut per ASTM A563, Grade DH
Lockwasher is heavy duty external toothed.
Finish-Cadmium plated per ASTM A165-80, Type DS, except
using clear chromate

SIGN SIZE	CHANNEL POST POST-WITH STRAP (EZE-ERECT)
5 S.F. AND UNDER	1-2 LB./FT.
OVER 5 S.F. UP TO 10 S.F.	1-2.25 LB./FT.
* OVER 10 S.F. UP TO 20 S.F.	2-2.25 LB./FT.

* NOTE: Signs with a width of 4' and over
shall require 2 posts.

GALVANIZING FINISH

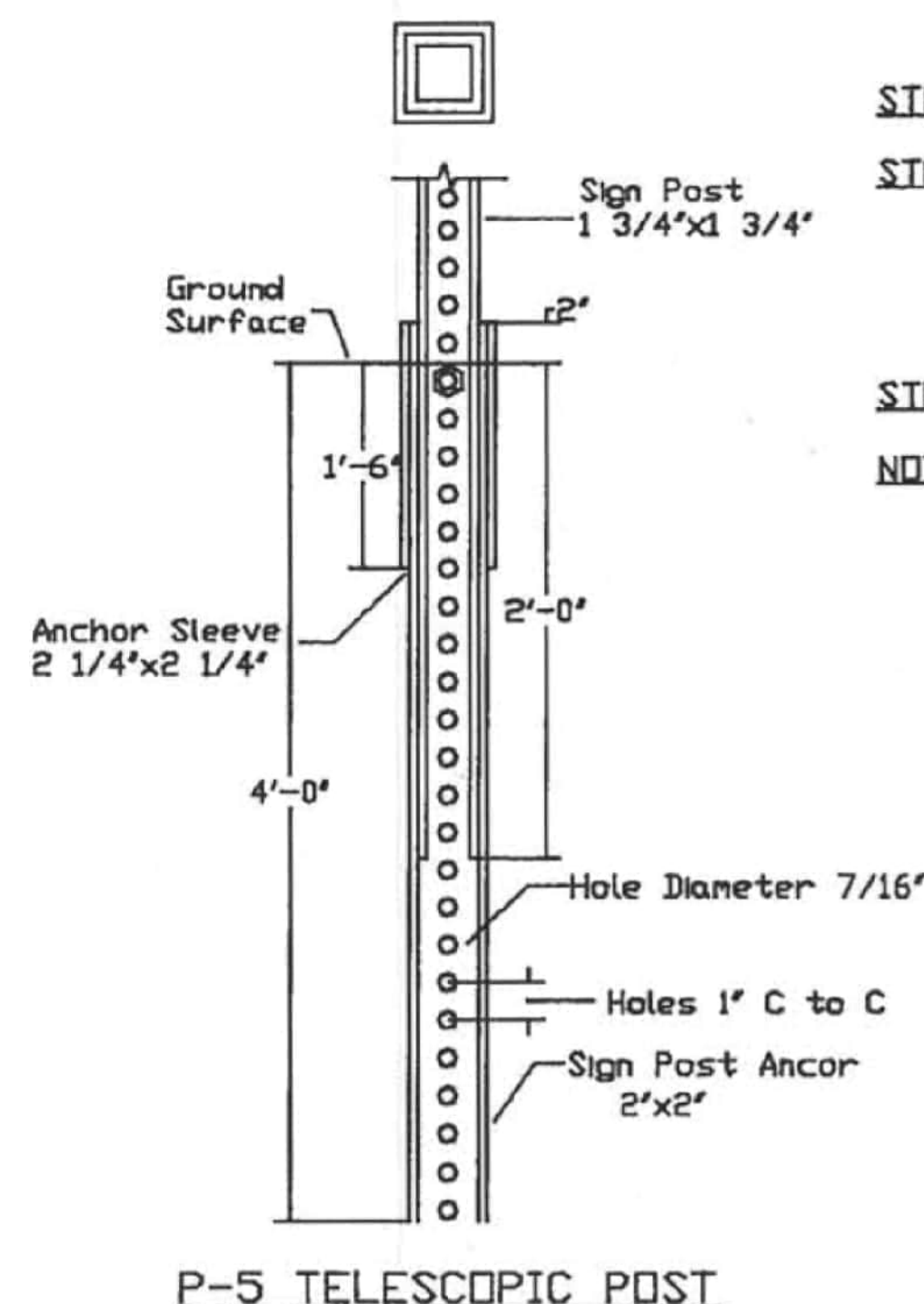
Galvanizing Shall Conform with ASTM Specification A123-73.
It Shall Be Galzanized After All Fabrication and Punching,
Has Been Completed.

GENERAL NOTES:

1. DETAILS PROVIDED ARE FROM THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARD
DRAWINGS FOR SIGNS AND SUPPORTS, 1990 ED.

GROUND INSTALLATION

METHOD OF INSTALLATION



STEP 1 Drive Sign Post Anchor To Within 3 Or 4' Of Surface.

STEP 2 Pre-cut Anchor Sleeve So That The Holes Will Match And Still Be Flush With Top Of Sign Post Anchor, Drive Anchor Sleeve Untill Holes Match As Noted Above, Then Drive Both The Sign Post Anchor And Anchor Sleeve Until One Hole Is Exposed Above Ground For Bolt Connection.

STEP 3 Insert Sign Post And Bolt In Place.

NOTE: Driving Caps Must Be Used To Drive Posts.
Retain 4'-0" Depth To Reach Theoretical Frost
Line.

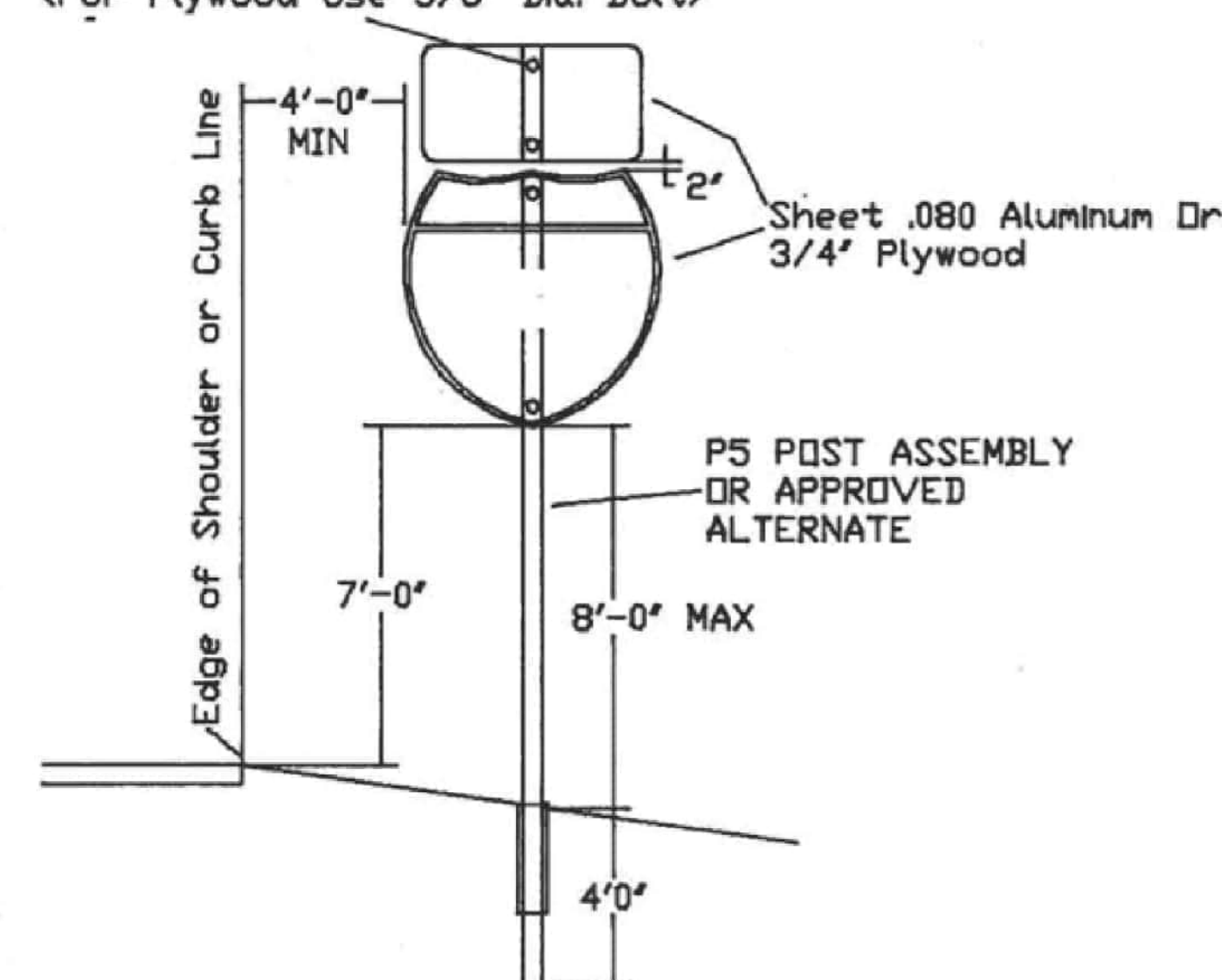
GENERAL NOTES

BREAKAWAY SIGN SUPPORTS SHALL BE FABRICATED FROM STEEL AND SHALL CONFORM TO THE BREAKAWAY DESIGN SHOWN ON THIS SHEET OR "GROUND MOUNTED SIGN SUPPORTS BREAKAWAY DESIGN FOR SIGNS WITH AREA 20 SQ. FT. AND BELOW" AND THE MASS. DEPT. OF PUBLIC WORKS "STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES".

THE STEEL POSTS SHALL CONFORM TO ASTM-A366. THE CROSS SECTION OF THE POST SHALL BE SQUARE TUBE FORMED OF 12 GAUGE (.105" U.S.S. GAUGE) COLD-ROLLED CARBON STEEL SHEETS WHICH HAVE BEEN ZINC COATED (.25 oz.) CONFORMING TO ASTM-A525, CAREFULLY ROLLED TO SIZE AND WELDED DIRECTLY IN THE CORNER BY HIGH FREQUENCY RESISTANCE WELDING OR EQUAL AND EXTERNALLY SCARFED TO AGREE WITH CORNER RADI. STANDARD OUTSIDE CORNER CORNER RADIUS SHALL BE $5/32"$ PLUS OR MINUS $1/64"$.

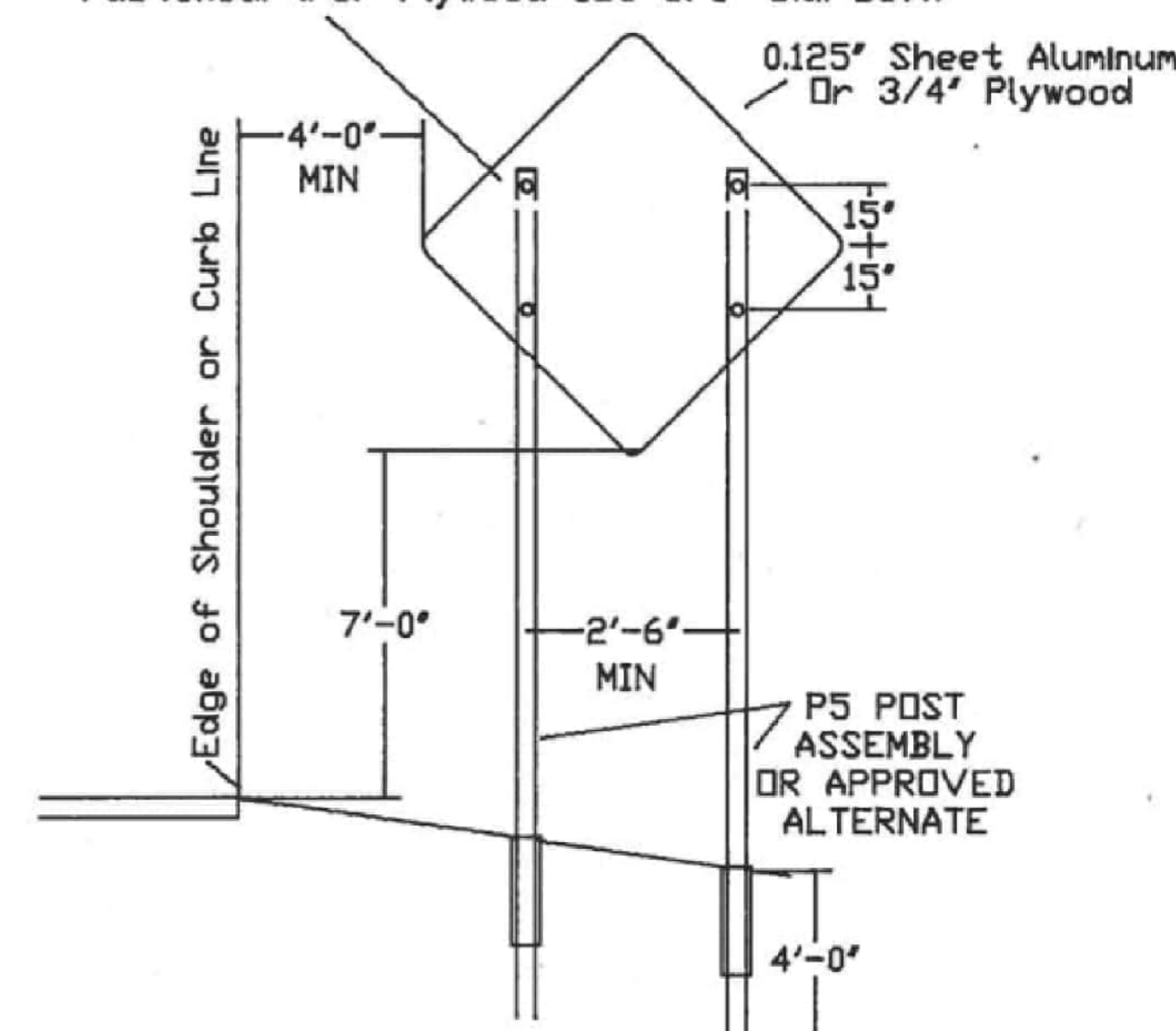
ALL BOLTS SHALL CONFORM TO ASTM-A307, CLASS A.
ALL BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AS
PER ASTM-A153.

Use 5/16" Dia. Hot Dipped Galvanized Button Head Bolt With A Slot In Head And Nut With Lockwasher, With A Minimum Of 1/4" Of Threads Beyond Nuts On All Signs After They Are Securely Fastened.
(For Plywood Use 3/8" Dia. Bolt)



TYPICAL INSTALLATION FOR SIGNS WITH
AREA UP TO AND INCLUDING 10 SQ. FT.
SIGNS WITH A WIDTH OF 4' AND OVER
SHALL REQUIRE TWO POSTS.

Use 3/8" Dia. Hot Dipped Galvanized Button Head
With A Slot In Head And Nut With Lockwasher, With
A Minimum Of 1/4" Of Threads Beyond Nuts On
All Signs After They Are Securely
Fastened. (For Plywood Use 3/8" Dia. Bolt)



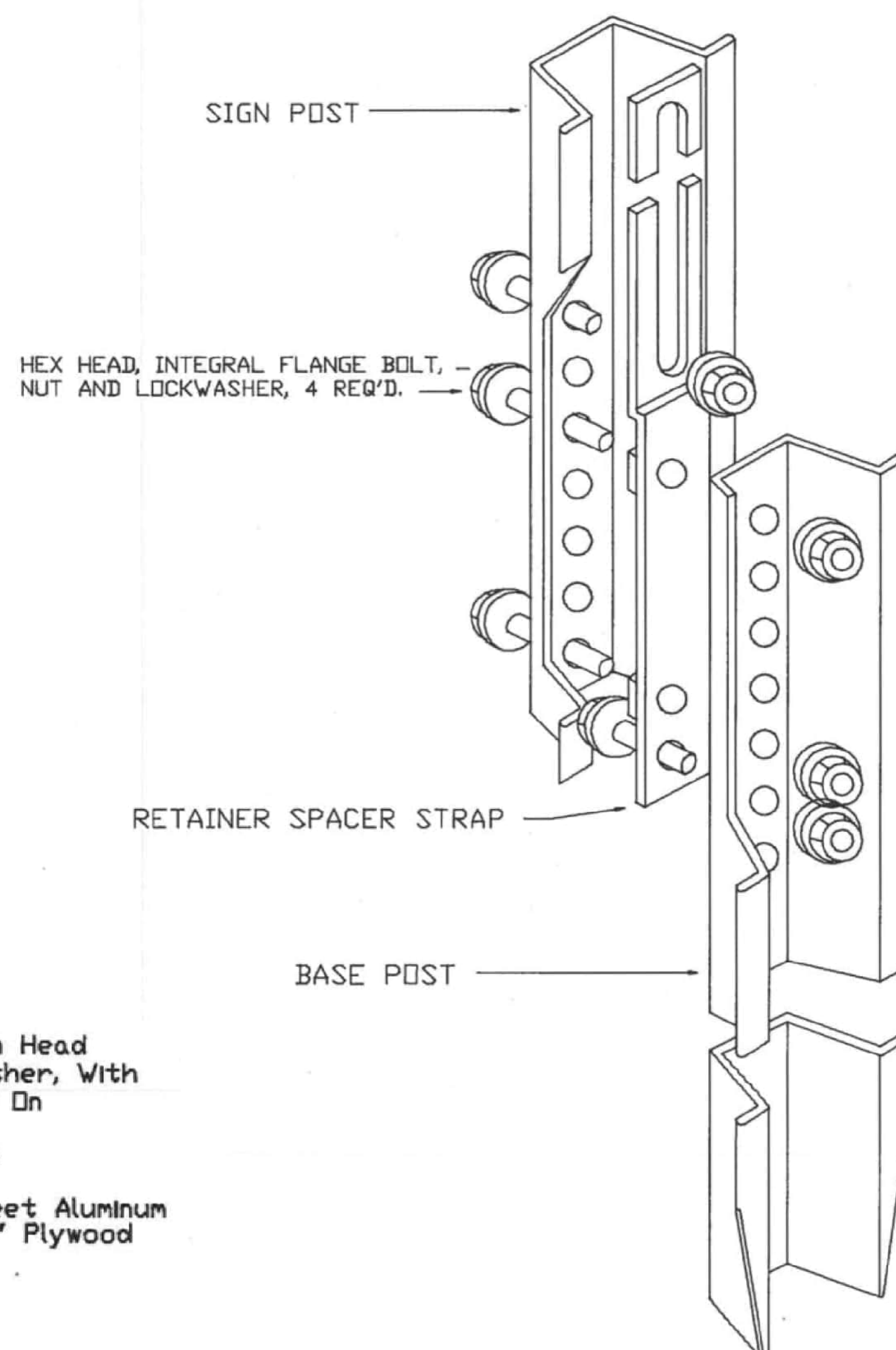
TYPICAL INSTALLATION FOR SIGNS WITH
AREA OVER 10 SQ. FT. UP TO AND
INCLUDING 20 SQ. FT.

TYPICAL INSTALLATION FOR SMALL SIGNS (UP TO 20 SQ.FT.)

GENERAL NOTES:

1. DETAILS PROVIDED ARE FROM THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, 1990 ED.

ATTACHMENT OF SIGN POST TO BASE POST



EZE-ERECT SIGN POST INSTALLATION*

BOLTS: 5/16"-18 UNC x 2", GRBD, FOR 4.0 LB POSTS
5/16"-18 UNC x 1 3/4", GRBC, FOR 2.0, 2.25, 2.5 & 3.0 LB. POSTS
DO NOT USE 5/16" GRBC BOLTS ON 4.0 LB POSTS

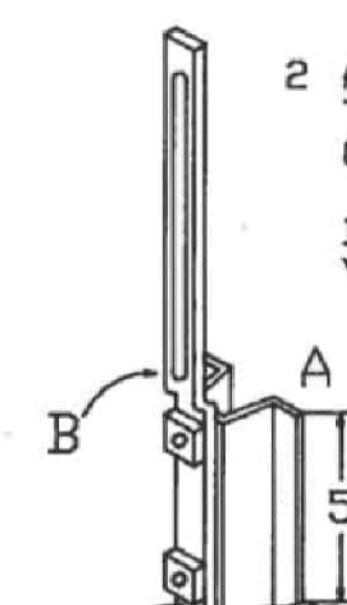
- 1 A-DRIVE BASE POST TO WITHIN 12 IN.
OF GROUND LEVEL

B-ATTACH RETAINER-
SPACER STRAP WITH ONE
BOLT, NUT, AND LOCK-
WASHER THROUGH
BOTTOM HOLE OF STRAP
AND SIXTH HOLE OF BASE
POST. TOP HOLE OF STRAP
SHOULD LINE UP WITH
TOP HOLE IN BASE POST

C-ROTATE STRAP 90°
TO LEFT

- 2 A-DRIVE BASE POST
TO 4 IN. ABOVE
GROUND

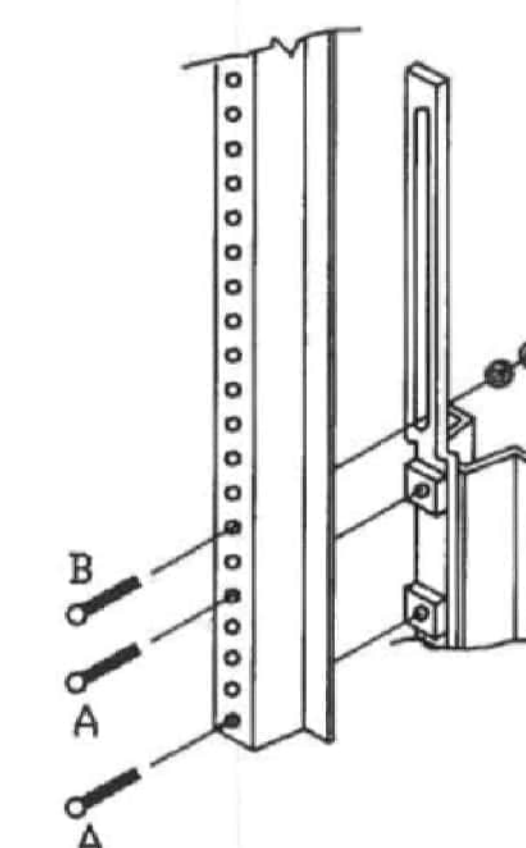
B-ROTATE STRAP TO
VERTICAL POSITION



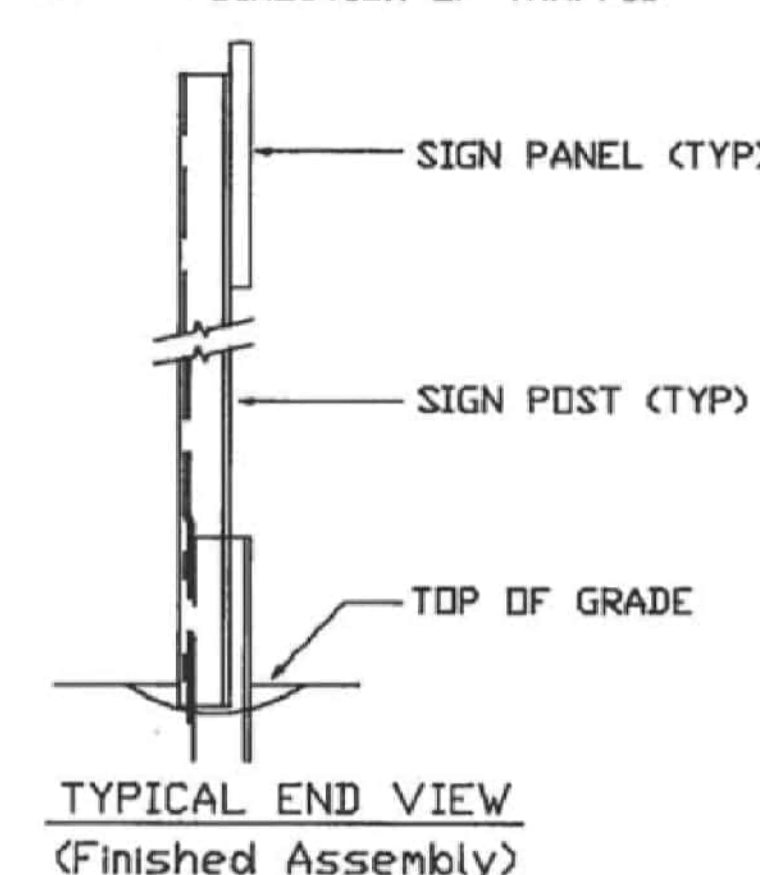
* Notwithstanding references to the availability of 3 and 4 lb./linear ft. posts, the sign size vs. post weight table on page 50 shall govern.

- 3 A-ATTACH SIGN
POST WITH TWO
BOLTS, NUTS, AND
LOCKWASHERS IN
BOTTOM AND FIFTH
HOLES. (THESE
CORRESPOND WITH
SMALL HOLES IN
STRAP)

B-INSERT ONE BOLT THROUGH SIGN POST AND BOTTOM OF LONG SLOT IN STRAP. TIGHTEN ALL NUTS SNUGLY BEFORE COMPLETELY TIGHTENING ASSEMBLY.



- DIRECTION OF TRAFFIC



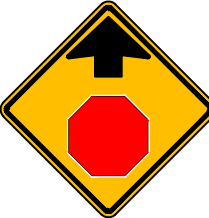
Attachment 4

Sign Summary



TRAFFIC SIGN SUMMARY

BROOKLINE LAGRANGE RD/PRINCETON RD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	#####	4	4
PROJECT FILE NO.		#####	
SIGN SUMMARY			

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER			
LED ENHANCED R1-1	30"	30"		MUTCD 2023 STANDARDS			8	RED	WHITE	WHITE	P5*, 8	6.25	50
R1-3P	18"	6"		MUTCD 2023 STANDARDS			7	RED	WHITE	WHITE	0, MNT w/ R1-1	0.75	5.25
W3-1	30"	30"		MUTCD 2023 STANDARDS			8	YELLOW	BLACK	BLACK	P5*, 8	6.25	50
W23-2	36"	36"		MUTCD 2023 STANDARDS			4	YELLOW	BLACK	BLACK	P5*, 4	9	36

* VERTICAL RETROREFLECTIVE SHEETING STRIPS ON ALL P5 SIGN SUPPORTS FRONTS FOR ENHANCED SIGN CONSPICUITY PER MUTCD 2023 STANDARDS TO BE INSTALLED. STRIPS SHALL BE AT LEAST 2 INCHES WIDE AND MATCH THE BACKGROUND COLOR OF THE SIGN.

GENERAL NOTES:

- REFER TO INTERSECTION LAYOUT PLAN AND THE EVALUATION REPORT FOR COMPLETE LIST OF REQUIRED AND OPTIONAL ITEMS AND MEASURES TO BE DONE.
- NEW TRAFFIC PATTERN AHEAD SIGNS ARE TEMPORARY AND SHOULD BE REMOVED WHEN THE TRAFFIC PATTERN RETURN TO NORMAL, WHEN THE CHANGED PATTERN IS NO LONGER CONSIDERED TO BE NEW, OR WITHIN 12 MONTHS.
- SIGNS SHALL BE INSTALLED MINIMUM OF 6' FROM THE EDGE OF ROADWAY AND AT A MOUNTING HEIGHT OF 7' FROM THE BOTTOM EDGE OF THE SIGN TO THE ROADWAY SURFACE. SIGN POSITIONS SHALL CONFORM TO MUTCD FIGURES 2A-2 AND 2A-3.

Attachment 5

Form for Confirming Sign Options

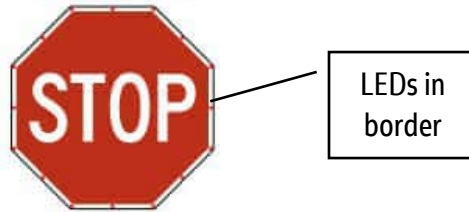


Confirm Sign Options

To avoid confusion and delay, please check the boxes below indicating preferred sign type and placement. Be sure to review your intersection's Conversion Plan (Attachment 3 in the memorandum).

LED Signs

LED stop signs are effective tools for improving intersection safety by gaining driver attention and increasing the intersection's conspicuity. LED stop signs require **continuing maintenance** to ensure effective operation including battery and solar panel maintenance and routine vegetation clearing to ensure adequate sunlight for charging.



Source: MUTCD 11th edition, Chapter 2A Figure 2A-1
https://mutcd.fhwa.dot.gov/pdfs/11th_Edition/Chapter2a.pdf

The municipality would like (check one)

- ☐ LED Stop Signs on ALL APPROACHES
- ☐ LED Stop Signs on the MAJOR APPROACHES and Static Stop Signs on the Minor Approaches
- ☐ Static Stop Signs on ALL APPROACHES
- ☐ Other (please specify) _____

Double Signing

Doubled-up signs (on both the left and right sides of the roadway) is also a FHWA [Proven Safety Countermeasure](#). However, they may involve tree removal or be unwanted for site restrictions or other reasons.



Source: [Connecticut Department of Transportation Technical Brief: Doubled-up Signs](#)

The municipality would like (check one)

- ☐ Double STOP and Stop Ahead Signs on ALL APPROACHES
- ☐ Double Signs on the MAJOR APPROACHES and Single Signs on the Minor Approaches
- ☐ Single STOP and Stop Ahead Signs on ALL APPROACHES
- ☐ Other (please specify) _____

Attachment 6

Community Informational Flyer



Best Practices for AWSC Conversion

Successful implementation of traffic control modifications from a Two-Way Stop Controlled Intersection to an All-Way Stop Controlled (AWSC) Intersection hinges on two critical factors:

1. Timely and extensive advance notification: get the word out to as many people as possible.
2. Comprehensive community engagement: provide transparency regarding when, how and why.

Proactively informing stakeholders increases the likelihood of a smoother transition and minimizes potential disruptions. This approach fosters understanding, cooperation, and compliance among community members, ultimately contributing to the overall success of the project.

This informational flyer provides best practices for successful conversion to AWSC, such as changeable message boards, temporary signs and plaques, and permanent treatments such as pavement markings.¹ This phased and proactive approach not only enhances public safety but also demonstrates the commitment to minimizing inconvenience and maintaining positive relationships with the communities served.

Two Weeks Prior to Implementation

Community Outreach	
Notify the Public of upcoming changes in as many ways as possible: media blasts, newspapers, local news broadcasts, signage, changeable message boards, etc. Be sure to include information regarding the expected safety benefits. See sample media post to the right. Reminders post implementation are also recommended.	Sample Media Post TRAFFIC ALERT Please be advised of an upcoming change to the traffic pattern at the intersection of Smith Road and Jones Road. On or about Monday, July 1, this intersection will be converted from a two-way stop to a four-way stop. What this means for you: All four approaches to the intersection will now have a stop sign. Drivers must come to a complete stop before proceeding through the intersection. Please remember the rule of right-of-way: the first vehicle to arrive at the stop sign is the first to proceed. If two vehicles arrive at the same time, the vehicle on the right has the right-of-way. This change is being implemented to improve safety at this intersection. Please drive with caution as everyone adjusts to the new pattern.

¹ The traffic control devices (signage and pavement markings) and changeable message boards referenced in this memorandum shall comply with the requirements outlined in the [Manual on Uniform Traffic Control Devices \(MUTCD\)](#). MassDOT also has an amendment to the MUTCD at: <https://www.mass.gov/doc/massachusetts-amendments-to-the-mutcd-2022/download>.

Portable Changeable Message Signs

When choosing the location for the **changeable message signs** it is important to consider the speed at which drivers typically travel at that site. Speeds impact the viewing distance necessary and the distance needed for vehicles to come to a complete stop. Other placement factors include roadway curvature (both horizontal and vertical), sight distance, and the presence of large trucks as these can block sign visibility. Refer to [MUTCD Section 6L.05 Portable Changeable Message Signs](#) for more information.

Sample Messages

**NEW ALL-
WAY STOP
AHEAD**

**STARTING
JANUARY 1**

**NEW ALL-
WAY STOP
AHEAD**

**ALL
TRAFFIC
MUST STOP**

First Twelve Months of Implementation

Once a new intersection control has been implemented, temporary treatments are recommended to provide the driver with advanced warning of the change. **These treatments should be left in place for no longer than 12 months.**

NEW Plaques

A **"NEW" plaque** can be mounted above a regulatory sign (STOP sign) when a new regulation takes effect to alert road users to the new traffic regulation. A **"NEW"** plaque may also be mounted above an advance warning sign (STOP AHEAD) to warn about a new traffic condition.



[MUTCD Section 2C.60 NEW Plaque \(W16-15P\)](#)



Source: reddit.com

New Traffic Pattern Ahead (W23-2)

A “NEW TRAFFIC PATTERN AHEAD” sign is recommended on the approach to an intersection to provide advance warning of a change in traffic patterns such as an intersection control or a change in roadway geometry.



[MUTCD Section 2C.38 NEW TRAFFIC PATTERN AHEAD \(W23-2\)](#)



Source: whatcomcounty.us

Warning Beacon – flashing, circular, yellow beacons may be added to the advance warning signs (Stop Ahead or New Traffic Pattern Ahead) and may be used to increase driver awareness of the new stop requirement, especially when standard signs may be overlooked due to high speeds or limited visibility.

The installation of warning beacons must adhere to the criteria outlined in the MUTCD Chapter 4S.
[MUTCD 11th Edition - Part 4](#)

Warning Beacons may be used as a temporary or permanent measure. The implementation of warning beacons shall be determined at the discretion of the municipality, taking into account the specific characteristics and concerns of the intersection and surrounding area.

Red or Orange Flags

One or more **red or orange flags** can be added above a regulatory or warning sign to help grab the driver's attention to the sign. They shall be oriented at 45 degrees to the vertical and can be either cloth or retroreflective material. Periodic flag maintenance or replacement may be required.



[MUTCD Section 2A.11 Enhanced Conspicuity for Standard Signs](#)



Source: coloradohometownweekly.com

Red or Orange Flags may also be used as a either a temporary or permanent treatment at the discretion of the municipality.

Long-Term Treatments

Some intersections may merit long-term treatments to improve compliance and realize the anticipated benefits of AWSC, particularly those intersections with geometric constraints. Such treatments can be highly cost effective, and may result in:

- Improved driver response
- Reduction of fatal and injury crashes
- Reduction of nighttime crashes

In addition to the examples below, the MUTCD describes treatments in [Section 2A.11 Enhanced Conspicuity for Standard Signs](#).

Vertical Retroreflective Strip on Signpost

Retroreflective sheeting on signposts are a Federal Highway Administration (FHWA) [Proven Safety Countermeasure](#).

A strip of retroreflective material can be used on a sign support to increase the sign's conspicuity. It must be two inches in width and extend the full length of the support from the sign to within two feet above the near edge of the roadway.

Its color shall match the background color of the sign. (Except that the color of the strip for the YIELD and DO NOT ENTER signs shall be red.)



Source: Trafficsign.com



Source: toolkits.ite.org

Double Signing

Doubled-up signs (on both the left and right sides of the roadway) are also an FHWA [Proven Safety Countermeasure](#).



Source: [Connecticut Department of Transportation Technical Brief: Doubled-up Signs](#)

STOP and STOP AHEAD Pavement Markings

Stenciled pavement markings can be installed in advance of the STOP and STOP AHEAD signs to supplement the traffic control device. Stenciled pavement markings can improve driver awareness of the stop-control at unsignalized intersections by having the intended messages directly within the driver's perceptual vision cone. STOP and STOP AHEAD Markings shall be white. Letters shall be 6 feet or more in height. If a pavement marking word message consists of more than one line of information, it should read in the direction of travel. See [MUTCD Section 3B.20](#).



Source: toolkits.ite.org

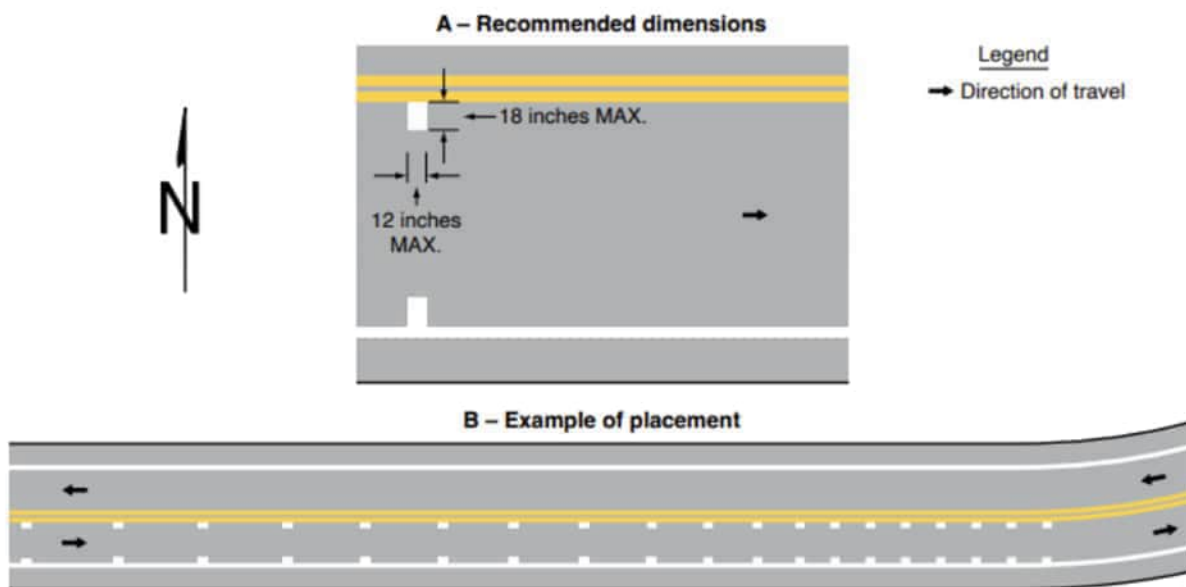
Optical Speed Bars

Also referred to as **Speed Reduction Markings**, optical speed bars are transverse pavement markings placed with progressively reduced spacing on both sides of the travel way to give drivers the impression that their speed is increasing. This illusion encourages drivers to slow down as they pass the markings. The markings can be used in advance of the intersection to manage speeds on the approach to the stop condition. These white transverse stripes are only allowed where longitudinal lines are present on both sides of the lane. FHWA notes that

Speed reduction markings should be reserved for unexpected horizontal or vertical curves or other feature where drivers need to decelerate in advance of the feature. The countermeasure should supplement, and not substitute for, appropriate warning signs and other traffic control devices. Agencies should avoid applying speed reduction markings to long roadway sections just to reduce traffic speed, because overuse could jeopardize the visual effect of the countermeasure. In addition, this countermeasure has been shown to be most effective in locations with unfamiliar drivers.²

² <https://highways.dot.gov/safety/rwd/keep-vehicles-road/horizontal-curve/low-cost-treatments-horizontal-curve-safety-2016-3>

Figure 3B-25. Example of the Application of Speed Reduction Markings



[MUTCD Section 3B. 28 Speed Reduction Markings](#)



Source: FHWA/KLS Engineering

Attachment 7 – Sample MOA



MEMORANDUM OF AGREEMENT

ALL WAY STOP CONTROL (AWSC) PROGRAM

This Memorandum of Agreement (“**Agreement**”) is made and entered into this _____ day of _____, 2026, by and between the Massachusetts Department of Transportation, established pursuant to Chapter 6C of the General Laws, as amended, having its principal place of business at Ten Park Plaza, Boston, Massachusetts, 02116 (“**MassDOT**”), and the CITY/TOWN of _____, a municipal corporation and political subdivision of the Commonwealth of Massachusetts located in _____ County (“**Municipality**”). The Municipality and MassDOT are each sometimes referred to individually herein as a “Party”, and collectively as the “Parties.”

RECITALS

WHEREAS, to enhance pedestrian and driver safety in the Commonwealth of Massachusetts, MassDOT intends to procure sign materials as part of a program to assist municipalities with the conversion certain high-risk intersections on municipally owned roadways from two-way stop control (“**TWSC**”) to all-way stop control (“**AWSC**”); and

WHEREAS, Municipality desires to convert the intersections(s) identified in Exhibit A (the “**Locations**”), which are within the geographical jurisdiction of Municipality, from TWSC to AWSC, and has requested that MassDOT provide Municipality with the AWSC sign materials identified in Exhibit B (the “**Sign Materials**”); and

WHEREAS, MassDOT has confirmed that the Location(s) are eligible for the AWSC materials program and has approved Municipality’s request for Sign Materials; and

WHEREAS, Municipality has agreed to install the Sign Materials and convert the Location(s) from TWSC to AWSC at Municipality’s own expense; and

WHEREAS, MassDOT and Municipality seek to confirm their respective rights and obligations in connection with the Sign Materials as set forth in this Agreement.

NOW, THEREFORE, in consideration of the premises herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. **Recitals.** The recitals in this Agreement are true and correct, and are incorporated herein by reference and made part of his Agreement.
2. **Sign Materials.** MassDOT agrees to provide Municipality with the Sign Materials identified in Exhibit B. MassDOT will fund the entire cost of the Sign Materials, including the cost of delivery to Municipality. Upon delivery, ownership of the Sign Materials will transfer to Municipality.

It is understood and agreed that MassDOT’s procurement of the Sign Materials is contingent upon availability and continued appropriation of federal funds, and if for any

reason whatsoever, such funds are terminated or reduced or otherwise become unavailable, MassDOT may terminate this Agreement immediately.

3. **Project.** Municipality, at its sole expense, shall convert the Locations from TWSC to AWSC in accordance with Exhibit A and Exhibit B (the “**Project**”). As part of the conversion, Municipality shall install the Sign Materials provided by MassDOT at the location(s) indicated in the Project plans. Aside from the Sign Materials, Municipality shall provide all necessary labor, materials (including pavement marking materials, if applicable), equipment, and other services necessary to complete the Project. Municipality shall also be solely responsible for evaluating the specific site constraints for each Location and providing all necessary temporary traffic control devices and/or police details necessary to safely complete the Project. Traffic control plans, signs, devices, and police details shall conform to the Official Standards of MassDOT. Prior to installation, Municipality shall obtain, at its sole cost and expense, any and all applicable permits, approvals, including local approvals, and/or clearances required by local and state agencies, commissions, or bodies necessary for the conversion of the Location(s) to AWSC and for the completion of the Project. Municipality’s failure to comply with any requirement of this paragraph shall constitute a material breach of this Agreement and MassDOT may require Municipality to correct the deficiency at its own expense.

Municipality shall install the Sign Materials and complete the Project within ninety (90) days of their delivery to Municipality. If Municipality fails to install the Sign Materials and complete the Project within the ninety-day period, ownership of the Sign Materials shall revert to MassDOT and Municipality must return the Sign Materials to MassDOT at its sole expense.

Within a week of completing the Project, Municipality shall provide written notice to MassDOT that the Project has been completed. The notice shall include the Project’s completion date. Municipality shall also provide MassDOT with photograph(s) depicting each sign installed pursuant to this Agreement (“**Sign**”) and documentation, in a form acceptable to MassDOT, evidencing each Sign’s location and date of installation.

4. **Operation and Maintenance.** Municipality, at its own expense, shall be solely responsible for the proper operation, maintenance, and repair of the Signs for the duration of the Signs’ useful life. The Signs shall be operated and maintained in accordance with the applicable provisions of the most recent edition of the *Manual on Uniform Traffic Control Devices* (MUTCD) and the Massachusetts Amendments to the MUTCD published by MassDOT. In addition to annual preventative maintenance, Municipality’s maintenance obligation also includes the replacement of major components and miscellaneous parts due to damage or wear and any tree trimming that may be necessary for the proper functioning of a solar-powered Sign. Except for temporary New Traffic Pattern Ahead Signs, Municipality shall not remove or relocate any Sign nor install additional signs (warning or regulatory) with the limits of the Project without receiving

prior written approval from MassDOT. Temporary New Traffic Pattern Ahead Signs shall be removed by Municipality in the time frame indicated in Exhibit B. Failure on the part of Municipality to fulfill its responsibilities for the proper maintenance and operation of the Signs may disqualify Municipality from participation in future Federal Aid Projects in which Municipality has maintenance responsibility. Municipality's obligations under this Section shall survive the expiration or earlier termination of this Agreement.

5. **Term.** This Agreement shall be effective as of the date of full execution by Municipality and MassDOT and, unless terminated earlier as provided herein or otherwise agreed in writing by the Parties, shall remain in full force and effect for a period of 2 years after Municipality's receipt of the Sign Materials. This Agreement may be terminated by mutual agreement of the Parties, upon such terms and conditions as the Parties may mutually agree upon. Such termination shall be effective in accordance with a written agreement by the Parties.

In addition, MassDOT may, by written notice to Municipality, terminate this Agreement in any one of the following circumstances:

- (a) The Municipality neglects or fails to comply with any provision of this Agreement in accordance with its terms or within the time specified for performance herein, and Municipality fails to cure any such failure within thirty (30) calendar days after receipt of notice specifying such failure. In the event this Agreement is terminated pursuant to this provision, MassDOT shall not be liable to the Municipality for any costs incurred or burdens assumed upon or subsequent to, and associated with, such termination.
- (b) The applicable Federal funding source fails to appropriate or otherwise make available funds for the Agreement. In the event this Agreement is terminated pursuant to this provision, MassDOT shall not be liable to Municipality for any costs.

In the event that MassDOT terminates this MOA subsequent to the delivery of the Sign Materials to Municipality but prior to their installation, Municipality shall, at its expense, return the Sign Materials to the applicable MassDOT District Office.

6. **Compliance with Laws.** Municipality, in meeting its obligations hereunder, shall comply with all applicable federal, state, county, municipal and other governmental statutes, laws, rules, orders, regulations and ordinances. Municipality's obligations under this Section 6 shall survive the expiration or earlier termination of this Agreement.
7. **Indemnification.** To the extent permitted by the laws of the Commonwealth, Municipality shall indemnify, defend (at Municipality's sole expense and with counsel reasonably acceptable to MassDOT), and hold harmless MassDOT and all of MassDOT's officers, agents, and employees, from and against any and all suits, claims, proceedings, liabilities, losses

damages, penalties, charges and expenses (including attorneys' fees and experts' fees) of every name and nature, based on or arising out of any actual or alleged loss or injury (including death) to persons or damage to real or tangible property that are caused or alleged to be caused, in whole or in part, by, or to arise out of the acts or omissions of, Municipality, or its employees, contractors, subcontractors, or agents, in its performance of the obligations set forth herein. Municipality's obligations under this Section 7 shall survive the expiration or earlier termination of this Agreement.

8. **Notices.** Any notices required or permitted to be given hereunder shall be given in writing and shall be delivered (a) in person, (b) by certified or registered mail, postage prepaid, return receipt requested, or (c) by a commercial overnight courier that guarantees next day delivery and provides a receipt. Such notices shall be addressed as follows:

If to MassDOT: Massachusetts Department of Transportation
Highway Division of Traffic & Safety Engineering
10 Park Plaza, Suite 7520
Boston, MA 02116
Attention: Neil Boudreau

If to Municipality: _____

Attention: _____

or to such other address as either Party may from time to time specify in writing to the other Party. Any notice shall be effective only upon delivery.

9. **Authority.** The individuals executing this MOA represent that they are empowered and duly authorized to so execute this MOA on behalf of the Parties they represent.
10. **Miscellaneous.** This MOA represents the entire agreement between the Parties with respect to the subject matter hereof, superseding any prior oral or written agreements or understandings regarding the same, and any modification amendment or change to the terms and conditions hereof shall be binding only when expressed in writing and signed by both Parties hereto. This MOA may be signed in multiple counterparts each of which shall be deemed an original, but all of which when taken together shall constitute one and the same instrument. This MOA shall be governed by and interpreted in accordance with the laws of the Commonwealth of

Massachusetts, without regard to its choice of law rules. If any provision or condition of this MOA shall be deemed invalid or unenforceable, the remaining provisions and conditions shall remain in full force and effect and shall be valid and enforceable to the fullest extent permitted by law.

IN WITNESS WHEREOF, Municipality and MassDOT have caused this Agreement to be executed by their duly authorized officers or representatives as of the date first above written.

MASSACHUSETTS DEPARTMENT
OF TRANSPORTATION

MUNICIPALITY

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Attachment 8 – Traffic Volumes and Speeds



PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	34	0	0	34	1	4	0	0	5	1	125	1	0	127	1	0	0	0	1	167
7:15 AM	2	55	0	0	57	1	3	0	0	4	0	130	0	0	130	1	0	0	0	1	192
7:30 AM	3	77	0	0	80	0	19	1	0	20	8	127	15	0	150	2	2	0	0	4	254
7:45 AM	4	101	0	0	105	0	23	1	0	24	10	100	10	0	120	1	7	1	0	9	258
Total	9	267	0	0	276	2	49	2	0	53	19	482	26	0	527	5	9	1	0	15	871
8:00 AM	2	83	0	0	85	0	19	1	0	20	7	106	9	0	122	3	3	0	0	6	233
8:15 AM	1	58	3	0	62	0	11	0	0	11	4	118	7	0	129	0	0	0	0	0	202
8:30 AM	5	62	0	0	67	1	9	0	0	10	5	97	4	0	106	2	0	0	0	2	185
8:45 AM	2	58	1	0	61	0	9	0	0	9	2	89	1	0	92	0	0	1	0	1	163
Total	10	261	4	0	275	1	48	1	0	50	18	410	21	0	449	5	3	1	0	9	783
Grand Total	19	528	4	0	551	3	97	3	0	103	37	892	47	0	976	10	12	2	0	24	1654
Approach %	3.4	95.8	0.7	0.0		2.9	94.2	2.9	0.0		3.8	91.4	4.8	0.0		41.7	50.0	8.3	0.0		
Total %	1.1	31.9	0.2	0.0	33.3	0.2	5.9	0.2	0.0	6.2	2.2	53.9	2.8	0.0	59.0	0.6	0.7	0.1	0.0	1.5	
Exiting Leg Total	897					53					541					163					1654
Cars	19	516	4	0	539	3	95	3	0	101	37	878	47	0	962	10	10	2	0	22	1624
% Cars	100.0	97.7	100.0	0.0	97.8	100.0	97.9	100.0	0.0	98.1	100.0	98.4	100.0	0.0	98.6	100.0	83.3	100.0	0.0	91.7	98.2
Exiting Leg Total	883					51					529					161					1624
Heavy Vehicles	0	12	0	0	12	0	2	0	0	2	0	14	0	0	14	0	2	0	0	2	30
% Heavy Vehicles	0.0	2.3	0.0	0.0	2.2	0.0	2.1	0.0	0.0	1.9	0.0	1.6	0.0	0.0	1.4	0.0	16.7	0.0	0.0	8.3	1.8
Exiting Leg Total	14					2					12					2					30

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	3	77	0	0	80	0	19	1	0	20	8	127	15	0	150	2	2	0	0	4	254
7:45 AM	4	101	0	0	105	0	23	1	0	24	10	100	10	0	120	1	7	1	0	9	258
8:00 AM	2	83	0	0	85	0	19	1	0	20	7	106	9	0	122	3	3	0	0	6	233
8:15 AM	1	58	3	0	62	0	11	0	0	11	4	118	7	0	129	0	0	0	0	0	202
Total Volume	10	319	3	0	332	0	72	3	0	75	29	451	41	0	521	6	12	1	0	19	947
% Approach Total	3.0	96.1	0.9	0.0		0.0	96.0	4.0	0.0		5.6	86.6	7.9	0.0		31.6	63.2	5.3	0.0		
PHF	0.625	0.790	0.250	0.000	0.790	0.000	0.783	0.750	0.000	0.781	0.725	0.888	0.683	0.000	0.868	0.500	0.429	0.250	0.000	0.528	0.918
Cars	10	312	3	0	325	0	70	3	0	73	29	444	41	0	514	6	10	1	0	17	929
Cars %	100.0	97.8	100.0	0.0	97.9	0.0	97.2	100.0	0.0	97.3	100.0	98.4	100.0	0.0	98.7	100.0	83.3	100.0	0.0	89.5	98.1
Heavy Vehicles	0	7	0	0	7	0	2	0	0	2	0	7	0	0	7	0	2	0	0	2	18
Heavy Vehicles %	0.0	2.2	0.0	0.0	2.1	0.0	2.8	0.0	0.0	2.7	0.0	1.6	0.0	0.0	1.3	0.0	16.7	0.0	0.0	10.5	1.9
Cars Enter Leg	10	312	3	0	325	0	70	3	0	73	29	444	41	0	514	6	10	1	0	17	929
Heavy Enter Leg	0	7	0	0	7	0	2	0	0	2	0	7	0	0	7	0	2	0	0	2	18
Total Entering Leg	10	319	3	0	332	0	72	3	0	75	29	451	41	0	521	6	12	1	0	19	947
Cars Exiting Leg	445					42					321					121					929
Heavy Exiting Leg	7					2					7					2					18
Total Exiting Leg	452					44					328					123					947

PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	33	0	0	33	1	4	0	0	5	1	124	1	0	126	1	0	0	0	1	165
7:15 AM	2	54	0	0	56	1	3	0	0	4	0	126	0	0	126	1	0	0	0	1	187
7:30 AM	3	75	0	0	78	0	19	1	0	20	8	125	15	0	148	2	1	0	0	3	249
7:45 AM	4	98	0	0	102	0	23	1	0	24	10	98	10	0	118	1	7	1	0	9	253
Total	9	260	0	0	269	2	49	2	0	53	19	473	26	0	518	5	8	1	0	14	854
8:00 AM	2	83	0	0	85	0	18	1	0	19	7	106	9	0	122	3	2	0	0	5	231
8:15 AM	1	56	3	0	60	0	10	0	0	10	4	115	7	0	126	0	0	0	0	0	196
8:30 AM	5	60	0	0	65	1	9	0	0	10	5	95	4	0	104	2	0	0	0	2	181
8:45 AM	2	57	1	0	60	0	9	0	0	9	2	89	1	0	92	0	0	1	0	1	162
Total	10	256	4	0	270	1	46	1	0	48	18	405	21	0	444	5	2	1	0	8	770
Grand Total	19	516	4	0	539	3	95	3	0	101	37	878	47	0	962	10	10	2	0	22	1624
Approach %	3.5	95.7	0.7	0.0		3.0	94.1	3.0	0.0		3.8	91.3	4.9	0.0		45.5	45.5	9.1	0.0		
Total %	1.2	31.8	0.2	0.0	33.2	0.2	5.8	0.2	0.0	6.2	2.3	54.1	2.9	0.0	59.2	0.6	0.6	0.1	0.0	1.4	
Exiting Leg Total	883					51					529					161					1624

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	3	75	0	0	78	0	19	1	0	20	8	125	15	0	148	2	1	0	0	3	249
7:45 AM	4	98	0	0	102	0	23	1	0	24	10	98	10	0	118	1	7	1	0	9	253
8:00 AM	2	83	0	0	85	0	18	1	0	19	7	106	9	0	122	3	2	0	0	5	231
8:15 AM	1	56	3	0	60	0	10	0	0	10	4	115	7	0	126	0	0	0	0	0	196
Total Volume	10	312	3	0	325	0	70	3	0	73	29	444	41	0	514	6	10	1	0	17	929
% Approach Total	3.1	96.0	0.9	0.0		0.0	95.9	4.1	0.0		5.6	86.4	8.0	0.0		35.3	58.8	5.9	0.0		
PHF	0.625	0.796	0.250	0.000	0.797	0.000	0.761	0.750	0.000	0.760	0.725	0.888	0.683	0.000	0.868	0.500	0.357	0.250	0.000	0.472	0.918
Entering Leg	10	312	3	0	325	0	70	3	0	73	29	444	41	0	514	6	10	1	0	17	929
Exiting Leg	445					42					321					121					929
Total	770					115					835					138					1858

PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
7:15 AM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	5
7:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
Total	0	7	0	0	7	0	0	0	0	0	0	9	0	0	9	0	1	0	0	1	17
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
8:15 AM	0	2	0	0	2	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	6
8:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
8:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	5	0	0	5	0	2	0	0	2	0	5	0	0	5	0	1	0	0	1	13
Grand Total	0	12	0	0	12	0	2	0	0	2	0	14	0	0	14	0	2	0	0	2	30
Approach %	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	40.0	0.0	0.0	40.0	0.0	6.7	0.0	0.0	6.7	0.0	46.7	0.0	0.0	46.7	0.0	6.7	0.0	0.0	6.7	
Exiting Leg Total	14					2					12					2					30
Buses	0	6	0	0	6	0	1	0	0	1	0	3	0	0	3	0	1	0	0	1	11
% Buses	0.0	50.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	50.0	0.0	21.4	0.0	0.0	21.4	0.0	50.0	0.0	0.0	50.0	36.7
Exiting Leg Total	3					1					6					1					11
Single-Unit Trucks	0	6	0	0	6	0	1	0	0	1	0	9	0	0	9	0	1	0	0	1	17
% Single-Unit	0.0	50.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	50.0	0.0	64.3	0.0	0.0	64.3	0.0	50.0	0.0	0.0	50.0	56.7
Exiting Leg Total	9					1					6					1					17
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	6.7
Exiting Leg Total	2					0					0					0					2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	5
7:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
8:15 AM	0	2	0	0	2	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	6
Total Volume	0	7	0	0	7	0	2	0	0	2	0	7	0	0	7	0	2	0	0	2	18
% Approach Total	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.583	0.000	0.000	0.583	0.000	0.500	0.000	0.000	0.500	0.000	0.583	0.000	0.000	0.583	0.000	0.500	0.000	0.000	0.500	0.750
Buses	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	5
Buses %	0.0	28.6	0.0	0.0	28.6	0.0	50.0	0.0	0.0	50.0	0.0	14.3	0.0	0.0	14.3	0.0	50.0	0.0	0.0	50.0	27.8
Single-Unit Trucks	0	5	0	0	5	0	1	0	0	1	0	4	0	0	4	0	1	0	0	1	11
Single-Unit %	0.0	71.4	0.0	0.0	71.4	0.0	50.0	0.0	0.0	50.0	0.0	57.1	0.0	0.0	57.1	0.0	50.0	0.0	0.0	50.0	61.1
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	11.1
Buses	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	5
Single-Unit Trucks	0	5	0	0	5	0	1	0	0	1	0	4	0	0	4	0	1	0	0	1	11
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Entering Leg	0	7	0	0	7	0	2	0	0	2	0	7	0	0	7	0	2	0	0	2	18
Buses	1					1					2					1					5
Single-Unit Trucks	4					1					5					1					11
Articulated Trucks	2					0					0					0					2
Total Exiting Leg	7					2					7					2					18

PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	5
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	6
Grand Total	0	6	0	0	6	0	1	0	0	1	0	3	0	0	3	0	1	0	0	1	11
Approach %	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	54.5	0.0	0.0	54.5	0.0	9.1	0.0	0.0	9.1	0.0	27.3	0.0	0.0	27.3	0.0	9.1	0.0	0.0	9.1	
Exiting Leg Total	3					1					6					1					11

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Total Volume	0	4	0	0	4	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	8
% Approach Total	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.500	0.000	0.250	0.000	0.000	0.250	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	4	0	0	4	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	8
Exiting Leg					3					0					4					1	8
Total					7					1					7					1	16

PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
7:45 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total	0	4	0	0	4	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	12
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
8:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	5
Grand Total	0	6	0	0	6	0	1	0	0	1	0	9	0	0	9	0	1	0	0	1	17
Approach %	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	35.3	0.0	0.0	35.3	0.0	5.9	0.0	0.0	5.9	0.0	52.9	0.0	0.0	52.9	0.0	5.9	0.0	0.0	5.9	
Exiting Leg Total	9					1					6					1					17

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
7:45 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total Volume	0	4	0	0	4	0	1	0	0	1	0	7	0	0	7	0	1	0	0	1	13
% Approach Total	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.500	0.000	0.250	0.000	0.000	0.250	0.000	0.438	0.000	0.000	0.438	0.000	0.250	0.000	0.000	0.250	0.813
Entering Leg	0	4	0	0	4	0	1	0	0	1	0	7	0	0	7	0	1	0	0	1	13
Exiting Leg					7					1		4			4					1	13
Total	11					2					11					2					26

PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	2					0					0					0					2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Exiting Leg	2					0					0					0					2
Total	2					0					2					0					4

PDI File #: 250954 (1)
 Location: N: Lagrange Street S: Lagrange Street
 Location: E: Princeton Road W: Princeton Road
 City, State: Brookline, MA
 Client: Jacobs/ W. Kwon
 Site Code: AWSC Project #3
 Count Date: Tuesday, January 6, 2026
 Start Time: 7:00 AM
 End Time: 9:00 AM



Class:

Bicycles (on Roadway and Crosswalks)

	Lagrange Street							Princeton Road							Lagrange Street							Princeton Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0							0							0							0							0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Lagrange Street							Princeton Road							Lagrange Street							Princeton Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: 250954 (1)
 Location: N: Lagrange Street S: Lagrange Street
 Location: E: Princeton Road W: Princeton Road
 City, State: Brookline, MA
 Client: Jacobs/ W. Kwon
 Site Code: AWSC Project #3
 Count Date: Tuesday, January 6, 2026
 Start Time: 7:00 AM
 End Time: 9:00 AM
 Class:



Pedestrians

	Lagrange Street							Princeton Road							Lagrange Street							Princeton Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	1	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Grand Total	0	0	0	0	0	1	1	0	0	0	0	1	1	2	0	0	0	0	2	1	3	0	0	0	0	0	0	0	6
Approach %	0	0	0	0	0	100		0	0	0	0	50	50		0	0	0	0	66.7	33.3		0	0	0	0	0	0		
Total %	0	0	0	0	0	16.7	16.7	0	0	0	0	16.7	16.7	33.3	0	0	0	0	33.3	16.7	50	0	0	0	0	0	0		
Exiting Leg Total	1							2							3							0							6

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Lagrange Street							Princeton Road							Lagrange Street							Princeton Road							Total	
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	2	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	3	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	66.7	33.3		0.0	0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	3	
Exiting Leg	0							0							3							0							3	
Total	0							0							6							0							6	

PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	1	145	0	0	146	1	1	2	0	4	2	76	0	0	78	1	1	1	0	3	231
4:15 PM	0	161	1	0	162	0	0	3	0	3	1	77	0	0	78	3	4	1	0	8	251
4:30 PM	1	168	0	0	169	1	2	1	0	4	2	77	1	0	80	2	1	0	0	3	256
4:45 PM	2	149	3	0	154	0	0	1	0	1	0	90	1	0	91	5	1	0	0	6	252
Total	4	623	4	0	631	2	3	7	0	12	5	320	2	0	327	11	7	2	0	20	990
5:00 PM	2	147	0	0	149	0	2	0	0	2	1	91	0	0	92	2	0	1	0	3	246
5:15 PM	2	149	3	0	154	0	1	2	0	3	1	99	1	0	101	10	1	0	0	11	269
5:30 PM	0	150	1	0	151	0	2	0	0	2	4	101	3	0	108	10	3	0	0	13	274
5:45 PM	1	135	1	0	137	0	2	2	0	4	1	51	0	0	52	2	5	5	0	12	205
Total	5	581	5	0	591	0	7	4	0	11	7	342	4	0	353	24	9	6	0	39	994
Grand Total	9	1204	9	0	1222	2	10	11	0	23	12	662	6	0	680	35	16	8	0	59	1984
Approach %	0.7	98.5	0.7	0.0		8.7	43.5	47.8	0.0		1.8	97.4	0.9	0.0		59.3	27.1	13.6	0.0		
Total %	0.5	60.7	0.5	0.0	61.6	0.1	0.5	0.6	0.0	1.2	0.6	33.4	0.3	0.0	34.3	1.8	0.8	0.4	0.0	3.0	
Exiting Leg Total	672					37					1250					25					1984
Cars	8	1191	9	0	1208	2	10	11	0	23	12	655	6	0	673	35	15	8	0	58	1962
% Cars	88.9	98.9	100.0	0.0	98.9	100.0	100.0	100.0	0.0	100.0	100.0	98.9	100.0	0.0	99.0	100.0	93.8	100.0	0.0	98.3	98.9
Exiting Leg Total	665					36					1237					24					1962
Heavy Vehicles	1	13	0	0	14	0	0	0	0	0	0	7	0	0	7	0	1	0	0	1	22
% Heavy Vehicles	11.1	1.1	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.0	0.0	6.3	0.0	0.0	1.7	1.1
Exiting Leg Total	7					1					13					1					22

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	2	149	3	0	154	0	0	1	0	1	0	90	1	0	91	5	1	0	0	6	252
5:00 PM	2	147	0	0	149	0	2	0	0	2	1	91	0	0	92	2	0	1	0	3	246
5:15 PM	2	149	3	0	154	0	1	2	0	3	1	99	1	0	101	10	1	0	0	11	269
5:30 PM	0	150	1	0	151	0	2	0	0	2	4	101	3	0	108	10	3	0	0	13	274
Total Volume	6	595	7	0	608	0	5	3	0	8	6	381	5	0	392	27	5	1	0	33	1041
% Approach Total	1.0	97.9	1.2	0.0		0.0	62.5	37.5	0.0		1.5	97.2	1.3	0.0		81.8	15.2	3.0	0.0		
PHF	0.750	0.992	0.583	0.000	0.987	0.000	0.625	0.375	0.000	0.667	0.375	0.943	0.417	0.000	0.907	0.675	0.417	0.250	0.000	0.635	0.950
Cars	5	593	7	0	605	0	5	3	0	8	6	377	5	0	388	27	5	1	0	33	1034
Cars %	83.3	99.7	100.0	0.0	99.5	0.0	100.0	100.0	0.0	100.0	100.0	99.0	100.0	0.0	99.0	100.0	100.0	100.0	0.0	100.0	99.3
Heavy Vehicles	1	2	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7
Heavy Vehicles %	16.7	0.3	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.7
Cars Enter Leg	5	593	7	0	605	0	5	3	0	8	6	377	5	0	388	27	5	1	0	33	1034
Heavy Enter Leg	1	2	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7
Total Entering Leg	6	595	7	0	608	0	5	3	0	8	6	381	5	0	392	27	5	1	0	33	1041
Cars Exiting Leg	378					18					623					15					1034
Heavy Exiting Leg	4					0					2					1					7
Total Exiting Leg	382					18					625					16					1041

PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	1	141	0	0	142	1	1	2	0	4	2	76	0	0	78	1	0	1	0	2	226
4:15 PM	0	159	1	0	160	0	0	3	0	3	1	76	0	0	77	3	4	1	0	8	248
4:30 PM	1	164	0	0	165	1	2	1	0	4	2	75	1	0	78	2	1	0	0	3	250
4:45 PM	1	148	3	0	152	0	0	1	0	1	0	89	1	0	90	5	1	0	0	6	249
Total	3	612	4	0	619	2	3	7	0	12	5	316	2	0	323	11	6	2	0	19	973
5:00 PM	2	147	0	0	149	0	2	0	0	2	1	90	0	0	91	2	0	1	0	3	245
5:15 PM	2	149	3	0	154	0	1	2	0	3	1	99	1	0	101	10	1	0	0	11	269
5:30 PM	0	149	1	0	150	0	2	0	0	2	4	99	3	0	106	10	3	0	0	13	271
5:45 PM	1	134	1	0	136	0	2	2	0	4	1	51	0	0	52	2	5	5	0	12	204
Total	5	579	5	0	589	0	7	4	0	11	7	339	4	0	350	24	9	6	0	39	989
Grand Total	8	1191	9	0	1208	2	10	11	0	23	12	655	6	0	673	35	15	8	0	58	1962
Approach %	0.7	98.6	0.7	0.0		8.7	43.5	47.8	0.0		1.8	97.3	0.9	0.0		60.3	25.9	13.8	0.0		
Total %	0.4	60.7	0.5	0.0	61.6	0.1	0.5	0.6	0.0	1.2	0.6	33.4	0.3	0.0	34.3	1.8	0.8	0.4	0.0	3.0	
Exiting Leg Total	665					36					1237					24					1962

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	1	148	3	0	152	0	0	1	0	1	0	89	1	0	90	5	1	0	0	6	249
5:00 PM	2	147	0	0	149	0	2	0	0	2	1	90	0	0	91	2	0	1	0	3	245
5:15 PM	2	149	3	0	154	0	1	2	0	3	1	99	1	0	101	10	1	0	0	11	269
5:30 PM	0	149	1	0	150	0	2	0	0	2	4	99	3	0	106	10	3	0	0	13	271
Total Volume	5	593	7	0	605	0	5	3	0	8	6	377	5	0	388	27	5	1	0	33	1034
% Approach Total	0.8	98.0	1.2	0.0		0.0	62.5	37.5	0.0		1.5	97.2	1.3	0.0		81.8	15.2	3.0	0.0		
PHF	0.625	0.995	0.583	0.000	0.982	0.000	0.625	0.375	0.000	0.667	0.375	0.952	0.417	0.000	0.915	0.675	0.417	0.250	0.000	0.635	0.954
Entering Leg	5	593	7	0	605	0	5	3	0	8	6	377	5	0	388	27	5	1	0	33	1034
Exiting Leg					378					18					623					15	1034
Total					983					26					1011					48	2068

PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	5
4:15 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
4:30 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6
4:45 PM	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
Total	1	11	0	0	12	0	0	0	0	0	0	4	0	0	4	0	1	0	0	0	1	17
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	5
Grand Total	1	13	0	0	14	0	0	0	0	0	0	7	0	0	7	0	1	0	0	0	1	22
Approach %	7.1	92.9	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0			
Total %	4.5	59.1	0.0	0.0	63.6	0.0	0.0	0.0	0.0	0.0	0.0	31.8	0.0	0.0	31.8	0.0	4.5	0.0	0.0	4.5		
Exiting Leg Total	7					1					13					1					22	
Buses	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	0	1	0	0	1	13	
% Buses	0.0	53.8	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4	0.0	0.0	71.4	0.0	100.0	0.0	0.0	100.0	59.1	
Exiting Leg Total	5					1					7					0					13	
Single-Unit Trucks	1	6	0	0	7	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	9	
% Single-Unit	100.0	46.2	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	40.9	
Exiting Leg Total	2					0					6					1					9	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					0					0					0	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
4:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
4:30 PM	0	4	0	0	4	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
4:45 PM	1	1	0	0	2	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total Volume	1	11	0	0	12	0	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	17
% Approach Total	8.3	91.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.250	0.688	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.250	0.000	0.000	0.250	0.708	
Buses	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	9	
Buses %	0.0	54.5	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	100.0	0.0	0.0	100.0	52.9	
Single-Unit Trucks	1	5	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8	
Single-Unit %	100.0	45.5	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	47.1	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Buses	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	9	
Single-Unit Trucks	1	5	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Entering Leg	1	11	0	0	12	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	17	
Buses	2					1					6					0					9	
Single-Unit Trucks	2					0					5					1					8	
Articulated Trucks	0					0					0					0					0	
Total Exiting Leg	4					1					11					1					17	

PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
4:15 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
Total	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	9	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	
Grand Total	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	0	1	0	0	1	13	
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0			
Total %	0.0	53.8	0.0	0.0	53.8	0.0	0.0	0.0	0.0	0.0	0.0	38.5	0.0	0.0	38.5	0.0	7.7	0.0	0.0	7.7		
Exiting Leg Total	5					1					7					0					13	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total	
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
4:15 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
Total Volume	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	9	
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.250	0.000	0.000	0.250	0.750	
Entering Leg	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	9	
Exiting Leg	2					1					6					0					9	
Total	8					1					8					1					18	

PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	5	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	1	6	0	0	7	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	9
Approach %	14.3	85.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	11.1	66.7	0.0	0.0	77.8	0.0	0.0	0.0	0.0	0.0	0.0	22.2	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	2					0					6					1					9

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	5	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8
% Approach Total	16.7	83.3	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.250	0.417	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	1	5	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8
Exiting Leg					2					0		5			5					1	8
Total					8					0		7			7					1	16

PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Lagrange Street					Princeton Road					Lagrange Street					Princeton Road					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0					0					0					0					0
Total	0					0					0					0					0

PDI File #: **250954 (1)**
 Location: **N: Lagrange Street S: Lagrange Street**
 Location: **E: Princeton Road W: Princeton Road**
 City, State: **Brookline, MA**
 Client: **Jacobs/ W. Kwon**
 Site Code: **AWSC Project #3**
 Count Date: **Tuesday, January 6, 2026**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Lagrange Street							Princeton Road							Lagrange Street							Princeton Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
4:30 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3
Approach %	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		
Total %	0.0	66.7	0.0	0.0	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	33.3	
Exiting Leg Total	0							1							2							0							3

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Lagrange Street							Princeton Road							Lagrange Street							Princeton Road							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
4:30 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.500	
Entering Leg	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
Exiting Leg	0							1							1							0							2
Total	1							1							1							1							4

PDI File #: 250954 (1)
 Location: N: Lagrange Street S: Lagrange Street
 Location: E: Princeton Road W: Princeton Road
 City, State: Brookline, MA
 Client: Jacobs/ W. Kwon
 Site Code: AWSC Project #3
 Count Date: Tuesday, January 6, 2026
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



Pedestrians

	Lagrange Street							Princeton Road							Lagrange Street							Princeton Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3
Grand Total	0	0	0	0	2	0	2	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5
Approach %	0	0	0	0	100	0		0	0	0	0	50	50		0	0	0	0	0	0	0	0	0	0	0	0	100		
Total %	0	0	0	0	40	0	40	0	0	0	0	20	20	40	0	0	0	0	0	0	0	0	0	0	0	0	20	20	
Exiting Leg Total	2							2							0							1							5

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Lagrange Street							Princeton Road							Lagrange Street							Princeton Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:45 PM	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	0	0	0	0	2	0	2	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5
% Approach Total	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250		0.625
Entering Leg	0	0	0	0	2	0	2	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5
Exiting Leg	2							2							0							1							5
Total	4							4							0							2							10

Princeton Road
north of Lagrange Street
City, State: Brookline, MA
Client: Jacobs/ W. Kwon
Site Code: AWSC Project #3



PDI File #: 250954 ATR (1) Speed

Count Date
Tuesday, January 6, 2026

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	6	6	5	1	0	0	1	0	0	0	19	37.0	33.8
1:00 AM	0	0	0	2	3	1	1	0	0	0	0	0	0	7	35.5	32.9
2:00 AM	0	0	1	3	2	6	1	2	0	0	0	0	0	15	41.7	35.6
3:00 AM	0	0	1	3	1	3	1	0	0	0	0	0	0	9	36.0	31.9
4:00 AM	0	0	0	6	13	10	3	0	0	0	0	0	0	32	38.4	33.7
5:00 AM	0	0	3	10	42	56	24	3	0	1	0	0	0	139	40.0	35.6
6:00 AM	3	0	7	50	160	106	21	4	1	0	0	0	0	352	37.4	33.2
7:00 AM	44	12	11	50	164	83	16	1	0	0	0	0	0	381	36.0	29.5
8:00 AM	41	33	25	70	71	39	15	1	0	0	0	0	0	295	35.0	26.6
9:00 AM	25	15	16	39	113	96	21	1	0	0	0	0	0	326	38.0	30.8
10:00 AM	1	1	3	25	105	104	27	2	0	0	0	0	0	268	38.0	34.2
11:00 AM	0	0	3	26	105	88	19	3	0	0	0	0	0	244	38.0	34.2
12:00 PM	0	0	2	23	113	112	21	8	0	0	0	0	0	279	39.0	34.7
1:00 PM	0	1	8	23	123	112	21	2	1	0	0	0	0	291	38.0	34.2
2:00 PM	0	1	2	31	131	122	25	2	0	0	0	0	0	314	38.0	34.2
3:00 PM	0	7	6	21	127	92	19	3	1	0	0	0	0	276	38.0	33.6
4:00 PM	1	3	8	41	162	85	16	6	0	0	0	0	0	322	37.0	33.0
5:00 PM	3	4	17	75	138	50	9	2	0	0	0	0	0	298	35.0	31.2
6:00 PM	0	1	11	61	130	58	12	1	0	0	0	0	0	274	36.0	31.9
7:00 PM	0	5	3	26	98	43	10	0	0	1	0	0	0	186	36.0	32.5
8:00 PM	0	1	7	21	61	30	13	0	0	0	0	0	0	133	37.2	32.8
9:00 PM	0	0	1	10	38	21	5	0	0	0	0	0	0	75	38.0	33.1
10:00 PM	0	0	1	6	19	16	4	0	0	0	0	0	0	46	39.0	34.0
11:00 PM	0	0	1	3	10	9	3	0	0	0	0	0	0	26	39.0	34.5
Total	118	84	137	631	1935	1347	308	41	3	3	0	0	0	4607	38.0	32.5
Percent	2.56%	1.82%	2.97%	13.70%	42.00%	29.24%	6.69%	0.89%	0.07%	0.07%	0.00%	0.00%	0.00%			

AM Peak	7:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	6:00 AM	10:00 AM	6:00 AM	6:00 AM	12:00 AM				7:00 AM
Volume	44	33	25	70	164	106	27	4	1	1	0	0	0	381

PM Peak	5:00 PM	3:00 PM	5:00 PM	5:00 PM	4:00 PM	2:00 PM	2:00 PM	12:00 PM	1:00 PM	7:00 PM				4:00 PM
Volume	3	7	17	75	162	122	25	8	1	1	0	0	0	322

15th Percentile:	28.0 MPH	Average Speed:	32.5 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	33.0 MPH	10 MPH Pace:	29 to 38 MPH	Number of Vehicles > 30 MPH:	3357
85th Percentile:	38.0 MPH	Number in Pace:	3348	Percent of Vehicles > 30 MPH:	72.9%
95th Percentile:	41.0 MPH	Percent in Pace:	72.7%		

Princeton Road
north of Lagrange Street
City, State: Brookline, MA
Client: Jacobs/ W. Kwon
Site Code: AWSC Project #3



PDI File #: 250954 ATR (1) Speed

Count Date
Tuesday, January 6, 2026

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	8	6	4	0	0	0	0	0	0	18	41.0	36.2
1:00 AM	0	0	0	2	6	7	1	0	0	0	0	0	0	16	37.0	34.4
2:00 AM	0	0	0	2	2	3	3	1	0	0	0	0	0	11	43.5	36.2
3:00 AM	0	0	0	0	3	4	3	0	0	0	0	0	0	10	40.7	36.7
4:00 AM	0	0	0	0	6	4	4	4	0	0	0	0	0	18	45.5	38.4
5:00 AM	0	0	0	1	3	7	7	2	0	0	0	0	0	20	43.0	38.2
6:00 AM	0	0	4	6	30	26	12	1	1	0	0	0	0	80	40.0	34.5
7:00 AM	0	0	1	3	77	126	50	9	2	0	0	0	0	268	40.0	36.7
8:00 AM	0	0	3	12	104	110	35	3	1	0	0	0	0	268	39.0	35.3
9:00 AM	0	1	2	11	69	96	29	4	0	0	0	0	0	212	40.0	35.6
10:00 AM	0	0	1	10	65	111	45	3	0	0	0	0	0	235	40.0	36.2
11:00 AM	0	0	0	8	78	131	25	7	1	0	0	0	0	250	39.0	35.9
12:00 PM	0	1	1	6	93	118	47	11	0	0	0	0	0	277	40.0	36.4
1:00 PM	1	0	4	6	91	146	55	8	2	0	0	0	0	313	40.0	36.3
2:00 PM	0	1	0	7	114	215	80	2	1	0	0	0	0	420	40.0	36.5
3:00 PM	0	0	2	30	199	308	71	6	0	0	0	0	0	616	39.0	35.5
4:00 PM	0	0	2	34	223	252	52	7	0	1	0	0	0	571	38.0	35.0
5:00 PM	0	2	3	44	246	200	35	4	0	0	0	0	0	534	38.0	34.2
6:00 PM	0	1	5	25	163	155	24	5	0	0	0	0	0	378	38.0	34.2
7:00 PM	0	0	0	14	99	111	33	5	0	0	0	0	0	262	39.0	35.5
8:00 PM	0	0	0	10	75	69	18	4	1	0	0	0	0	177	39.0	35.1
9:00 PM	0	0	1	7	43	56	17	4	0	0	0	0	0	128	40.0	35.6
10:00 PM	0	0	0	0	16	42	19	2	0	0	0	0	0	79	41.0	37.4
11:00 PM	0	0	1	1	17	30	14	2	0	0	0	0	0	65	41.4	36.7
Total	1	6	30	239	1830	2333	683	94	9	1	0	0	0	5226	40.0	35.5
Percent	0.02%	0.11%	0.57%	4.57%	35.02%	44.64%	13.07%	1.80%	0.17%	0.02%	0.00%	0.00%	0.00%			

AM Peak 9:00 AM 6:00 AM 8:00 AM 8:00 AM 11:00 AM 7:00 AM 7:00 AM 7:00 AM 7:00 AM 7:00 AM
Volume 0 1 4 12 104 131 50 9 2 0 0 0 0 268

PM Peak 1:00 PM 5:00 PM 6:00 PM 5:00 PM 5:00 PM 3:00 PM 2:00 PM 12:00 PM 1:00 PM 4:00 PM 3:00 PM
Volume 1 2 5 44 246 308 80 11 2 1 0 0 0 616

15th Percentile:	32.0 MPH	Average Speed:	35.5 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	35.0 MPH	10 MPH Pace:	31 to 40 MPH	Number of Vehicles > 30 MPH:	4787
85th Percentile:	40.0 MPH	Number in Pace:	4270	Percent of Vehicles > 30 MPH:	91.6%
95th Percentile:	42.0 MPH	Percent in Pace:	81.7%		

Princeton Road
north of Lagrange Street
City, State: Brookline, MA
Client: Jacobs/ W. Kwon
Site Code: AWSC Project #3



PDI File #: 250954 ATR (1) Speed

Count Date
Tuesday, January 6, 2026

Speed (60-minute)																
Combined NB and SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	6	14	11	5	0	0	1	0	0	0	37	39.8	35.0
1:00 AM	0	0	0	4	9	8	2	0	0	0	0	0	0	23	37.0	33.9
2:00 AM	0	0	1	5	4	9	4	3	0	0	0	0	0	26	43.3	35.8
3:00 AM	0	0	1	3	4	7	4	0	0	0	0	0	0	19	40.3	34.4
4:00 AM	0	0	0	6	19	14	7	4	0	0	0	0	0	50	41.7	35.4
5:00 AM	0	0	3	11	45	63	31	5	0	1	0	0	0	159	41.0	35.9
6:00 AM	3	0	11	56	190	132	33	5	2	0	0	0	0	432	38.0	33.5
7:00 AM	44	12	12	53	241	209	66	10	2	0	0	0	0	649	39.0	32.5
8:00 AM	41	33	28	82	175	149	50	4	1	0	0	0	0	563	38.0	30.7
9:00 AM	25	16	18	50	182	192	50	5	0	0	0	0	0	538	39.0	32.7
10:00 AM	1	1	4	35	170	215	72	5	0	0	0	0	0	503	40.0	35.1
11:00 AM	0	0	3	34	183	219	44	10	1	0	0	0	0	494	39.0	35.0
12:00 PM	0	1	3	29	206	230	68	19	0	0	0	0	0	556	40.0	35.6
1:00 PM	1	1	12	29	214	258	76	10	3	0	0	0	0	604	39.0	35.3
2:00 PM	0	2	2	38	245	337	105	4	1	0	0	0	0	734	39.1	35.5
3:00 PM	0	7	8	51	326	400	90	9	1	0	0	0	0	892	39.0	34.9
4:00 PM	1	3	10	75	385	337	68	13	0	1	0	0	0	893	38.0	34.3
5:00 PM	3	6	20	119	384	250	44	6	0	0	0	0	0	832	38.0	33.1
6:00 PM	0	2	16	86	293	213	36	6	0	0	0	0	0	652	37.0	33.2
7:00 PM	0	5	3	40	197	154	43	5	0	1	0	0	0	448	39.0	34.3
8:00 PM	0	1	7	31	136	99	31	4	1	0	0	0	0	310	39.0	34.1
9:00 PM	0	0	2	17	81	77	22	4	0	0	0	0	0	203	39.0	34.7
10:00 PM	0	0	1	6	35	58	23	2	0	0	0	0	0	125	41.0	36.2
11:00 PM	0	0	2	4	27	39	17	2	0	0	0	0	0	91	41.0	36.1
Total	119	90	167	870	3765	3680	991	135	12	4	0	0	0	9833	39.0	34.1
Percent	1.21%	0.92%	1.70%	8.85%	38.29%	37.42%	10.08%	1.37%	0.12%	0.04%	0.00%	0.00%	0.00%			

AM Peak	7:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	11:00 AM	10:00 AM	7:00 AM	6:00 AM	12:00 AM				7:00 AM
Volume	44	33	28	82	241	219	72	10	2	1	0	0	0	649

PM Peak	5:00 PM	3:00 PM	5:00 PM	5:00 PM	4:00 PM	3:00 PM	2:00 PM	12:00 PM	1:00 PM	4:00 PM				4:00 PM
Volume	3	7	20	119	385	400	105	19	3	1	0	0	0	893

15th Percentile:	30.0 MPH	Average Speed:	34.1 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	34.0 MPH	10 MPH Pace:	30 to 39 MPH	Number of Vehicles > 30 MPH:	8144
85th Percentile:	39.0 MPH	Number in Pace:	7445	Percent of Vehicles > 30 MPH:	82.8%
95th Percentile:	42.0 MPH	Percent in Pace:	75.7%		

Princeton Road
north of Lagrange Street
City, State: Brookline, MA
Client: Jacobs/ W. Kwon
Site Code: AWSC Project #3



Count Date: Tuesday, January 6, 2026
Direction: NB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	7	0	0	7
12:15 AM	5	1	0	6
12:30 AM	1	0	0	1
12:45 AM	1	1	0	2
1:00 AM	2	0	0	2
1:15 AM	1	0	0	1
1:30 AM	2	0	0	2
1:45 AM	3	0	0	3
2:00 AM	4	0	0	4
2:15 AM	6	0	0	6
2:30 AM	0	0	0	0
2:45 AM	3	0	1	4
3:00 AM	2	0	0	2
3:15 AM	1	0	0	1
3:30 AM	4	0	0	4
3:45 AM	0	0	0	0
4:00 AM	3	0	0	3
4:15 AM	12	0	0	12
4:30 AM	11	0	0	11
4:45 AM	5	0	0	5
5:00 AM	12	0	0	12
5:15 AM	27	1	0	28
5:30 AM	31	2	0	33
5:45 AM	53	1	0	54
6:00 AM	48	1	0	49
6:15 AM	69	0	0	69
6:30 AM	110	2	0	112
6:45 AM	127	5	0	132
7:00 AM	122	2	0	124
7:15 AM	126	5	0	131
7:30 AM	125	2	0	127
7:45 AM	99	2	0	101
8:00 AM	107	0	0	107
8:15 AM	115	1	2	118
8:30 AM	96	2	0	98
8:45 AM	91	0	0	91
9:00 AM	114	3	0	117
9:15 AM	130	3	0	133
9:30 AM	87	3	0	90
9:45 AM	62	1	0	63
10:00 AM	69	0	0	69
10:15 AM	60	1	0	61
10:30 AM	61	1	0	62
10:45 AM	54	1	0	55
11:00 AM	45	1	0	46
11:15 AM	59	2	0	61
11:30 AM	64	2	0	66
11:45 AM	50	2	0	52

AM Total	2286	48	3	2337
Percentage	97.82%	2.05%	0.13%	
AM Peak	6:45 AM	6:30 AM	7:30 AM	6:45 AM
Volume	500	14	2	514

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	63	2	0	65
12:15 PM	64	1	0	65
12:30 PM	54	1	0	55
12:45 PM	68	2	0	70
1:00 PM	64	1	0	65
1:15 PM	66	2	0	68
1:30 PM	68	1	0	69
1:45 PM	66	2	0	68
2:00 PM	71	1	0	72
2:15 PM	90	0	0	90
2:30 PM	87	2	0	89
2:45 PM	72	0	0	72
3:00 PM	74	0	0	74
3:15 PM	77	0	0	77
3:30 PM	74	2	0	76
3:45 PM	81	1	0	82
4:00 PM	78	0	0	78
4:15 PM	77	1	0	78
4:30 PM	76	2	0	78
4:45 PM	88	1	0	89
5:00 PM	86	1	0	87
5:15 PM	90	0	0	90
5:30 PM	96	2	0	98
5:45 PM	54	0	0	54
6:00 PM	83	0	0	83
6:15 PM	78	0	0	78
6:30 PM	59	1	0	60
6:45 PM	46	0	0	46
7:00 PM	53	0	0	53
7:15 PM	37	0	0	37
7:30 PM	44	0	0	44
7:45 PM	39	0	1	40
8:00 PM	36	1	0	37
8:15 PM	25	0	0	25
8:30 PM	27	0	0	27
8:45 PM	26	0	0	26
9:00 PM	22	0	0	22
9:15 PM	25	0	0	25
9:30 PM	13	0	0	13
9:45 PM	9	0	0	9
10:00 PM	11	0	0	11
10:15 PM	12	0	0	12
10:30 PM	12	0	0	12
10:45 PM	7	0	0	7
11:00 PM	6	0	0	6
11:15 PM	8	0	0	8
11:30 PM	8	0	0	8
11:45 PM	4	0	0	4

PM Total	2474	27	1	2502
Percentage	98.88%	1.08%	0.04%	
PM Peak	4:45 PM	12:00 PM	7:00 PM	4:45 PM
Volume	360	6	1	364

Day Total	4760	75	4	4839
Percentage	98.37%	1.55%	0.08%	

Princeton Road
north of Lagrange Street
City, State: Brookline, MA
Client: Jacobs/ W. Kwon
Site Code: AWSC Project #3



Count Date: Tuesday, January 6, 2026
Direction: SB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total	PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	3	0	0	3	12:00 PM	55	0	0	55
12:15 AM	7	0	0	7	12:15 PM	88	2	0	90
12:30 AM	3	0	0	3	12:30 PM	64	2	0	66
12:45 AM	3	1	0	4	12:45 PM	73	6	0	79
1:00 AM	5	0	0	5	1:00 PM	69	0	0	69
1:15 AM	4	0	0	4	1:15 PM	74	1	0	75
1:30 AM	5	0	0	5	1:30 PM	78	2	1	81
1:45 AM	2	0	0	2	1:45 PM	98	0	1	99
2:00 AM	5	0	0	5	2:00 PM	116	1	0	117
2:15 AM	2	1	0	3	2:15 PM	98	1	0	99
2:30 AM	2	0	0	2	2:30 PM	98	1	0	99
2:45 AM	1	0	0	1	2:45 PM	130	2	0	132
3:00 AM	1	3	0	4	3:00 PM	162	1	0	163
3:15 AM	0	0	0	0	3:15 PM	169	0	0	169
3:30 AM	2	1	0	3	3:30 PM	166	2	0	168
3:45 AM	3	0	0	3	3:45 PM	178	3	0	181
4:00 AM	2	0	0	2	4:00 PM	142	3	1	146
4:15 AM	6	1	0	7	4:15 PM	163	2	0	165
4:30 AM	2	0	0	2	4:30 PM	164	4	0	168
4:45 AM	5	2	0	7	4:45 PM	154	2	0	156
5:00 AM	3	0	0	3	5:00 PM	150	0	0	150
5:15 AM	3	0	0	3	5:15 PM	153	0	0	153
5:30 AM	3	0	0	3	5:30 PM	153	1	0	154
5:45 AM	11	0	0	11	5:45 PM	137	1	0	138
6:00 AM	14	0	0	14	6:00 PM	102	2	0	104
6:15 AM	12	1	0	13	6:15 PM	90	1	0	91
6:30 AM	17	2	0	19	6:30 PM	87	0	0	87
6:45 AM	22	1	0	23	6:45 PM	86	0	0	86
7:00 AM	33	1	0	34	7:00 PM	68	2	0	70
7:15 AM	55	1	0	56	7:15 PM	59	0	0	59
7:30 AM	79	1	0	80	7:30 PM	76	0	0	76
7:45 AM	102	4	0	106	7:45 PM	69	0	0	69
8:00 AM	84	0	0	84	8:00 PM	48	0	0	48
8:15 AM	60	2	0	62	8:15 PM	51	0	0	51
8:30 AM	66	2	0	68	8:30 PM	38	0	0	38
8:45 AM	60	1	0	61	8:45 PM	38	0	0	38
9:00 AM	54	2	0	56	9:00 PM	47	0	0	47
9:15 AM	56	1	1	58	9:15 PM	32	0	0	32
9:30 AM	49	0	0	49	9:30 PM	24	0	0	24
9:45 AM	59	1	0	60	9:45 PM	23	0	0	23
10:00 AM	60	1	0	61	10:00 PM	23	0	0	23
10:15 AM	56	3	0	59	10:15 PM	21	0	0	21
10:30 AM	56	3	0	59	10:30 PM	13	0	0	13
10:45 AM	51	3	0	54	10:45 PM	26	0	0	26
11:00 AM	65	0	0	65	11:00 PM	13	0	0	13
11:15 AM	57	3	0	60	11:15 PM	22	0	0	22
11:30 AM	53	1	0	54	11:30 PM	16	0	0	16
11:45 AM	73	1	0	74	11:45 PM	7	0	0	7

AM Total	1376	44	1	1421	PM Total	4011	42	3	4056
Percentage	96.83%	3.10%	0.07%		Percentage	98.89%	1.04%	0.07%	
AM Peak	7:30 AM	10:00 AM	8:30 AM	7:30 AM	PM Peak	3:00 PM	3:45 PM	1:00 PM	3:00 PM
Volume	325	10	1	332	Volume	675	12	2	681
Day Total					Day Total	5387	86	4	5477
Percentage					Percentage	98.36%	1.57%	0.07%	



JENNIFER PASTER
CHIEF OF POLICE

BROOKLINE POLICE DEPARTMENT
Brookline, Massachusetts

August 3, 2026

Dear Mr. Carey,

I am pleased to inform you that the Brookline Police Department has been awarded **\$248,276.00** through the **FY2027 State 911 Department Support and Incentive Grant Program**.

This funding will provide critical support for the Department's Telecommunications Center by reimbursing personnel and salary-related costs associated with providing enhanced 911 services. In addition, the grant will fund the replacement of Communications Center dispatcher console furniture, including ergonomic dispatch chairs, as well as communications equipment and operational supplies necessary to maintain reliable emergency communications services.

These grant funds will help ensure that our Telecommunications Center remains equipped to provide the highest level of emergency communications service to the Brookline community while supporting the dedicated dispatch professionals who serve as the first point of contact during emergencies.

The supporting grant documentation is attached.

With thanks for your consideration,

Respectfully,

A handwritten signature in black ink that reads "Jennifer Paster". The signature is fluid and cursive, written in a professional style.

Jennifer Paster
Chief of Police





The Commonwealth of Massachusetts
EXECUTIVE OFFICE OF PUBLIC SAFETY AND SECURITY
STATE 911 DEPARTMENT
151 Campanelli Drive, Suite A ~ Middleborough, MA 02346
Tel: 508-828-2911 ~ TTY: 508-947-1455
www.mass.gov/e911



MAURA T. HEALEY
Governor

GINA K. KWON
Secretary

KIMBERLEY DRISCOLL
Lieutenant Governor

FRANK POZNIAK
Executive Director

July 29, 2026

Chief Jennifer Paster
Brookline Police Department
350 Washington Street
Brookline, MA 02445

Dear Chief Paster:

The Commonwealth of Massachusetts, State 911 Department would like to thank you for participating in the **FY 2027 State 911 Department Support and Incentive Grant** program.

For your files, attached please find a copy of the executed contract and the final approved Appendix A: Personnel Costs form for your grant. Please note your contract start date is **July 29, 2026** and will run through June 30, 2027. Please keep in mind that there shall be no reimbursement for costs incurred prior to the effective date of the contract and all goods and services **MUST** be received on or before June 30, 2027.

Reimbursement requests should be submitted to the Department within **thirty (30) days** of the date on which the cost is incurred. We have made the request for payment forms available on our website www.mass.gov/e911. Please ensure all proper documentation is provided with the grant reimbursement submissions to avoid reductions or returns. For any questions related to this process, please contact Angela Pilling at 508-821-7305. Please note that funding of reimbursement requests received more than one (1) month after the close of the fiscal year under which costs were incurred cannot be guaranteed.

If, in the future, you would like to make any changes to the authorized signatory, the contract manager, and/or the budget worksheet, please e-mail those proposed changes to 911DeptGrants@mass.gov. Grantees are strongly encouraged to submit final, year-end budget modification requests on or before March 31, 2027.

Sincerely,

Frank P. Pozniak
Executive Director

cc: FY 2027 Support and Incentive Grant File

COMMONWEALTH OF MASSACHUSETTS | STANDARD CONTRACT FORM



This form is jointly issued and published by the Office of the Comptroller, the Executive Office for Administration and Finance, and the Operational Services Division as the default contract for all Commonwealth Departments when another form is not prescribed by regulation or policy. The Commonwealth deems void any changes made on or by attachment (in the form of addendum, engagement letters, contract forms or invoice terms) to the terms in this published form or to the [Standard Contract Form Instructions and Contractor Certifications](#), the [Commonwealth Terms and Conditions](#), the [Commonwealth Terms and Conditions for Human and Social Services](#), or the [Commonwealth IT Terms and Conditions](#) which are incorporated by reference herein. Additional non-conflicting terms may be added by Attachment. Contractors are required to access forms at macomptroller.org/forms or mass.gov/lists/osd-forms.

CONTRACTOR INFORMATION		COMMONWEALTH INFORMATION	
Contractor Legal Name Town of Brookline		Department State 911 Department	Mosaic Department Code EPS
d/b/a Brookline Police Department		Contract Manager Name Cindy Reynolds	
Legal Address As entered on Form W-9 or Form W-4 333 Washington St., Brookline, MA 02445		Business Mailing Address 151 Campanelli Drive, Suite A, Middleborough, MA 02346	
Contract Manager Name Elizabeth Scott, Public Safety Business Manager		Billing Address If Different	
Phone (617) 730-2224	Fax (617) 730-2619	Phone 508-821-7299	Fax 508-947-1452
Email lscotte@brooklinema.gov		Email 911DeptGrants@mass.gov	
Vendor Code vc 6000191738		Mosaic Transaction ID(s) CT EPS SUPG	
Vendor Code Address ID e.g. "AD001" AD 001		RFR/Procurement or Other ID Number FY2027 SUPG	
Note: The Address ID must be set up for Electronic Funds Transfer (EFT) payments.			
☒ NEW CONTRACT		☐ CONTRACT AMENDMENT	
Procurement or Exception Type (Check one option only)		Current Contract End Date PRIOR to Amendment	
☐ Statewide Contract (OSD or an OSD-designated department.) ☐ Collective Purchase (Attach OSD approval, scope, and budget.) ☒ Department Procurement - Includes all Grants 815 CMR 2.00 . (Attach Solicitation Notice or RFR, and Response or other procurement supporting documentation.) ☐ Emergency Contract (Attach justification for emergency, scope, and budget.) ☐ Contract Employee (Attach Employee Status Form, scope, and budget.) ☐ Interim Contract with new Contractor (Attach justification for Interim Contract and updated scope/budget.) ☐ Other Procurement Exception (Attach authorizing language, legislation with specific exemption or earmark, and exception justification, scope, and budget.)		Amendment Amount Or Enter "No Change" Amendment Type Check one option only. Attach details of amendment changes. ☐ Amendment to Date, Scope, or Budget (Attach updated scope and budget.) ☐ Interim Contract with Current Contractor (Attach justification for Interim Contract and updated scope/budget.) ☐ Contract Employee (Attach any updates to scope or budget.) ☐ Other Procurement Exception (Attach authorizing language/justification and updated scope/budget.)	
TERMS AND CONDITIONS			
The Standard Contract Form Instructions and Contractor Certifications and the following document are incorporated by reference into this Contract and are legally binding. Check ONE option:			
☒ Commonwealth Terms and Conditions ☐ Commonwealth Terms and Conditions for Human and Social Services ☐ Commonwealth IT Terms and Conditions			
COMPENSATION			
Check ONE option.			
The Department certifies that payments for authorized performance accepted in accordance with the terms of this Contract will be supported in the state accounting system by sufficient appropriations or other non-appropriated funds, subject to intercept for Commonwealth owed debts under 815 CMR 9.00 .			
☐ Rate Contract (No Maximum Obligation). (Attach details of all rates, units, calculations, conditions or terms and any changes if rates or terms are being amended.) ☒ Maximum Obligation Contract. Total maximum obligation for total duration of this contract (or new total if contract is being amended): \$ 248,276.00			

Mosaic Transaction ID(s) **CT EPS SUPG**

PROMPT PAYMENT DISCOUNTS (PPD)

Commonwealth payments are issued through Electronic Funds Transfer (EFT) 45 days from invoice receipt. See [Prompt Pay Discounts Policy](#).

Contractors requesting accelerated payments must identify a PPD as follows:

Payment issued within: **10 days** % PPD.
 15 days % PPD.
 20 days % PPD.
 30 days % PPD.

If PPD percentages are left blank, identify reason:

☐ Statutory/legal ☐ Ready Payments ([M.G.L.c. 29, § 23A](#)) ☒ Agree to standard 45-day cycle ☐ Only initial payment

BRIEF DESCRIPTION OF CONTRACT PERFORMANCE or REASON FOR AMENDMENT

Enter the Contract title, purpose, fiscal year(s) and a detailed description of the scope of performance or what is being amended for a Contract Amendment. Attach all supporting documentation and justifications.

Contract is for the reimbursement of funds under the State 911 Department FY 2027 Public Safety Answering Point and Regional Emergency Communication Center Support and Incentive Grant as authorized and awarded in compliance with the grant guidelines and the grantee's approved grant application.

SUPPLIER DIVERSITY PROGRAM (SDP) PLAN

Does the Supplier Diversity Program apply?

☐ YES If YES, the Contractor's annual SDP commitment for this Contract is
☒ NO If NO, and the department is an Executive Department, enter the appropriate exemption: **GRANTS**

ANTICIPATED START DATE (Complete ONE option only.)

The Department and Contractor certify for this Contract, or Contract Amendment, that Contract obligations:

- ☒ 1. may be incurred as of the Effective Date (latest signature date below) and no obligations have been incurred prior to the Effective Date.
- ☐ 2. may be incurred as of _____, 20____, a date LATER than the Effective Date below and no obligations have been incurred prior to the Effective Date.
- ☐ 3. were incurred as of _____, 20____, a date PRIOR to the Effective Date below, and the parties agree that payments for any obligations incurred prior to the Effective Date are authorized to be made either as settlement payments or as authorized reimbursement payments, and that the details and circumstances of all obligations under this Contract are attached and incorporated into this Contract. Acceptance of payments forever releases the Commonwealth from further claims related to these obligations.

CONTRACT END DATE

Contract performance shall terminate as of **June 30, 2027**, with no new obligations being incurred after this date unless the Contract is properly amended, provided that the terms of this Contract and performance expectations and obligations shall survive its termination for the purpose of resolving any claim or dispute, for completing any negotiated terms and warranties, to allow any close out or transition performance, reporting, invoicing or final payments, or during any lapse between amendments.

CERTIFICATIONS

Notwithstanding verbal or other representations by the parties, the "Effective Date" of this Contract or Amendment shall be the latest date that this Contract or Amendment has been executed by an authorized signatory of the Contractor, the Department, or a later Contract or Amendment Start Date specified above, subject to any required approvals. The Contractor certifies that they have accessed and reviewed all documents incorporated by reference as electronically published and the Contractor makes all certifications required under the Standard Contract Form Instructions and Contractor Certifications under the pains and penalties of perjury, and further agrees to provide any required documentation upon request to support compliance, and agrees that all terms governing performance of this Contract and doing business in Massachusetts are attached or incorporated by reference herein according to the following hierarchy of document precedence, the applicable Commonwealth Terms and Conditions, this Standard Contract Form, the Standard Contract Form Instructions and Contractor Certifications, the Request for Response (RFR) or other solicitation, the Contractor's Response (excluding any language stricken by a Department as unacceptable), and additional negotiated terms, provided that additional negotiated terms will take precedence over the relevant terms in the RFR and the Contractor's Response only if made using the process outlined in [801 CMR 21.07](#), incorporated herein, provided that any amended RFR or Response terms result in best value, lower costs, or a more cost effective Contract.

AUTHORIZING SIGNATURE FOR THE CONTRACTOR

Signature and date must be captured at time of signature.

Signature: *Jennifer Paster* Date: *7/16/26*
Print Name: *Jennifer Paster* Print Title: *Chief of Police*

AUTHORIZING SIGNATURE FOR THE DEPARTMENT

Signature and date must be captured at time of signature.

Signature: *Frank Pozniak* Date: *7/29/26*
Print Name: *Frank Pozniak* Print Title: *Executive Director*

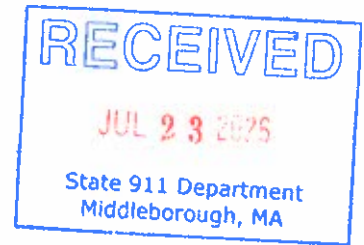
Appendix A - Personnel Costs
(List Certified Enhanced 911 Telecommunicators)

{List ALL in Alphabetical Order by LAST Name - Not by Rank or Seniority}

All certs
✓ SL

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FY 2027 SUPPORT AND INCENTIVE GRANT



Type of PSAP: (please check one)

- ☒ Primary ☐ Regional ☐ Regional Secondary
☐ Regional Emergency Communication Center

Name of Eligible Entity (PSAP/RECC)

Brookline Police Department

Address

350 Washington Street

City/Town/Zip

Brookline, MA 02445

Telephone Number

(617) 730-2222

Fax Number

(617) 264-6488

Website

Name & Title of Authorized Signatory

Jennifer Paster, Chief of Police

Telephone Number

(617) 730-2249

Email Address

jpaster@brooklinema.gov

Name & Title of Grant Contract Manager

Elizabeth Scott, Public Safety Business Manager

Telephone Number

(617) 730-2224

Email Address

lscott@brooklinema.gov

Total Grant Program funds requested:

\$ 248,276.00✓

Authorization and Certification

Through its submission of this application to the State 911 Department, the applying governmental entity and the authorized signatory of the applying governmental entity affirms and declares that all information submitted to the State 911 Department regarding the application, reimbursements, budget modifications, reporting, and any and all other submissions required throughout the duration of the grant process, its award and execution shall be true and verifiable through source documentation. The above noted documents, excluding this application, will no longer require a signature at the time of submission. Submission of this application by the applying governmental entity and authorized signatory shall be applicable to any and all transactions submitted under a contract awarded as the result of this application.

Sign below to acknowledge having read and agreed to the Authorization and Certification above and the grant conditions and reporting requirements listed in the grant guidelines.

Signed under the penalties of perjury this 14 day of July, 20 26.


ORIGINAL SIGNATURE OF AUTHORIZING SIGNATORY

FY 2027 SUPPORT AND INCENTIVE GRANT

BUDGET SUMMARY

Primary PSAP, Regional PSAP, Regional Secondary PSAP, & RECCs	
CATEGORY	AMOUNT
A. Enhanced 911 Telecommunicator Personnel Costs	\$ 231,860.09
B. Heat, Ventilation, Air Conditioning, and Other Environmental Control Equipment	\$
C. Computer-Aided Dispatch Systems	\$
D. Radio Console	\$
E. Console Furniture and Dispatcher Chairs	\$ 15,183.00
F. Fire Alarm Receiving and Alerting Equipment Associated with Providing Enhanced 911 Service	\$
G. Other Equipment	\$ 1,232.91
REGIONAL PSAPs and RECCs ONLY	
H. Public Safety Radio Systems	\$
REGIONAL SECONDARY PSAP ONLY	
I. PSAP Customer Premises Equipment Maintenance	\$
SUBTOTAL/ FY2027 ALLOCATION	\$ 248,276.00
APPENDIX B: Mobile Behavioral Health Crisis Response Services REVIEW FOR ELIGIBILITY & ENTER AMOUNT HERE	\$
APPENDIX C: Credentialed TERT Team Member REVIEW FOR ELIGIBILITY & ENTER AMOUNT HERE	\$
REGIONAL PSAPs and RECCs ONLY	
APPENDIX D: Up to 60% of one (1) Annual Maintenance Contract (not to exceed \$314,000)	\$
GRAND TOTAL*	\$ 248,276.00

FY 2027 SUPPORT AND INCENTIVE GRANT

DETAIL NARRATIVE

Please make sure that every item listed in the above Budget Summary is listed in below narrative with a detailed description including category of item, price per unit, quantity, brand, model, and any other pertinent and available information. Please include any and all quotes to support the budget narrative. For personnel costs, please complete the Appendix A – Personnel Costs Form. Please use additional pages if needed.

A. Enhanced 911 Telecommunicator Personnel Costs – to defray the costs of salary for enhanced 911 telecommunicator personnel, including enhanced 911 telecommunicators who are emergency communications dispatchers or supervisors. In order to be eligible for such funding, a grantee shall show that the personnel costs to be reimbursed: (1) cover only personnel who are trained and certified as an enhanced 911 telecommunicator in accordance with the requirements of the State 911 Department, or are in the process of obtaining such certification, in accordance with the requirements of the State 911 Department; and (2) except as otherwise approved by the State 911 Department, are solely for hours in which such personnel are working in the capacity of an enhanced 911 telecommunicator as their primary job function; and (3) except as otherwise approved by the State 911 Department, are solely for hours in which such personnel are conducting quality control/quality assurance of 911 calls. Reimbursement may be allowed for straight time costs for on the job training for new telecommunicators who are in the process of obtaining certification as an enhanced 911 telecommunicator, in accordance with the requirements of the State 911 Department. Reimbursement for personnel costs related to training may be allowed only for training courses that have been approved by the State 911 Department under the Fiscal Year 2027 State 911 Department Training Grant, or with the prior written approval of the State 911 Department. Reimbursement for personnel costs for individuals who have other primary job duties not directly related to enhanced 911 service, such as firefighters or police officers who may occasionally be assigned PSAP enhanced 911 telecommunicator duty, may be allowed only for the documented hours in which the employee is acting primarily in the capacity of an enhanced 911 telecommunicator. For example, if a police officer or firefighter is assigned to work as an enhanced 911 telecommunicator 1 day a week, funding from these grants may only be used to cover the portion of such firefighter or police officer's salary for the 1 day a week that he or she is assigned to enhanced 911 telecommunicator duty. Funding awarded through these grants shall be assigned to specific identified personnel, and the funding shall be applied to the personnel costs associated with such specific identified personnel.

All wage reimbursements authorized under this Program shall be allocated by the grantee in adherence with applicable collective bargaining agreements. However, the State 911 Department is not bound by or required to adhere to grantee collective bargaining agreements when determining allocations or reimbursements.

☐ Attach Appendix A – Personnel Costs Form

Total Category A

\$ 231,860.09

B. Heat, Ventilation, Air Conditioning and Other Environmental Control Equipment – to defray costs associated with the acquisition and maintenance of heat, ventilation and air-conditioning equipment and other environmental control equipment. Such funds may only be used to purchase, install, replace, maintain, operate, and/or upgrade such equipment used in the physical space used for the provision of enhanced 911 service.

B. Heat, Ventilation, Air Conditioning and Other Environmental Control Equipment

Description:

Vendor:

☐ Attach Quote and mark with letter B

Total Category B

\$

FY 2027 SUPPORT AND INCENTIVE GRANT

E. Console Furniture and Dispatcher Chairs – to defray costs associated with the purchase, installation, replacement, maintenance, and/or upgrade of console furniture and dispatcher chairs necessary for enhanced 911 telecommunicators working at primary PSAPs, regional PSAPs, regional secondary PSAPs, and RECCs to perform their jobs effectively and in an ergonomically appropriate manner. Such funds may only be used to purchase, install, replace, maintain, and/or upgrade such console furniture and dispatcher chairs, including shelving, storage cabinets, and rotary resource files, used in the physical space used for the provision of enhanced 911 service, except as otherwise approved by the State 911 Department, based on supporting documentation that the physical space used for the provision of enhanced 911 service is inadequate to house the equipment, or except as otherwise approved by the State 911 Department based on supporting documentation.

E. Console Furniture and Dispatcher Chairs

Description(s):

Evans Care - Preventative Maintenance & Console Cleaning of 4 9-1-1 workstations.
Concept Seating - Two (2) 24/7 Chairs w/ assembly. Model# 3150HR (\$2,247) & 3150 (\$2,100)
Iron Horse Seating - Two (2) 24/7 Chairs. Custom GT Sport \$4,000/ each w/ care kit \$125.00/each.
All chairs to be used on Communications Center floor.

Have you previously applied for funding for dispatcher chairs? Yes

If so, what grant year? FY21 + ② in FY22

Are they under warranty? No

Include use and location for each of the requested item(s).

Vendor(s):

☒ Attach Quote and mark with letter E

Total Category E

\$ 15,183.00

F. Fire Alarm Receiving and Alerting Equipment Associated with Providing Enhanced 911 Service – to defray costs associated with the purchase, installation, replacement, maintenance, and/or update of fire alarm receiving and alerting equipment used at primary PSAPs, regional PSAPs, regional secondary PSAPs, and RECCs. Funding may be used to purchase, install, replace, maintain, and/or update systems used by such PSAPs to alert remote station personnel of emergency responses, including hardware and components installed within remote station locations. Funding for street or structure based cable or radio fire alarm boxes and related hardware is not permitted.

F. Fire Alarm Receiving and Alerting Equipment Associated with Providing Enhanced 911 Service

Description:

Vendor:

☐ Attach Quote and mark with letter F

Total Category F

\$

ESTIMATE

Evans Consoles Inc.
Remit To: 305 E Wall St
Grapevine, TX 76051

tle@evansonline.com
+1 (503) 313-4348
www.evansonline.com



Bill to
Natalie Hunt
Brookline, MA

Ship to
Natalie Hunt
Brookline, MA

Estimate details

Estimate no.: 2752
Estimate date: 07/02/2026

#	Date	Product or service	Description	Qty	Rate	Amount
1.		Public Safety-Console Cleaning and preventative Maintenance Agreement	Preventative Maintenance and Console Cleaning Agreement with EvansCare- Estimate includes one time cleaning. Console cleaning is performed on-site while center stays live. Service is conducted in as quiet as possible manner using vacuums modified with mufflers and grade 5 HEPA filters. Included in this service is our preventative maintenance and repair of any brand of console. Console will be inspected and preventative maintenance such as hinge adjustments, tightening screws, leveling, and minor touch ups will be performed to lessen the likelihood of a possible breakdown ensuring that the console functions at its optimum level of performance. EvansCare provides cleaning and preventative maintenance for consoles produced by every console manufacturer. If replacement parts are needed, EvansCare will create a report that can be used to reach out to manufacturers about needed parts and/or issues to ensure premium service to you. EvansCare services in no way violate or void any console manufacturer's warranties.	4	\$495.00	\$1,980.00
Total						\$1,980.00

WB Mason-HVS
7.1.26

E

Item	Manufacturer Na	Part Num	Part Description	Qty	Sell	Ext Sell
1	Concept Seating	3150HR	Black Leather, 24/7 Chair	1	\$ 2,247.00	\$ 2,247.00
2	Concept Seating	3150	Black Leather 24/7 Chair	1	\$ 2,100.00	\$ 2,100.00
3	Concept Seating	Shipping	Delivery	1	\$ 0.00	\$ 0.00
4	WB Mason	Labor	Assembly (Optional)	2	\$ 55.00	\$ 110.00
			Grand Total			\$ 4,457.00



Bill To

Natalie Hunt
Brookline Public Safety
Public Safety Business Office
350 Washington Street
Brookline MA 02445
United States

Ship To

Brookline Public Safety
Public Safety Business Office
350 Washington Street
Brookline MA 02445
United States

TOTAL

\$8,746.00

Expires: 7/29/2026

Company	Terms	Partner	Sales Rep	Shipping Method
66634	Prepayment	Internal	Taylor Moran	SAIA

Memo

Flat Freight (inside delivery not included) / FOB Lake Forest, IL 60045. Estimated lead time 6-8 weeks.

Quantity	Item	Unit Price	Amount
2	IHC-340S.DCCGBA.9BL7YE1 IRON HORSE Custom GT Sport 3000 Series Slider Cushion, Black Leather w/Carbon Fiber Vinyl Bolsters, Black Leather Center Panel w/Yellow Vinyl Double Stripe, Traditional Style DLX Black Leather Headrest w/Carbon Fiber Accent, Black Deluxe Tilt Up Armrests, HD Tilt Mechanism, Standard Shock w/Black Cover, 29" Black Aluminum Base, 60mm Hard Casters, No Logo	\$4,000.00	\$8,000.00
2	IH-OPERATORKIT-BDCH IRON HORSE Operator Care Kit - Black DCH IRON HORSE Branded Mesh Carrying Bag with ID Tag, Care Kit Includes pair of Removable Memory Foam Armrest Covers in Black Vinyl, one Removable DCH Cover in Black Vinyl, one Microfiber Cloth Rag.	\$125.00	\$250.00

Subtotal	\$8,250.00
Tax Total (0%)	\$0.00
Shipping Cost	\$496.00
Total	\$8,746.00



QUO20778

1 of 1

All quotes are valid for 30 days. Please refer to quotation number on all inquiries and Purchase Orders. All orders should be made out to United Group, Inc. Prices are quoted FOB, Lake Forest, IL.
FEIN: 36-3594625 | DUNS: 608865796 | UEI: FE52LKH4YEC3 | www.unitedgp.com

FY 2027 SUPPORT AND INCENTIVE GRANT

G. Other Equipment and Related Maintenance Associated with Providing Enhanced 911 Service – to defray costs associated with the purchase, installation, replacement, and/or maintenance of other equipment used in the physical space used for the provision of enhanced 911 service, except as otherwise approved by the State 911 Department, based on supporting documentation that the physical space used for the provision of enhanced 911 service is inadequate to house the equipment, or except as otherwise approved by the State 911 Department based on supporting documentation. Funding may be used for, but is not limited to: support technology (such as printers, headsets, and call recorders); supplies (such as disc and printer cartridges); hardware and support costs (excluding monthly recurring telephone service costs) for telephones; acoustic wall coverings; ESD-resistant flooring; lighting; and security equipment used for securing access to the PSAP to prevent entry by the public or unauthorized personnel.

G. Other Equipment and Related Maintenance Associated with Providing Enhanced 911 Service

Description(s):

HP Ink Cartridges for the printer located in the Communications Center

HP Ink Cartridges for the printer located in the Dispatch Supervisors Office

Include use and location for each of the requested item(s).

What will run or be displayed on computers/monitors, if requesting?

Vendor(s):

☒ Attach Quote and mark with letter G

Total Category G

\$	1,232.91
-----------	-----------------

REMINDER: Disposal of Equipment Purchased with Grant Funding: Grantees may replace and/or dispose of equipment purchased with funds under the State 911 Department grant programs only if such equipment has reached the end of its useful life, in accordance with the manufacturer's warranty or industry expected useful life, whichever is longer. Disposal shall be in compliance with municipal guidelines, and equipment may be transferred to public entities for public municipal purposes only.

All goods and/or services shall be received on or before June 30, 2027 to be eligible for reimbursement under the Fiscal Year 2027 State 911 Department Public Safety Answering Point and Regional Emergency Communication Center Support and Incentive Grant.

Back to Previous Page
MY CART

Add Item Number **Tip** Add items to cart without leaving the page

Sort by Order Added

Empty Cart

	HP 962XL (31403AA), Original Mega Yield Ink Cartridge, Black HEW31403AAZ6	Next Business Day Delivery	☐ Remove ☒ Add to List	\$191.97 \$63.99 / EA
	HP 962 (31700AA), Original Standard Yield Ink Cartridges, Cyan/Magenta/Yellow, 3 Cartridges/Pack HEW31700AA	Next Business Day Delivery	☐ Remove ☒ Add to List	\$257.97 \$85.99 / PK
	HP 37A (CF337A), Toner Cartridge, Black HEWCF337A	Next Business Day Delivery	☐ Remove ☒ Add to List	\$782.97 \$260.99 / EA

SUBTOTAL **\$1,232.91**

CONTINUE TO CHECKOUT

1 888-WB-MASON (1 888-926-2766)

customersupport@wbmason.com

- About**
 Who We Are
 Our Story
 Careers
 Locations
 Business Solutions
- Help**
 Customer Support
 FAQs
 Order History
 Sell With WB.
 Returns Center
- Quick Links**
 Dashboard
 Payments
 My Account & Settings
 Lists
 Blog
 Federal Government Customers

GA

State 911 Department Support & Incentive Grant FY2027
Address & Parcel Mapping Update Status
Revised 7/14/2026

PSAP	ADDRESS COMPLIANCE	PARCEL COMPLIANCE
ACTON POLICE DEPARTMENT	YES	YES
ACUSHNET POLICE DEPARTMENT	YES	YES
AGAWAM POLICE DEPARTMENT	YES	YES
AMHERST COMMUNICATIONS	YES	YES
ANDOVER POLICE DEPARTMENT	YES	YES
ARLINGTON POLICE DEPARTMENT	YES	YES
ASHBURNHAM POLICE DEPARTMENT	NO	YES
ASHLAND POLICE DEPARTMENT	YES	YES
ATHOL POLICE DEPARTMENT	YES	YES
ATTLEBORO POLICE DEPARTMENT	YES	YES
AUBURN POLICE DEPARTMENT	YES	YES
AYER SHIRLEY REGIONAL EMERGENCY COMMUNICATIONS CENTER	YES	YES
BARNSTABLE COUNTY SHERIFF'S OFFICE	YES	NO
BARNSTABLE POLICE DEPARTMENT	YES	YES
BEDFORD POLICE DEPARTMENT	YES	YES
BELLINGHAM POLICE DEPARTMENT	YES	YES
BELMONT POLICE DEPARTMENT	YES	PRELIM
BERKLEY POLICE DEPARTMENT	YES	YES
BERKSHIRE COUNTY SHERIFF'S OFFICE	NO	NO
BEVERLY POLICE DEPARTMENT	YES	YES
BILLERICA POLICE DEPARTMENT	YES	YES
BLACKSTONE POLICE DEPARTMENT	YES	YES
BOSTON POLICE DEPARTMENT	YES	NO
BOURNE POLICE DEPARTMENT	YES	NO
BOYLSTON POLICE DEPARTMENT	YES	YES
BRAINTREE POLICE DEPARTMENT	YES	YES
BRIDGEWATER POLICE DEPARTMENT	YES	YES
BROCKTON POLICE DEPARTMENT	YES	YES

BROOKLINE POLICE DEPARTMENT	YES	YES
BURLINGTON POLICE DEPARTMENT	YES	YES
CAMBRIDGE COMMUNICATIONS	YES	YES
CANTON POLICE DEPARTMENT	YES	YES
CARLISLE POLICE DEPARTMENT	YES	YES
CARVER POLICE DEPARTMENT	YES	YES
CENTRAL MASSACHUSETTS REGIONAL 911 DISTRICT	YES	YES
CHARLTON POLICE DEPARTMENT	YES	YES
CHELMSFORD POLICE DEPARTMENT	YES	YES
CHELSEA EMERGENCY COMMUNICATIONS	YES	YES
CLINTON POLICE DEPARTMENT	YES	YES
CONCORD POLICE DEPARTMENT	YES	YES
DALTON COMMUNICATIONS CENTER	YES	YES
DANVERS POLICE DEPARTMENT	YES	YES
DARTMOUTH POLICE DEPARTMENT	YES	YES
DEDHAM POLICE DEPARTMENT	YES	YES
DENNIS POLICE DEPARTMENT	YES	NO
DIGHTON POLICE DEPARTMENT	YES	YES
DOUGLAS POLICE DEPARTMENT	YES	YES
DOVER POLICE DEPARTMENT	YES	YES
DUKES COUNTY SHERIFFS OFFICE	NO	YES
EASTHAMPTON POLICE DEPARTMENT	YES	YES
EVERETT COMMUNICATIONS CENTER	YES	NO
FALL RIVER POLICE DEPARTMENT	YES	YES
FITCHBURG POLICE DEPARTMENT	YES	YES
FRAMINGHAM POLICE DEPARTMENT	YES	YES
FREETOWN POLICE DEPARTMENT	YES	YES
GARDNER POLICE DEPARTMENT	YES	YES
GEORGETOWN POLICE DEPARTMENT	YES	YES
GLOUCESTER POLICE DEPARTMENT	YES	YES
GRAFTON POLICE DEPARTMENT	YES	YES
GRANBY POLICE DEPARTMENT	YES	YES
GREAT BARRINGTON POLICE DEPARTMENT	YES	NO
GREENFIELD POLICE DEPARTMENT	YES	YES



Commonwealth of Massachusetts CONTRACTOR AUTHORIZED SIGNATORY LISTING

This form is jointly issued and published by the Office of the Comptroller (CTR) and the Operational Services Division (OSD) as the default form for all Commonwealth Departments when another form is not prescribed by regulation or policy.

Signature for Corporation (C or S), Partnership, Trust/Estate, Limited Liability Company (must match Form W-9 tax classification)

Contractor Legal Name	Contractor Vendor/Customer Code (if available, not the Taxpayer Identification Number or Social Security Number)
-----------------------	---

INSTRUCTIONS: Any Contractor (other than a sole-proprietor or an individual contractor) must provide a listing of individuals who are authorized as legal representatives of the Contractor who can sign contracts and other legally binding documents related to the contract on the Contractor's behalf. In addition to this listing, any state department may require additional proof of authority to sign contracts on behalf of the Contractor, or proof of authenticity of signature (a notarized signature that the Department can use to verify that the signature and date that appear on the Contract or other legal document was actually made by the Contractor's authorized signatory, and not by a representative, designee or other individual.)

For privacy purposes **DO NOT ATTACH** any documentation containing personal information, such as bank account numbers, social security numbers, driver's licenses, home addresses, social security cards or any other personally identifiable information that you do not want released as part of a public record. The Commonwealth reserves the right to publish the names and titles of authorized signatories of contractors.

There are three types of electronic signatures that will be accepted on this form: 1) Traditional "wet signature" (ink on paper); 2) Electronic signature that is either: a. hand drawn using a mouse or finger if working from a touch screen device; or b. An upload picture of the signatory's hand drawn signature; 3) Electronic signature affixed using a digital tool such as Adobe Sign or DocuSign. Typed text of a name not generated by a digital tool, computer generated cursive, or an electronic symbol are not acceptable forms of electronic signature.

Authorized Signatory Name	Signature (Signature as it will appear on contract or other documents)	Title	Phone Number	Email Address
Jennifer Paster		Chief of Police	(617) 730 2249	j.paster@brookline.ma.gov
Elizabeth Scott		Business Manager	(617) 730 2224	lscott@brookline.ma.gov

Acceptance of any payment under a Contract or Grant shall operate as a waiver of any defense by the Contractor challenging the existence of a valid Contract due to an alleged lack of actual authority to execute the document by the signatory.

I certify that I am a responsible authorized officer of the Contractor and as an authorized officer of the Contractor I certify that the names of the individuals identified on this listing are current as of the date of execution and that these individuals are authorized to sign contracts and other legally binding documents related to contracts with the Commonwealth of Massachusetts on behalf of the Contractor. I understand and agree that the Contractor has a duty to ensure that this listing is immediately updated and communicated to any state department with which the Contractor does business whenever the authorized signatories above retire, are otherwise terminated from the Contractor's employ, have their responsibilities changed resulting in their no longer being authorized to sign contracts with the Commonwealth or whenever new signatories are designated.

Please note you cannot self-certify your own signature as a single signer listed above.

Signature 	Date 7/20/20
Print Name Holly Sullivan	Phone Number (617) 730-2021
Title Dep. Treasurer Collector	Email Address hsullivan@BrooklineMA.gov

A copy of this listing must be attached to the "record copy" of a contract filed with the department.

Memorandum

To: Select Board

From: Charles A. Simmons, Director of Public Buildings 

Date: August 5, 2026

Re: Eliot Recreation Center Renovation Contract

On behalf of Tim Davis, Recreation Director, I am requesting that the attached contract be approved and signed by the Select Board.

A Bid was put out and were received on July 22, 2026 for a partial renovation of the Eliot Recreation Center.

There were eight (8) contractors that bid. WCI Corp. was the low bidder at \$493,000.

Our Architectural Consultant, MKA Architecture, has recommended awarding WCI Corp. a contract.

Thank you.

cc: Tim Davis, Recreation Director

Enc.



MEMO

DATE: August 03, 2026
TO: Charlie Symmons, Public Buildings Director – Town of Brookline
FROM: Virginie Nogara, Senior Associate – MKA Architecture, LLC
Cc: Tim Davis, Director of Brookline Recreation
Re: Renovations to the Brookline Recreation Department
133 Eliot St, Brookline MA, 02467
Bid Results and Recommendation

General contractor bids for the above project were received on July 22, 2026 through ProjectDog. Eight bidders submitted bids which appear to be in order. There were 2 addenda included in the bid document. WCI Corp. is the low bidder at \$493,000, which is above the advertised project estimate of \$300,000.

MKA researched the DCAMM Contractor Database on July 31, 2026. WCI Corp. is currently certified by DCAMM as both a PC (Prime Contractor) and an SBC (Sub-Bidder Contractor). Their Work Categories are relevant to the Renovations of the Brookline Recreation Department as described on the attached DCAMM Certified Profile.

MKA also checked references for recent projects. Mike Messersmith, Chief Supervisor at Boston Public Schools worked with WCI Corp. on over 20 interior projects, including restrooms and kitchens renovations at various Boston Public Schools. Mike highly recommends WCI Corp., citing its very good administrative organization, excellent construction work, and prompt, satisfying responsiveness to any issue arising on the job.

Wayne McKenzie, project Manager for the City of Boston reported having worked with WCI Corp. many times as a general contractor. Wayne stated that he has only good things to say about WCI's work and organizational skills. "We'd be happy to work with them anytime again."

Given the responsiveness to the invitation to bid, the DCAMM results, and the positive feedback from the references, MKA recommends that the Town of Brookline award the contract in the amount of \$493,000 to WCI Corp.

The list of bidders is attached below, and the full bidding documents are available online. If you have any further questions, please don't hesitate to contact MKA.



MKA ARCHITECTURE

projectdog.com/GCEBidReceiveBids.aspx?ProjectID=875448 - Google Chrome

projectdog.com/GCEBidReceiveBids.aspx?ProjectID=875448

GC E-Bid : List of bids received 07/22/26 12:00 PM Brookline Recreation Dept. Interior Renovations 875448

Company	Proposed Contract Price ▼	Bid Package
WCI Corp., 555 Amory St P.O. Box 300187, Boston, MA 02130	\$493,000.00	View File
General Development Inc, 427 water st, wakefield, MA 01880	\$496,451.00	View File
Campbell Construction Group LLC, 21 Caller St, Peabody, MA 01960	\$499,000.00	View File
DDC Construction, 20 Query St, New Bedford, MA 02745	\$523,185.00	View File
Northern Contracting Corp., 68 Jackson Street, Canton, MA 02021	\$536,100.00	View File
Rapid Construction, 716 Beacon Street 590304, Newton, MA 02459	\$566,000.00	View File
Thomas E Snowden, 117 N Main St, Middleton, MA 01949	\$574,000.00	View File
R Mullen Associates, 18 Autumn Circle , Hingham, MA 02043	\$725,300.00	View File

Town of Brookline Standard Form of Agreement Between Town and Contractor

AGREEMENT

made as of the 11th day of August in the year of 2026

For the following Project:

Project Name: Eliot Rec Center – Renovations

Project Address: 133 Eliot Street, Brookline MA 02445

Description: Partial renovation of the 2nd floor including demo, new walls, painting, flooring

BETWEEN the
Owner:

The Town of Brookline
333 Washington Street, Brookline MA 02445

and the Contractor:

Name: WCI Corp.

Address: 555 Amory St, P.O. Box 300187

City/Town: Boston

State: MA

Zip Code: 02130

Contact Name: Kevin Walker Title: President

Office Phone No.: 617-593-2617

Email: kevin@wci-corp.com

Cell Phone No.: _____

The Designer is:

Name: MKA Architecture, LLC

Address: 1 Holden St. #3

City/Town: Brookline

State: MA

Zip Code: 02445

Contact Name: Michael Kim

Title: Architect

Office Phone No.: 617-739-6925

Email: mkim@mkimarchitecture.com

Cell Phone No.: 617-283-7688

The Town and Contractor agree as set forth below.

ARTICLE 1

THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General and other Conditions), Drawings, Specifications, Addenda issued prior to the execution of this Agreement; these form the Contract, and are as fully a part of the Contract as if attached to this Agreement on repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than Modifications, appears in Article 9.

ARTICLE 2

THE WORK OF THIS CONTRACT

The Contractor shall execute the entire Work described in the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others, or as follows:

ARTICLE 3

DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

3.1 The date of commencement is the date from which the Contract Time of Paragraph 3.2 is measured, and shall be the date of this Agreement, as first written above, unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Town.

The work to be performed under contract shall commence upon issuance of a Notice to Proceed, anticipated to be issued on or about August 11, 2026

3.2 The Contractor shall achieve Substantial Completion of the entire Work not later than **November 20, 2026** subject to adjustments of this Contract Time as provided in the Contract Documents.

Liquidated Damages: The General Contractor agrees to pay the Town for any delay in Work; the sum of One Thousand, Five Hundred dollars (\$1,500.00) per day for every calendar day beyond the above-established date; said amounts to be deemed payment for liquidated and ascertained for such delay.

REST OF PAGE INTENTIONALLY LEFT BLANK

ARTICLE 4
CONTRACT SUM

4.1 The Town shall pay the Contractor in current funds for the Contractor's performance of the Contract the Contract Sum of (\$495,000), subject to additions and deductions as provided in the Contract Documents.

4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Town: *None*

Alternate 1:

Alternate 3:

Alternate 2:

Alternate 4:

4.3 Unit prices, if any, are as follows: *None*

The Unit Prices are as described in Section 01 2200, Unit Prices, of these Specifications.

ARTICLE 5
PROGRESS PAYMENTS

5.1 Based upon Applications for Payment submitted to the Designer by the Contractor and Certificates for Payment issued by the Designer, the Town shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

5.2 The provisions of this Article are subject to the provisions of the General Laws of the Commonwealth of Massachusetts, Chapter 30, as amended.

ARTICLE 6
FINAL PAYMENT

The provisions will be made in accordance with Chapter 30 of the General Laws of the Commonwealth of Massachusetts.

ARTICLE 7
MISCELLANEOUS PROVISIONS

7.1 Where reference is made in this Agreement to a provision of the General Conditions or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

SECTION CONTINUES ON NEXT PAGE

7.2 Other Provisions:

1. Contractor's Representations

- a. The Contractor has familiarized himself with the nature and extent of the Contract Documents, work, locality, and all location conditions and federal, state, and local laws, rules, ordinances, and regulations that in any manner may affect costs, progress, or performance of the Work.
- b. The Contractor has made, or has caused to be made, examinations, investigations, and test and studies of such reports, and related data in addition to those referred to in the paragraph above as the Contractor deems necessary for the performance of the Work at the Contract Price, within the Contract Time, and in accordance with other Terms and Conditions of the Contract Documents; and no additional examinations, tests, investigations, reports, and similar data are or will be required by the Contractor for such purposes.
- c. The Contractor has correlated the results of such observations, examinations, investigations, tests, reports, and data with the Terms and Conditions of the Contract Documents.
- d. The Contractor has given the Designer written notice of all conflicts, errors, or discrepancies that he has discovered in the Contract Documents, and the Written Resolution thereof by the Designer is acceptable to the Contractor.

2. Miscellaneous

- a. Terms used in this Contract where are defined in Article 1 of Town of Brookline General Conditions of the Contract for Construction shall have the meaning indicated in the General Conditions; other terms shall have the meanings given them in applicable publications and regulations.
- b. No assignment by a party hereto or any rights under or interest in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically, but without limitation, monies that may become due and monies that are the effect of this restriction may be limited (by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

ARTICLE 8

TERMINATION OR SUSPENSION

8.1 The Contract may be terminated by the Town as provided in Article 14 of the General Conditions.

8.2 The Work may be suspended by the Town as provided in Article 14 of the General Conditions.

ARTICLE 9

ENUMERATION OF CONTRACT DOCUMENTS

9.1 The Contract Documents, which comprise the entire contract between the Town and the Contractor, are attached to this Contract, made a part hereof, and consist of the following:

1. The Contract.
2. Contractor's Bid, including required submittals.
3. Bid, Performance, and Payment Bond.
4. General Conditions (herein stated and in the "General Conditions for the Contract").
5. Specifications bearing the title: "*Eliot Rec Renovations*".
6. All Addenda issued prior to Bid Preparation.

7. Documentation submitted by Contractor during the Performance of the Contract.
 8. Contract Drawings.
 9. Town of Brookline Standard Signature Sheet, attached to this Contract as Page 5.
- This Agreement is entered into as of the day and year first written above and is executed in at least three (3) copies of which one is to be delivered to the Contractor, one to the Designer for use in the administration of the Contract, and the remainder original wet copy to the Town.

CONTRACTOR

(Signature)

(Printed name and title)

Town Comptroller

Town Administrator

APPROVAL OF OWNER

Select Board

Approved as to Form:

I hereby certify in accordance with Mass. Gen. Laws ch. 44 paragraph 31C that an appropriation in the amount of the Contract Sum has been made and is available for compensation to the Contractor for the work described in this agreement.

Town Counsel



Memorandum

To: Select Board

From: Amy Yuhasz, Housing and Community Planning Director

Date: 8/3/2026

Re: Affordable Housing Restriction Amendment – 90 Longwood Avenue

CC: Town Administrator Charles Carey, Associate Town Counsel John Buchheit, Director Kara Brewton

At the Select Board's August 11th meeting, please consider the following vote:

"Authorize the Select Board Chair, Town Administrator, and Director of Planning and Community Development to execute an Amendment to the Affordable Housing Restriction with the 90 Longwood LLC, related to 90 Longwood Avenue."

The Brookline Housing Authority (BHA) is requesting an amendment to the Affordable Housing Restriction for 90 Longwood Avenue. The project consists of 99 rental units, 98 of which are deed restricted for seniors at or below 100% of area median income, with the remaining unrestricted unit set aside for a live-in resident services aide. The BHA would like to add the unrestricted unit to the Affordable Housing Restriction, as explained in their attached memo and accompanying Amendment to the Affordable Housing Restriction.

The property is ground leased to 90 Longwood LLC, a BHA affiliated limited liability company, but the BHA manages the building and is the ground landlord under the ground lease.

The original restriction and proposed amendment have been reviewed by Town Counsel.

Thank you.



Brookline Housing Authority

90 Longwood Ave. Ste. 1
Brookline, MA 02446

TEL 617 277 2022
FAX 877 485 5549
TTD 800 545 1833 x213

BOARD OF COMMISSIONERS

Susan C. Cohen, Chair
Kimberley Richardson, Vice Chair
Judith A. Katz, Treasurer
Karen Patinha Rojas, Commissioner
Jonathan Klein, Commissioner
Ben Stone, Executive Director

July 22, 2026

Members of the Brookline Select Board,

Brookline Housing Authority seeks the Town of Brookline's approval of an amendment to the Affordable Housing Restriction (AHR) for 90 Longwood, a BHA-managed property. BHA seeks to add one additional income-restricted unit to the AHR, allowing us to serve one more household.

90 Longwood is a 99-unit high rise serving low-income seniors and people with disabilities. BHA repositioned this formerly federally-aided public housing development through the Rental Assistance Demonstration (RAD) program in a project completed in 2023. This project financed substantial rehabilitation using low-income housing tax credits and tax-exempt bonds and moving the property from the federal public housing program to the Housing Choice Voucher Program. While the 90 Longwood development is ground leased to a BHA affiliated limited liability company, BHA still manages the building and is the ground landlord under the ground lease. The AHR, at time of repositioning, set aside one apartment as a "friendly neighbor unit" to be occupied by a live-in resident services aide. This program did not last very long, and this apartment has been used as an office for the last couple of years. As an aside, we have the same situation at 61 Park, but the Town is not a party to the AHR for that building.

We now would like to include this vacant unit as one of the low-income apartments available to households with incomes at or below 100% of the Area Median Income. Therefore, we are seeking Town's consent to such amendment of the AHR for 90 Longwood.

Following Select Board approval, we will send the AHR amendment to the state for their signature, record the executed AHR amendment, and then move forward with leasing the apartment to a household from our waitlist.

Thank you for your consideration and your support for Brookline Housing Authority.

Ben Stone
Executive Director

Attachment: 90 Longwood Amendment of AHR

NOT
AN
OFFICIAL
COPY

NOT
AN
OFFICIAL
COPY

RECEIVED AND RECORDED
NORFOLK COUNTY
REGISTRY OF DEEDS
DEDHAM, MA

CERTIFY
William P. O'Donnell
WILLIAM P. O'DONNELL, REGISTER

AFFORDABLE HOUSING RESTRICTION

DATE: As of July 30, 2020

GRANTOR:	90 Longwood LLC
PROPERTY NAME:	Morse Apartments
TOTAL NUMBER OF UNITS:	99
TOTAL NUMBER OF RESTRICTED UNITS:	98
NUMBER OF HIGH MODERATE INCOME UNITS (100% AMI): ¹	95
NUMBER OF MODERATE INCOME UNITS (80% AMI):	0
NUMBER OF LOW INCOME UNITS (60% AMI):	3
NUMBER OF VERY LOW INCOME UNITS (50% AMI):	0
NUMBER OF EXTREMELY LOW INCOME UNITS (30% AMI):	0
NUMBER OF HOME ASSISTED UNITS:	3
PROPERTY ADDRESS:	90 Longwood Avenue Brookline, Massachusetts
TERM:	Perpetual

This Affordable Housing Restriction (this "Restriction") is granted by the undersigned Grantor, a Massachusetts limited liability company having a mailing address of 90 Longwood Avenue, Brookline, Massachusetts 02446, for the benefit of The Commonwealth of Massachusetts acting by and through the Department of Housing and Community Development having a mailing address of 100 Cambridge Street, Suite 300, Boston, Massachusetts 02114-2524 ("DHCD"); and the Town of Brookline, a municipal corporation in the Commonwealth of Massachusetts, acting by and through its Select Board, acting by and through the Department of Planning and Community Development, having an address as Brookline Town Hall, c/o Director of Planning and Community Development, 333 Washington Street, Room 309, Brookline, Massachusetts 02445 (the "Town").

¹Numbers in parentheses are the percentage of median income for the Area (AMI, as defined below), adjusted for family size, as determined from time to time by HUD (as defined below) pursuant to Section 8 of the United States Housing Act, as amended.

BACKGROUND

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3. **Occupancy Restrictions.** The following restrictions shall apply during the period commencing with the first date on which any Units are occupied and continuing for the balance of the term of this Restriction, subject always to any applicable rent restrictions of the federal low-income housing tax credit program under Section 42 of the Internal Revenue Code of 1986, as amended, and any provision herein that conflicts with the requirements of the federal low-income housing tax credit program shall be suspended so long as the restrictions under the federal low income housing tax credit program are in effect.

- A. High Moderate Income Units.** At least 95 of the Units of the types shown on Exhibit C attached hereto shall be leased exclusively to High Moderate Income Families ("High Moderate Income Units"). The monthly rent charged to a Family occupying a High Moderate Income Unit shall be one-twelfth of thirty percent (30%) of one-hundred percent (100%) of the Bedroom Adjusted AMI, minus, if applicable, an allowance established by the Holders for any utilities and services (excluding telephone) to be paid by the occupying Family. A Family who resides in a Restricted Unit, who qualified as a High Moderate Income Family at the time of such Family's initial occupancy at the Property and whose Household Income exceeds one-hundred percent (100%) of the Family-size Adjusted AMI, shall, from and after the expiration of the then-current term of such Family's lease, no longer be treated as an income-qualified Family and (i) until such time as the Property again has the required number of income-qualified Families at all income levels hereunder, must pay as monthly rent the Over-income Rent and (ii) once the Property again has the required number of income-qualified Families at all income levels hereunder, such Family's Unit shall, from and after the expiration of the then-current term of such Family's lease, no longer be deemed a Restricted Unit hereunder.
- B. Low Income Units.** At least 3 of the Units of the types shown on Exhibit C attached hereto shall be leased exclusively to Low Income Families ("Low Income Units"). With respect to each Low Income Unit designated as a HOME Assisted Unit, the monthly rent charged to a Family occupying such HOME Assisted Unit shall not exceed the lesser of Fair Market Rent or an amount equal to (x) one-twelfth of thirty percent (30%) of sixty percent (60%) of the Bedroom Adjusted AMI, minus (y) if applicable, an allowance established by the Holders for any utilities and services (excluding telephone) to be paid by the occupying Family or (z) the comparable market rent for the Family's Unit. With respect to each Low Income Unit that is not a HOME Assisted Unit, the monthly rent charged to a Family occupying a Low Income Unit shall be one-twelfth of thirty percent (30%) of sixty percent (60%) of the Bedroom Adjusted AMI, minus (y) if applicable, an allowance established by the Holders for any utilities and services (excluding telephone) to be paid by the occupying Family. A Family who resides in a Low Income Unit designated as a HOME Assisted Unit, who qualified as a Low Income Family at the time of such Family's initial occupancy at the Property and whose Household Income exceeds sixty percent (60%), but does not exceed eighty percent (80%), of the Family-size Adjusted AMI, shall, from and after the expiration of the then-current term of such Family's lease, be treated as a Low Income Family, and must pay as monthly rent the lesser of (x) the maximum amount payable by the Family under the laws of the municipality in which the Property is located or of The Commonwealth of Massachusetts, (y) one-twelfth of thirty percent (30%) of sixty five percent (65%) of the Bedroom Adjusted

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AMI (minus, if applicable, an allowance established by the Holders for any utilities and services [excluding telephone] to be paid by the occupying Family) or (z) the comparable market rent for the Family's Unit. A Family who resides in a Low Income Unit that is not a HOME Assisted Unit, who qualified as a Low Income Family at the time of such Family's initial occupancy at the Property and whose Household Income exceeds sixty percent (60%), but does not exceed eighty percent (80%), of the Family-size Adjusted AMI, shall, from and after the expiration of the then-current term of such Family's lease, be treated as a Low Income Family, and must pay as monthly rent the lesser of (x) the maximum amount payable by the Family under the laws of the municipality in which the Property is located or of The Commonwealth of Massachusetts, or (y) one-twelfth of thirty percent (30%) of sixty percent (60%) of the Bedroom Adjusted AMI (minus, if applicable, an allowance established by the Holders for any utilities and services [excluding telephone] to be paid by the occupying Family). A Family who resides in a Restricted Unit, who qualified as a Low Income Family at the time of such Family's initial occupancy at the Property and whose Household Income exceeds eighty percent (80%) of the Family-size Adjusted AMI, shall, from and after the expiration of the then-current term of such Family's lease, no longer be treated as an income-qualified Family and (i) until such time as the Property again has the required number of income-qualified Families at all income levels hereunder must pay as monthly rent the Over-income Rent and (ii) once the Property again has the required number of income-qualified Families at all income levels hereunder, such Family's Unit shall, from and after the expiration of the then-current term of such Family's lease, no longer be deemed a Restricted Unit hereunder.

- C. HERA Rent.** Notwithstanding the foregoing, the Borrower shall be permitted to increase the rents to those permitted under Section 3009(a)(E)(i) of the Housing and Economic Recovery Act of 2008 (Public Law 110-289) ("HERA"), even if such rents would be above those that would otherwise be permitted under the above provisions.
- D. Applicable Lease Term, Change of Status.** References in the foregoing provisions of the "then-current term of such Family's lease" shall refer to the term of the lease or occupancy agreement in effect on the date of the required delivery of the Income certification that reflects (or that, if duly delivered, would have reflected) the applicable increase in such Family's income or, as applicable, the term of the lease or occupancy agreement in effect at the time the Property regains the required number of income-qualified Families. If, with the Holders' consent, the Grantor does not require that a lease be signed for a Restricted Unit (e.g., a property providing short-term transitional housing), the provisions set forth above shall apply, except that the applicable date on which a Family's income-qualified status and/or applicable rent restriction is modified shall be the first day of the month that is at least thirty (30) days following the date of the required delivery of the Income certification that reflects (or that, if duly delivered, would have reflected) the applicable increase in such Family's income and the applicable date on which a Restricted Unit's status is modified shall be the first day of the month that is at least thirty (30) days following the date on which the Property regains the required number of income-qualified Families.
- E. Federal or State Rental Subsidy.** Except with respect to HOME Assisted Units, if a Restricted Unit or the Family occupying such Unit receives federal or state rental subsidy,

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then the Family's ^{A N} contribution towards rent shall be the ^{A N} contribution allowable under the federal or state rental subsidy program and the maximum rent (i.e., tenant contribution plus rental subsidy) shall be the rent allowable under the federal or state rental subsidy program. In the case of HOME Assisted Units, if a Restricted Unit receives federal or state project-based rental subsidy and the occupying Family qualifies as a Low Income Family and pays as a contribution towards rent not more than thirty percent (30%) of one-twelfth of the Family's Household Income, then the maximum rent (i.e., tenant contribution plus rental subsidy) shall be the rent allowable under the federal or state rental subsidy program.

- F. Next Available Unit Rule.** If at any time fewer than the required number of Units are leased, rented or occupied by Low Income Families, the next available Units shall all be leased, rented or otherwise made available to Low Income Families until the required number of Units occupied by Low Income Families is again obtained. Subject to the foregoing, if at any time fewer than the required number of Units are leased, rented or occupied by High Moderate Income Families, the next available Units shall all be leased, rented or otherwise made available to High Moderate Income Families until the required number of Units occupied by High Moderate Income Families is again obtained. The foregoing provisions shall be applied so as to maintain a mix of Restricted Units that is comparable in size, features and number of bedrooms to the originally designated Restricted Units (i.e., a Unit will not be considered an available Unit for purposes of this Paragraph if classification of such Unit as a Restricted Unit would cause the then current mix of Restricted Units to no longer be comparable to the original mix of Restricted Units described in Section 2 above and as shown on Exhibit C).

- 4. Rent Schedule.** Except as is set forth in Sections 3.A., 3.B., 3.B., 3.C. and 3.E, projected initial monthly maximum rents including utilities for all Restricted Units shall be as set forth in Exhibit B and Exhibit B-1 attached hereto. If permitted maximum rents and utility allowances as reflected in the annual schedule of rents and utility allowances issued by DHCD increase prior to initial occupancy of the Project, the initial monthly maximum rents and utility allowances shall be as set forth in the latest schedule issued by DHCD. Notwithstanding the rent restrictions set forth in Section 3 above, the maximum monthly rent permitted to be charged for a Restricted Unit at any particular income level is not required to be lower than the maximum rent applicable at such income level pursuant to Exhibit B and Exhibit B-1 or such higher initial maximum rent applicable at such income level pursuant to the immediately preceding sentence, regardless of changes in fair market rents or in median income over time (subject only to the restrictions applicable in the event of any federal or state subsidy, as set forth in Section 3 above). Rents for Restricted Units shall not be increased above applicable maximums without all Holders' prior written approval of a specific request by the Grantor for a rent increase, except for increases implemented in accordance with an annual schedule of maximum rents and allowances issued by DHCD. Notwithstanding the foregoing, rent increases shall be subject to the provisions of outstanding leases and shall not be implemented without at least thirty (30) days' prior written notice by the Grantor to all affected Residents and notwithstanding any provision in a lease or occupancy agreement to the contrary, in the event of any increase in the rent payable by such Residents in connection with an increase in the income of such Residents, consistent with the terms hereof, the Residents shall have the right to terminate

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their lease or occupancy agreement by written notice to the Grantor delivered within such thirty-day period.

C O P Y

5. Resident Selection.

A. Nondiscrimination. The Grantor shall not discriminate on the basis of race, religious creed, color, sex, age, marital status, sexual orientation (which shall not include persons whose sexual orientation involves minor children as the sex object), gender identity, genetic information, veteran status, membership in the armed forces, ancestry, national origin, handicap, blindness, hearing impairment, or because a person possesses a trained guide dog as a consequence of blindness, hearing impairment or other handicap of such person or any other basis prohibited by law in the lease, use and occupancy of the Units or in connection with the employment or application for employment of persons for the operation and management of the Units. The Grantor shall not discriminate against, or refuse to lease, rent or otherwise make available the Units to, a holder of a certificate or voucher under the Federal Rental Certificate Program or the Federal Rental Voucher Program or a holder of a comparable document evidencing participation in a HOME Program tenant-based assistance program because of the status of the prospective tenant as a holder of such certificate, voucher or comparable HOME Program tenant-based assistance document.

B. Selection Policies. The Grantor shall adopt and submit to the Holders for approval resident selection policies and criteria for the Restricted Units that:

- (i) Are consistent with the purpose of providing housing for a High Moderate Income Family or a Low Income Family, as defined below and required herein;
- (ii) Are reasonably related to eligibility of prospective tenants under the Programs and to the prospective tenants' ability to perform the obligations of the Grantor's form lease; and
- (iii) Provide for (x) the selection of Residents from a written waiting list in the chronological order of their application, insofar as practicable, and (y) the prompt written notification to any rejected applicant of the grounds for any rejection.

The Grantor shall also provide the Holders with an affirmative marketing plan acceptable to all Holders. The affirmative marketing plan must comply with all applicable statutes, regulations and executive orders, with all Holders' affirmative marketing requirements and with DHCD's directives reflecting the agreement between DHCD and HUD in the case of NAACP, Boston Chapter v. Kemp. The approved marketing plan and the approved resident selection policies and criteria shall be adhered to in every respect and any changes thereto shall be subject to the prior written approval of the Holders. The Grantor shall list vacancies in Restricted Units in the MassAccess Housing Registry at <http://www.massaccesshousingregistry.org>.

6. Lease Form. The Grantor shall not include in any lease for a Restricted Unit any of the following provisions:

A. Agreement by the tenant to be sued, to admit guilt or to a judgment in favor of the Grantor in a lawsuit brought in connection with the lease.

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- B.** Agreement by the tenant that the Grantor may take, hold, or sell personal property of household members without notice to the tenant and a court decision on the rights of the parties. This prohibition, however, does not apply to an agreement by the tenant concerning disposition of personal property remaining in the Unit after the tenant has moved out of the Unit. The Grantor may dispose of such personal property in accordance with state law.
- C.** Agreement by the tenant not to hold the Grantor or the Grantor's agents legally responsible for any action or failure to act, whether intentional or negligent.
- D.** Agreement of the tenant that the Grantor may institute a lawsuit without notice to the tenant.
- E.** Agreement by the tenant that the Grantor may evict the tenant or household members without instituting a civil court proceeding in which the tenant has the opportunity to present a defense, or before a court decision on the rights of the parties.
- F.** Agreement by the tenant to waive any right to a trial by jury.
- G.** Agreement by the tenant to waive the tenant's right to appeal, or to otherwise challenge in court, a court decision in connection with the lease.
- H.** Agreement by the tenant to pay attorney's fees or other legal costs even if the tenant wins in a court proceeding by the Grantor against the tenant. The tenant, however, may be obligated to pay costs if the tenant loses.

All leases for Restricted Units shall be consistent with the requirements set forth herein, shall be on a form reasonably approved by the Holders, shall be for terms of not less than one (1) year (unless a shorter term is specified by mutual agreement between the Resident and the Grantor, subject to the Holders' program requirements) and shall require tenants to provide information required for the Grantor to meet its reporting requirements hereunder. The Grantor may not terminate the tenancy or refuse to renew the lease of an occupant of a Restricted Unit except (i) for serious or repeated violation of the terms and conditions of the lease; (ii) for violations of applicable federal, state or local law; (iii) for completion of the tenancy period for transitional housing; or (iv) for other good cause. Any termination or refusal to renew must be preceded by not less than thirty (30) days by the Grantor's service on the tenant of a written notice specifying the grounds for the action.

7. Transfer Restrictions. The Grantor shall not sell, transfer, convey, rent (except for (i) the office sublease by and between Grantor and Brookline Housing Authority dated on or about the date hereof and (ii) leases or occupancy agreements made in connection with the Permitted Uses that are substantially in the form approved by the Holders), encumber as security for financing, or in any other way exchange all or any portion of the Property nor shall the Grantor permit the sale, transfer or pledge of any direct or indirect interests in the Grantor, without the express written permission of the Holders, which consent shall not be unreasonably withheld or delayed with respect to any transfer to the Sponsor or any entity wholly owned and controlled by the Sponsor pursuant to the Right of First Refusal Agreement and Purchase Option Agreement each dated of even date herewith granted to the Sponsor by the Grantor, provided that at the time of exercise of such Right of First Refusal or Purchase Option (i) no Event of Default, or event or condition which with the giving of notice or passage of time or both would constitute an Event of Default, is then outstanding hereunder or under any of the Loans; (ii) the Sponsor or such other entity designated as transferee

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is an eligible borrower under all applicable Statutes, Regulations and Guidelines as then in effect; (iii) the Sponsor or such other entity is in good standing with all Holders and in each Holder's reasonable discretion has sufficient financial capability and experience with affordable housing similar to the Property to perform the obligations of the Grantor; (iv) the Sponsor or such transferee agrees in writing to be bound by and perform all of the terms and conditions hereof; (v) such transfer is permitted by the holder of all loans secured by the Property and (vi) the Grantor gives to all Holders no less than thirty (30) days' prior written notice of any such proposed transfer. . For purposes of the foregoing sentence, a withdrawal by the investor member of Grantor shall be deemed to be a transfer of an interest in the Grantor. Without limiting the generality of the foregoing, the Permitted Encumbrances are hereby approved by the Holders. Notwithstanding the foregoing: (i) the investor member interest of Grantor currently held by LRCC Holdings, LLC may be transferred to BF Santander 2017, Limited Partnership (the "Investor"); and (ii) after such transfer, the investor member interest of the Grantor held by the Investor may be transferred to an entity in which Boston Financial Investment Management, LP (the "Investor Sponsor") or an affiliate of the Investor Sponsor is the general partner or managing member, provided that the Holders receive notice of such transfer; and (iii) the Grantor's investor member may remove and replace the managing member of the Grantor in accordance with the provisions of the Grantor's operating agreement, as may be amended from time to time. In connection with any transfer requiring the consent of the Holders, the Grantor shall provide such information to the Holders as the Holders may reasonably request, shall pay a fee to DHCD pursuant to DHCD's then-current fee schedule and shall pay all legal fees incurred by the Holders in connection with such transfer request.

8. Term of Restrictions; Covenants to Run with Land. The term of this Restriction shall be perpetual. Notwithstanding any provision to the contrary herein or in any of the other Loan Documents, this Restriction shall remain in full force for the full term set forth herein including any extension, notwithstanding any prepayment of the Loan. The restrictions contained herein shall run with the land, shall bind the successors and assigns of the Grantor, and shall inure to the benefit of the Holders and their successors and assigns as permitted herein. Notwithstanding the foregoing, at the end of the term of affordability for a particular program, as set forth on Exhibit C, as it may have been extended, provided that all obligations under the loan provided by such Program have been satisfied in full at that time, as determined by the appropriate Holder, the Grantor may request that the Holders modify this Restriction to eliminate the requirements imposed by or otherwise relating to such Program set forth in this Restriction. The parties shall cooperate to prepare an appropriate amendment to this Restriction, which amendment shall be duly recorded with the Registry of Deeds by the Grantor at its cost and expense.

9. Subsequent Conveyances. Each and every contract, deed or other instrument hereafter executed conveying the Property or portion thereof shall expressly provide that such conveyance is subject to this Restriction, provided, however, that the covenants contained herein shall survive and be effective regardless of whether such contract, deed or other instrument hereafter executed conveying the Property or portion thereof provides that such conveyance is subject to this Restriction.

10. Income Verification. The Grantor represents, warrants and covenants that the determination of whether a Family occupying a Restricted Unit meets the income requirements set forth herein shall be made by the Grantor at the time of leasing of a Restricted Unit and thereafter

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at least annually on the basis of the current income of such Family. In initially verifying a Family's income, the Grantor shall examine the source documents evidencing annual income (e.g., wage statements, interest statements, unemployment compensation statements) for the Family.

11. Reporting Requirements.

A. Annual Report. Annually, no later than September 30, Grantor shall submit to each Holder an annual report consisting of the following:

- (i) Annual adjusted income of each Family occupying a Restricted Unit.
- (ii) Monthly gross rents (rents plus utility allowances, if applicable) for all Restricted Units, such rents to be consistent with the schedule of maximum rents published annually by DHCD. The rent schedule shall include the maximum rents applicable to Restricted Units under Section 3 as well as the actual rents to be charged to over-income Families under Section 3.
- (iii) The Grantor's certification, made to the best knowledge and belief of the officer or individual signing such certification, that:
 - (a) The Property continues to be used for the Permitted Uses.
 - (b) The Property continues to contain the required number of Low Income Units and Extremely Low Income Units and to comply with the rent and other restrictions applicable to such Restricted Units.
 - (c) Grantor has not transferred, pledged or encumbered any interest in the Property, except as specifically provided in, and in accordance and compliance with the terms of, this Restriction.
 - (d) Grantor has caused the Property to be maintained in a manner consistent with the Statute, Regulations and Guidelines and no children under six years old reside in or occupy the Property within the meaning of the Lead Paint Law or, if such children do reside in or occupy the Property, that the Property is in compliance with the Lead Paint Law.
 - (e) The information submitted pursuant to this Paragraph B is true and accurate.

B. Confidentiality. The Holders and the Grantor shall treat as confidential any of the foregoing information relating to a specific Resident or Unit in compliance with all applicable state and federal statutes and regulations, including M.G.L. c. 66A, and shall implement adequate systems and procedures for maintaining the confidentiality of such information (but the Holders and the Grantor may release general statistical and other information about the Property, so long as the privacy rights and interests of the individual Residents are protected). The Holders and the Grantor shall not use any of the foregoing information in Paragraph A.(iii) for any purpose described in Section 603(d)(1) of the federal Fair Credit Reporting Act (15 U.S.C. § 1681a(d)(1)) or in any manner that would cause a Holder or Grantor to be considered a "consumer reporting agency" under Section 603(f) of the federal Fair Credit Reporting Act (15 U.S.C. § 1681a(f)).

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C. Additional Reports. Grantor shall prepare and submit to the Holders such additional reports as any Holder may deem necessary to ensure compliance with the requirements of this Restriction and of the Programs.

D. Records. The Grantor shall maintain as part of its records (i) copies of all leases of Restricted Units; (ii) all initial and annual income certifications by Residents of Restricted Units and (iii) such additional records as any Holder may deem necessary to ensure compliance with the requirements of this Restriction and of the Programs.

E. Additional Reporting Requirements. Additional reporting requirements are stipulated in the Loan Agreement.

12. No Demolition. The Grantor shall not demolish any part of the Improvements or substantially subtract from any real or personal property included within the Property except in conjunction with renovation or rehabilitation of the Units or construction of a new project on the Property, in either case subject to the prior written consent of all Holders, which consent may be granted or withheld in a Holder's sole judgment.

13. Casualty. The Grantor represents, warrants and agrees that if the Property, or any part thereof, shall be damaged or destroyed, the Grantor (subject to the approval of the lender(s) providing financing) will use its best efforts to repair and restore the Units to substantially the same condition as existed prior to the event causing such damage or destruction, and the Grantor represents, warrants and agrees that the Units shall thereafter continue to operate in accordance with the terms of this Restriction.

14. Inspection. The Grantor hereby grants to each Holder and its duly authorized representatives the right to enter the Property (a) at reasonable times and in a reasonable manner for the purpose of inspecting the Property to determine compliance with this Restriction or any other agreement between the Grantor and such Holder and (b) after thirty (30) days' prior written notice, to take any reasonable and appropriate action under the circumstances to cure any violation of the provisions of this Restriction. The notice referred to in clause (b) shall include a clear description of the course and approximate cost of the proposed cure.

15. Enforcement. Upon violation by the Grantor of any of the provisions of this Restriction that remains uncured for more than thirty (30) days after notice thereof from any Holder (or for such longer period not to exceed thirty (30) days as shall be reasonably required under the circumstances to cure such violation, provided that the Grantor has commenced the cure of such violation within the initial thirty (30) day period and is thereafter diligently pursuing the cure to completion), any Holder, at its option (without liability to any party for failure to do so), may apply to any court, state or federal, for specific performance of this Restriction or an injunction against any violation of this Restriction, or for such other relief as may be appropriate, since the injury arising from the default under any of the terms of this Restriction would be irreparable and the amount of damage would be difficult to ascertain and may not be compensable by money alone. In each such default notice, the Holder giving such notice shall specify the violation in question and the actions such Holder believes are necessary and feasible to remedy such violation. No waiver by a Holder of any breach of this Restriction shall be deemed a waiver of such breach by any other Holder or a waiver of any other or subsequent breach. No act or omission by any Holder, other than a writing signed

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by it waiving a breach by the Grantor in accordance with the next Section hereof, shall constitute a waiver thereof. Any Holder shall be entitled to recover from the Grantor all of such Holder's reasonable costs of an action for enforcement of this Restriction, including reasonable attorneys' fees (including the time of any in-house counsel of a Holder charged at the same rate as comparable outside attorneys). By its acceptance of this Restriction, no Holder undertakes any liability or obligation relating to the condition of the Property. Without limiting any other rights or remedies available to a Holder, any transfer of all or any other portion of the Property in violation of the provisions hereof, in the absence of a certification from all Holders approving, or waiving any restrictions with respect to, the same, all as set forth above, shall, to the maximum extent permitted by law, be voidable by any Holder, by suit in equity to enforce the restrictions hereof.

16. Compliance Certification. Upon written request therefor, a Holder shall provide a statement in form acceptable for recording certifying that the Grantor is in full compliance with the provisions hereof as relate to that Holder, provided such Holder believes that the Grantor is so in compliance. Upon receipt of a written request therefor, if a Holder shall believe that the Grantor is not so in compliance, such Holder shall provide such a recordable certification specifying in detail the section or sections hereof with which such Holder believes the Grantor not to be in compliance. Any third party dealing with the Grantor may rely for all purposes on the truth and completeness of such a certification of a Holder.

17. Senior Lender Foreclosure.

- A. Notwithstanding anything herein to the contrary, but subject to the provisions of this Section, if the holder of record of a first mortgage granted to a state or national bank, state or federal savings and loan association, cooperative bank, mortgage company, trust company, insurance company or other institutional or governmental lender shall acquire the Property by reason of foreclosure or similar remedial action under the provisions of such mortgage or upon conveyance of the Property in lieu of foreclosure, and provided that the holder of such mortgage has given the Holders not less than sixty (60) days' prior written notice of its intention to foreclose upon its mortgage or to accept a conveyance of the Property in lieu of foreclosure to attempt to structure a workout or other arrangement to avoid such foreclosure, conveyance in lieu of foreclosure, or similar remedial action, then except as provided below, the rights and restrictions herein contained shall not apply to such mortgage holder upon such acquisition of the Property or to any purchaser of the Property from such mortgage holder, and such Property shall, subject to Paragraph B. below, thereafter be free from all such rights and restrictions. Notwithstanding the foregoing, the rights and restrictions contained herein shall terminate only to the extent it is financially infeasible to maintain the level of affordability required by this Restriction or some lesser level of affordability (i.e., fewer Restricted Units or Restricted Units affordable to Families with higher Household Incomes than those required by this Restriction). "Financially infeasible" shall mean (i) with respect to the operation of the Property, that the rent and other income from the Property is, or is reasonably projected to be, less than the reasonable expenses required (or reasonably projected to be required) to maintain and operate the Property and (ii) with respect to a sale of the Property, that the restrictions would prevent (or be reasonably projected to prevent) the senior mortgage holder from recovering all amounts due and owing with respect to its financing of the Property, including without

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limitation, principal, interest, charges, costs, expenses, late fees and prepayment premiums. Financial feasibility shall be determined by the senior mortgage holder in its sole discretion after consultation with the Holders. The senior mortgage holder shall notify the Holders of the extent to which the rights and restrictions contained herein shall be terminated and the Grantor agrees to execute any documents required to modify this Restriction to conform to the senior mortgage holder's determination. The Grantor hereby irrevocably appoints any senior mortgage holder and each of the Holders, its true and lawful attorney-in-fact, with full power of substitution, to execute, acknowledge and deliver any such documents on behalf of the Grantor should the Grantor fail or refuse to do so.

- B.** The rights and restrictions contained herein shall not lapse if the Property is acquired through foreclosure or deed in lieu of foreclosure by (i) the Grantor, (ii) any person with a direct or indirect financial interest in the Grantor, (iii) any person related to a person described in clause (ii) by blood, adoption or marriage, (iv) any person who is or at any time was a business associate of a person described in clause (ii), and (v) any entity in which any of the foregoing have a direct or indirect financial interest (each a "Related Party"). Furthermore, if the Property is subsequently acquired by a Related Party during the period in which this Restriction would have remained in effect but for the provisions of this Section, this Restriction shall be revived and shall apply to the Property as though it had never lapsed.
- C.** In the event such mortgage holder conducts a foreclosure or other proceeding enforcing its rights under such mortgage and the Property is sold for a price in excess of the sum of the outstanding principal balances of all notes secured by mortgages of the Property plus all future advances, accrued interest and all reasonable costs and expenses which the holders thereof are entitled to recover pursuant to the terms of such mortgages, such excess shall be paid to the Holders in consideration of the loss of the value and benefit of the rights and restrictions herein contained and released by the Holders pursuant to this Section in connection with such proceeding, provided that in the event that such excess shall be so paid to the Holders by such mortgage holder, the Holders shall thereafter indemnify such mortgage holder against loss or damage to such mortgage holder resulting from any claim made by the mortgagor of such mortgage to the extent that such claim is based upon payment of such excess by such mortgage holder to the Holders in accordance herewith, provided that such mortgage holder shall give the prompt notice of any such claim and shall not object to intervention by the Holders in any proceeding relating thereto. The Holders shall share any such excess pro rata in proportion to the respective amounts of principal and interest (if any) then outstanding on their portions of the Loan and the liability of a Holder under the foregoing indemnity shall be limited to the amount of such excess received by it. To the extent the Grantor possesses any interest in any amount which would otherwise be payable to the Holders under this Paragraph, to the full extent permissible by law, the Grantor hereby assigns its interest in such amount to said mortgage holder for payment to the Holders.
- 18. Notices.** Except for any notice required under applicable law to be given in a different manner, any notice, request or other communication which any party hereto may be required or may desire to give hereunder shall be made in writing, and shall be deemed to have been properly given if hand

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delivered, if sent by recognized overnight courier, receipt confirmed, or if mailed by United States registered or certified mail, postage prepaid, return receipt requested, addressed to the parties at their respective addresses first set forth above, or to such other address as the party to be served with notice may have furnished in writing to the party seeking or desiring to serve notice as a place for the service of notice. A notice sent by any of the foregoing methods shall be deemed given upon documented receipt or refusal. The Holders shall use reasonable efforts to send courtesy copies of all notices sent to the Grantor to the Grantor's investor at the address set forth below, provided that any failure to send such a courtesy copy shall not affect the validity of any notice: BF Santander 2017, Limited Partnership, c/o Boston Financial Investment Management, LP, 101 Arch Street, 13th Floor, Boston, Massachusetts 02110, Attention: Morse Apartments – Asset Management, with a copy to Holland & Knight LLP, 10 St. James Avenue, 12th Floor, Boston, Massachusetts 02116, Attention: Dayna M. Hutchins, Esq.

19. Successors and Assigns; No Third-Party Beneficiaries. This Restriction shall be binding upon the Grantor and its successors and assigns, and shall burden the Property as specified herein. This Restriction shall also be binding upon the Holders, and shall inure to the benefit of their successors and assigns, provided that a Holder shall not voluntarily assign its rights hereunder unless (a) such Holder believes in good faith that it is no longer reasonably capable of performing its duties hereunder, and (b) such assignment shall be to a governmental body or an entity of a similar character and purposes to such Holder which is reasonably capable of performing such duties hereunder. DHCD shall also be a Holder hereunder and may act at any time in its own name to pursue any rights and remedies of a Holder hereunder.

20. Severability; Construction. All rights, powers and remedies provided herein may be exercised only to the extent that exercise thereof does not violate any applicable law, and are intended to be limited to the extent necessary so that they will not render this Restriction invalid, unenforceable or not entitled to be recorded, registered or filed under applicable law. If any provision or part hereof shall be affected by such holding, the validity of other provisions of this Restriction and of the balance of any provision held to be invalid, illegal or unenforceable, in part only, shall in no way be affected thereby, and this Restriction shall be construed as if such invalid, illegal, or unenforceable provision or part hereof had not been contained herein. In the event of any actual or potential inconsistency between the terms of this Restriction and any of the Statute and/or the Regulations, such terms shall be interpreted, to the extent reasonably possible, so as to reconcile any such inconsistencies. If such provisions cannot reasonably be reconciled, the provisions of the Statute, the Regulations and this Restriction, in the foregoing order of priority, shall control.

21. Governing Law. This Restriction shall be governed by the laws of The Commonwealth of Massachusetts. Inasmuch as the restrictions contained herein have been imposed upon the Property in part to satisfy requirements of various governmental bodies referred to herein, including, without limitation, DHCD, the restrictions contained herein are intended to be construed as a restriction held by a governmental body with the benefit of Section 26 of Chapter 184 of the Massachusetts General Laws as existing as of the date hereof, such that the restrictions contained herein shall not be limited in duration by any rule or operation of law, but rather shall run for the full term thereof.

22. Recording. The Grantor, at its cost and expense, shall cause this Restriction and any amendment hereto to be duly recorded with the Registry of Deeds (and if necessary or appropriate,

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re-recorded), shall pay or ^{A N}cause to be paid all recording, filing, or other taxes, fees and charges and shall comply ^{O F F I C I A L}with all such statutes and regulations ^{O F F I C I A L}as may be required by law in order to establish, preserve and ^{C O P Y}protect the ability of the Holders and their successors and assigns to enforce this Restriction.

23. Further Assurances. Each Holder is authorized to record or file any notices or instruments appropriate to assuring the enforceability of this Restriction; and the Grantor on behalf of itself and its successors and assigns appoints each Holder its attorney-in-fact to execute, acknowledge and deliver any such instruments on its behalf. Without limiting the foregoing, the Grantor and its successors and assigns agrees to execute any such instruments upon request. The benefits of this Restriction shall be in gross and shall be assignable by any Holder. The Grantor and the Holders intend that the restrictions arising hereunder take effect upon the date hereof, and to the extent enforceability by any person ever depends upon the approval of governmental officials, such approval when given shall relate back to the date hereof regardless of the date of actual approval or the date of filing or recording of any instrument evidencing such approval.

24. Counterparts. This Restriction may be executed in several counterparts, each of which when executed and delivered shall be an original, but all of which together shall constitute one instrument. In making proof of this Restriction, it shall not be necessary to produce or account for more than one such counterpart executed by the party against whom enforcement of this Restriction is sought.

25. Incorporation of Exhibits and Riders. Any and all exhibits and riders attached hereto or otherwise referenced herein are hereby incorporated by reference, the same as if each were fully set forth herein.

26. Amendment; Waiver. This Restriction may not be amended, nor may any obligation hereunder be waived or released, without first obtaining the written consent of all Holders.

27. Ground Lessor Assent. The Grantor is the tenant under a Ground Lease of the Property from Brookline Housing Authority (the "Ground Lessor") as landlord and fee owner, dated as of the date hereof, notice of which is recorded with the Norfolk Registry of Deeds herewith. The Ground Lessor hereby joins in the grant of this Restriction and agrees, for itself and its successors and assigns, to be bound by all of the terms and conditions hereof for the term of this Restriction, whether or not said Ground Lease is terminated for any reason, to the same extent as if the Ground Lessor were the named Grantor hereunder.

No documentary stamps are required as this Restriction is not being purchased by the Holders.

Executed under seal as of the date set forth above.

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90 LONGWOOD LLC
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By: 90 LONGWOOD MANAGER LLC, its Managing
Member

By:

Patrick Dober

Its: Authorized Signatory

COMMONWEALTH OF MASSACHUSETTS

Suffolk County, ss.

On this 15th day of July, 2020, before me, the undersigned notary public, personally appeared Patrick Dober, proved to me through satisfactory evidence of identification, which was (a current driver's license) (a current U.S. passport) (my personal knowledge of the identity of the principal), to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily, as Authorized Signatory of 90 Longwood Manager LLC, for its stated purpose as the voluntary act of 90 Longwood LLC.

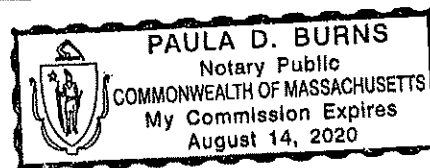
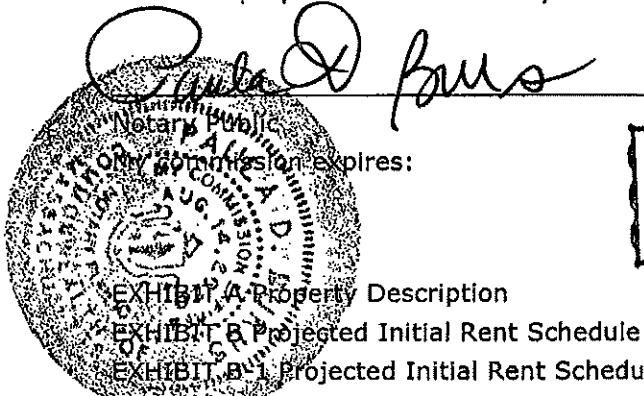


EXHIBIT A Property Description

EXHIBIT B Projected Initial Rent Schedule for Units Other Than Home Assisted Units

EXHIBIT B.1 Projected Initial Rent Schedule for \ Home Assisted Units

EXHIBIT C Initial Affordability Matrix

EXHIBIT D Additional Definitions

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BROOKLINE HOUSING AUTHORITY

By:

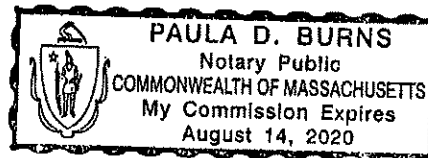
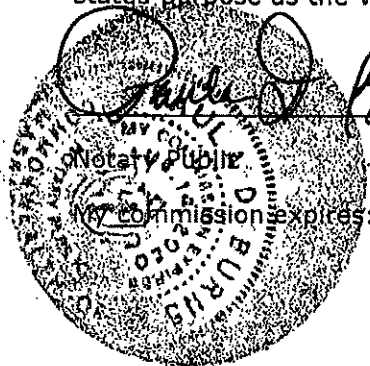
Patrick Dober

Executive Director

COMMONWEALTH OF MASSACHUSETTS

Suffolk County, ss.

On this 15th day of JULY, 2020, before me, the undersigned notary public, personally appeared Patrick Dober, proved to me through satisfactory evidence of identification, which was (a current driver's license) (a current U.S. passport) (my personal knowledge of the identity of the principal), to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily, as Executive Director of Brookline Housing Authority, for its stated purpose as the voluntary act of Brookline Housing Authority.



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EXHIBIT A : PROPERTY DESCRIPTION	
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Real property, with any buildings and improvements thereon, in the Town of Brookline, County of Norfolk, Commonwealth of Massachusetts, described as follows:

PARCEL 1:

SOUTHERLY	By Longwood Avenue, eighty-five (85) feet;
WESTERLY	By land now or formerly of Teresa M. Kennedy, one hundred and seventy-three and 73/100 (173.73) feet;
NORTHERLY	By land now or formerly of Louise S. Fuller, eighty-five (85) feet; and
EASTERLY	By land now or formerly of Jessie W. Cutler, one hundred eighty (180) feet.

All of said boundaries are determined by Land Court to be located as shown on a plan drawn by Henry F. Bryant & Son, Engineers, dated October 29, 1923, as modified and approved by said Court, filed in the Land Registration Office No. 9842A, a copy of a portion of which is filed in Norfolk Registry District with Certificate No. 7105, Page 36.

PARCEL 2:

SOUTHERLY	By Longwood Avenue, one hundred and 04/100 (100.04) feet;
WESTERLY	Partly by land now or formerly of Martha D. Seaver and partly by land now or formerly of Charles H. Stearns and others, one hundred and sixty-six and 35/100 (166.35) feet; and
NORTHERLY	By land formerly of said Charles H. Stearns, et al., one hundred one and 16/100 (101.16) feet; and
EASTERLY	By land now or formerly of Addison Boyden, Parcel 1 hereinbefore described, one hundred seventy-three and 73/100 (173.73) feet, or however otherwise bounded, measured or described and by any or all of said measurements more or less.

The granted premises are shown as Lot Two (2) on a plan made by Alexis H. French, Surveyor, dated May 23, 1881, recorded with Norfolk Deeds, Book 528, Page 468 and are believed to contain seventeen thousand, eighty five (17,085) square feet.

EXHIBIT B : PROJECTED INITIAL RENT SCHEDULE FOR UNITS OTHER THAN HOME ASSISTED UNITS

(Rents assume that the Grantor pays all utilities. An allowance for any utilities paid by tenants must be deducted from these rents. Utility allowances are available from the local housing authority.)

UNIT TYPE	INCOME LEVEL				
	EXTREMELY LOW INCOME (30%)	VERY LOW INCOME (50%)	LOW INCOME (60%)	MODERATE INCOME (80%)	HIGH MODERATE INCOME (100%)
SRO	\$671.00	\$1,120.00	\$1,344.00	\$1,685.00	\$2,240.00
STUDI OS	\$671.00	\$1,120.00	\$1,344.00	\$1,685.00	\$2,240.00
1-BR	\$719.00	\$1,200.00	\$1,440.00	\$1,805.00	\$2,400.00
2-BR	\$863.00	\$1,440.00	\$1,728.00	\$2,166.00	\$2,880.00
3-BR	\$997.00	\$1,663.00	\$1,995.00	\$2,502.00	\$3,326.00
4-BR	\$1,112.00	\$1,855.00	\$2,226.00	\$2,791.00	\$3,710.00

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EXHIBIT B-1: PROJECTED INITIAL RENT SCHEDULE FOR HOME ASSISTED UNITS

(Rents assume that the Grantor pays all utilities. An allowance for any utilities paid by tenants must be deducted from these rents. Utility allowances are available from the local housing authority.) For Studios without both a kitchen and bathroom (i.e. an SRO), the rent will be 75% of the Fair Market Rent for a Studio.

UNIT TYPE	INCOME LEVEL	
	LOW INCOME	
STUDIOS	\$1,436.00	
1-BR	\$1,540.00	
2-BR	\$1,849.00	
3-BR	\$2,129.00	
4-BR	\$2,355.00	

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EXHIBIT C: INITIAL AFFORDABILITY MATRIX

		TERM	INCOME CATEGORY				
			HIGH MODERATE INCOME (100% AMI)	MODERATE INCOME (80% AMI)	LOW INCOME (60% AMI)	VERY LOW INCOME (50% AMI)	EXTREMELY LOW INCOME (30% AMI)
BROOKLINE HOME		Fifteen (15) years	0 1-BR	0 1-BR	3 1-BR	0 1-BR	0 1-BR
LOCAL AHT		Perpetual	98 1-BR	0 1-BR	0 1-BR	0 1-BR	0 1-BR
COMPOSITE			95 1-BR	0 1-BR	3 1-BR	0 1-BR	0 1-BR

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EXHIBIT D: ADDITIONAL DEFINITIONS O F F I C I A L
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Following are additional definitions used in this Affordable Housing Restriction:

"Area" shall mean Boston-Cambridge-Quincy, MA-NH HMFA.

"Bedroom Adjusted AMI" applicable to a Unit shall mean the median income for the Area, with adjustments for the number of bedrooms in such Unit, as determined from time to time by HUD pursuant to Section 8 of the United States Housing Act of 1937, as amended. For purposes of adjustments for the number of bedrooms in a Unit, a Unit that does not have a separate bedroom is assumed to be occupied by one individual and a Unit with one or more separate bedrooms is deemed assumed to be occupied by 1.5 individuals for each bedroom (with the total number of individuals rounded up).

"Extremely Low Income Family" shall mean a Family whose Household Income is less than or equal to thirty percent (30%) of the Family-size Adjusted AMI.

"Fair Market Rent" shall mean the fair market rent in the Area for a comparably-sized dwelling as established by HUD under regulations promulgated at 24 C.F.R. §888.11 (or successor regulations), minus a monthly allowance established by the Holders for any utilities and services (excluding telephone) to be paid by the occupying Family.

"Family" shall have the meaning set forth in 24 C.F.R. §5.403 (or any successor regulation). Notwithstanding the foregoing, a household comprised of a full-time student or students shall not qualify as a Family except as permitted under the federal low-income housing tax credit program pursuant to Section 42(i)(3)(D) of the Internal Revenue Code of 1986, as amended.

"Family-size Adjusted AMI" shall mean the median income for the Area, adjusted for family size, as determined from time to time by HUD pursuant to Section 8 of the United States Housing Act of 1937, as amended.

"Grantor" shall mean the Grantor named on the first page hereof or any successor or assign thereof permitted under Section 8 of this Restriction, including any party holding ownership interests in or with respect to the Property.

"Guidelines" shall mean the Local AHT Guidelines and the HOME Guidelines.

"High Moderate Income Family" shall mean a Family whose Household Income is less than or equal to one-hundred percent (100%) of the Family-size Adjusted AMI.

"Holder" shall mean each of DHCD and the Town, or, as applicable, each successor or assign of the foregoing and "Holders" shall mean all of the foregoing parties, collectively.

"HOME Guidelines" shall mean the guidelines issued by DHCD regarding the HOME Program, as the same may be amended, supplemented, replaced or otherwise modified from time to time.

"HOME Program" shall mean the federal HOME Investment Partnerships Program under which the Town makes loans available to sponsors of certain types of affordable housing.

"HOME Regulations" shall mean 24 C.F.R. Part 92.

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"Household Income" shall mean a Family's adjusted annual income determined in the manner set forth in 24 C.F.R. § 5.609 (or any successor regulations).
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"HUD" shall mean the United States Department of Housing and Urban Development.

"Improvements" shall mean the building or buildings on the Property presently containing, or after completion of the planned construction to contain, the number of Units indicated on the first page hereof, and all other authorized buildings, structures and improvements located on the Property from time to time, all equipment and fixtures therein, and any authorized repair, improvement, reconstruction, restoration, renovation, or replacement of a capital nature thereto or otherwise on the Property.

"Loan" shall mean collectively, the loans for the Project being provided to the Grantor under the Programs.

"Loan Documents" shall mean collectively, the documents evidencing and securing the Loan.

"Local AHT Guidelines" shall mean the guidelines issued by the Town of Brookline regarding the Local AHT Program, as the same may be amended, supplemented, replaced or otherwise modified from time to time.

"Local AHT Program" shall mean the Affordable Housing Trust Fund loan program established by the Town of Brookline under the Local AHT Statute under which the Town of Brookline makes loans available to sponsors of certain types of affordable housing.

"Local AHT Statute" shall mean the Article 3.13 of the Town of Brookline General By-Law, as the same may be amended, supplemented, replaced or otherwise modified from time to time.

"Local AHT Regulations" shall mean the regulations relating to the Local AHT Program promulgated by the Town of Brookline, as the same may be amended, supplemented, replaced or otherwise modified from time to time.

"Low Income Family" shall mean a Family whose Household Income is less than or equal to sixty percent (60%) of the Family-size Adjusted AMI.

"Moderate Income Family" shall mean a Family whose Household Income is less than or equal to eighty percent (80%) of the Family-size Adjusted AMI.

"Over-income Rent" shall mean, for a particular over-income Family, a monthly rent equal to the lesser of (x) the maximum amount payable by the Family under the laws of the municipality in which the Property is located or of The Commonwealth of Massachusetts, (y) one-twelfth of thirty percent (30%) of the Family's Household Income as recertified annually or (z) the comparable market rent for the Family's Unit, but in no event lower than the rent such Family was paying prior to becoming an over-income Family.

"Permitted Encumbrances" shall mean those encumbrances on the Property identified in the mortgage granted to the Holders of even or near date herewith.

"Permitted Uses" shall mean use of the Improvements for the number of rental Units indicated on the first page hereof, including the number of Restricted Units indicated on the first page hereof. Such Permitted Uses shall include activities and/or services of a nature to benefit the Residents of the Restricted Units.

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"Programs" shall mean the HOME Program and the Local AHT Program.

"Property" shall mean that certain parcel or parcels of land located at the Property Address Indicated on the first page hereof and more particularly described in Exhibit A attached hereto, together with all Improvements thereon.

"Registry of Deeds" shall mean the Norfolk Registry of Deeds.

"Regulations" shall mean the HOME Regulations and the Local AHT Regulations.

"Residents" shall mean the lawful occupants of the Units.

"Restricted Unit" shall mean a Unit required by the terms hereof to be rented to a High Moderate Income Family or a Low Income Family.

"SRO Unit" shall mean a single-room (zero bedroom) Unit intended for occupancy by a single eligible Resident and that may contain partial food preparation and/or sanitary facilities.

"Statute" shall mean the Local AHT Statute.

"Studio Unit" shall mean a single-room (zero bedroom) Unit that contains a complete kitchen and bathroom.

"Unit" shall mean any residential unit located on the Property.

"Very Low Income Family" shall mean a Family whose Household Income is less than or equal to fifty percent (50%) of the Family-size Adjusted AMI.

AMENDMENT TO AFFORDABLE HOUSING RESTRICTION

This Amendment to Affordable Housing Restriction (the “Amendment”) is entered into as of July ____ 2026 by and among 90 Longwood LLC, a Massachusetts limited liability company, with an address of 90 Longwood Avenue, Brookline, Massachusetts 02446 (the “Grantor”); The Commonwealth of Massachusetts, acting by and through the Executive Office of Housing and Livable Communities (f/k/a the Department of Housing and Community Development) having an address at 100 Cambridge Street, Suite 300, Boston, Massachusetts 02114 (“EOHLC”); and The Town of Brookline, Massachusetts, acting by and through its Select Board, acting by and through the Department of Planning and Community Development, having an address of Brookline Town Hall, c/o Director of Planning and Community Development, 333 Washington Street, Room 309, Brookline, Massachusetts 02445 (the “Town” and, together with EOHLC, the “Holders”), and amends that certain Affordable Housing Restriction dated as of July 30, 2020 granted by Grantor in favor of the Holders and recorded with the Norfolk County Registry of Deeds in Book 38158, Page 429 (the “AHR”).

BACKGROUND

A. Grantor granted the AHR to the Holders in order to restrict the affordability of certain units in Grantor’s project known as Morese Apartments located at 90 Longwood Avenue, Brookline, Massachusetts (the “Property”).

B. Initially, the Property contained 98 Restricted Units and 1 friendly neighbor/manager Unit.

C. Grantor desires to make the Friendly Neighbor Unit a Restricted Unit and to amend the AHR to increase the number of Restricted Units accordingly .

C. Grantor and the Holders have agreed to amend the AHR to provide for such increase in the number of Restricted Units as more fully set forth in this Amendment; and

D. Capitalized terms used herein but not defined shall have the meanings ascribed to them in the AHR.

AMENDMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Grantor and the Grantees agree as follows:

1. Unit Summary Table. The Unit Summary Table on the first page of the AHR is hereby deleted and the following new Unit Summary Table is substituted therefor:

GRANTOR:	90 Longwood LLC
PROPERTY NAME:	Morse Apartments
TOTAL NUMBER OF UNITS:	99
TOTAL NUMBER OF RESTRICTED UNITS:	99
NUMBER OF HIGH MODERATE INCOME UNITS (100% AMI): ¹	96
NUMBER OF MODERATE INCOME UNITS (80% AMI):	0
NUMBER OF LOW INCOME UNITS (60% AMI):	3
NUMBER OF VERY LOW INCOME UNITS (50% AMI):	0
NUMBER OF EXTREMELY LOW INCOME UNITS (30% AMI):	0
NUMBER OF HOME ASSISTED UNITS:	3
PROPERTY ADDRESS:	90 Longwood Avenue Brookline, Massachusetts
TERM:	Perpetual

2. Use Restriction. Section 2 of the AHR is hereby deleted and the following new Section 2 is substituted therefor:

Use Restrictions. The Property shall be reserved and used for the Permitted Uses and for no other purpose. All of the Units of the Property shall be Restricted Units. Three of the Restricted Units shall be deemed to be assisted under the HOME Program ("HOME Assisted Units") provided that certain of the provisions of the HOME Program may cease to be effective 15 years after the completion of the Project (the "HOME Term") as more fully set forth in Section 5.2 of the Loan Agreement between Grantor as Borrower and the Town. Such HOME Assisted Units may also constitute Restricted Units with respect to other programs hereunder. As of the date hereof,

¹Numbers in parentheses are the percentage of median income for the Area (AMI, as defined below), adjusted for family size, as determined from time to time by HUD (as defined below) pursuant to Section 8 of the United States Housing Act, as amended.

the Property has or is expected to have the benefit of a contract for 69 project-based vouchers under Section 8 of the United States Housing Act of 1937, as amended, concerning units converted to Section 8 assistance under the U.S. Housing and Urban Development's Rental Assistance Demonstration Program, and a contract for 29 project-based vouchers under Section 8 of the United States Housing Act of 1937, as amended, concerning the units converted to Section 8 assistance under Section 18 of the United States Housing Act of 1937 and de minimis disposition (together, the "Section 8 Contract"). The Property also shall include at least five (5) Units accessible to individuals with mobility impairments and at least two (2) additional Units accessible to individuals with sensory impairments. Each Unit shall contain complete facilities for living, sleeping, eating, cooking and sanitation that are to be used on other than a transient basis. Each Unit shall meet the housing quality standards set forth in the regulations of HUD at 24 C.F.R. §982.401 or any successor thereto, the accessibility requirements at 24 C.F.R. Part 8 or any successor thereto (which implement Section 504 of the Rehabilitation Act of 1973), and, if applicable, the design and construction requirements of 24 C.F.R. §100.205 or any successor thereto (which implement the Fair Housing Act). The Restricted Units shall be of comparable quality to the other Units at the Property. Throughout the term hereof, the Grantor shall maintain the Property and the Improvements in good, safe and habitable condition in all respects and in full compliance with all applicable laws, by-laws, rules and regulations of any governmental (or quasi-governmental) body with jurisdiction over matters concerning the condition of the Property.

3. Occupancy Restrictions for High Moderate Income Units. Section 3(A) of the AHR is hereby deleted and the following new Section 3(A) is substituted therefor:

High Moderate Income Units. At least 96 of the Units of the types shown on Exhibit C attached hereto shall be leased exclusively to High Moderate Income Families ("High Moderate Income Units"). The monthly rent charged to a Family occupying a High Moderate Income Unit shall be one-twelfth of thirty percent (30%) of one-hundred percent (100%) of the Bedroom Adjusted AMI, minus, if applicable, an allowance established by the Holders for any utilities and services (excluding telephone) to be paid by the occupying Family. A Family who resides in a Restricted Unit, who qualified as a High Moderate Income Family at the time of such Family's initial occupancy at the Property and whose Household Income exceeds one-hundred percent (100%) of the Family-size Adjusted AMI, shall, from and after the expiration of the then-current term of such Family's lease, no longer be treated as an income-qualified Family and (i) until such time as the Property again has the required number of income-qualified Families at all income levels hereunder, must pay as monthly rent the Over-income Rent and (ii) once the Property again has the required number of income-qualified Families at all income levels hereunder, such Family's Unit shall, from and after the expiration of the then-current term of such Family's lease, no longer be deemed a Restricted Unit hereunder.

4. Exhibit C. Exhibit C of the AHR is hereby deleted and the following new Exhibit C attached hereto is substituted therefor:

3. Ratification. Except as expressly amended herein, the AHR is hereby ratified and confirmed.

4. Governing Law. This Amendment shall be governed by the laws of The Commonwealth of Massachusetts.

[signature pages follow]

Executed under seal as of the _____ day of July, 2026.

90 LONGWOOD LLC, a Massachusetts limited
liability company

By: _____

Name: Benjamin S. Stone

Title: Authorized Signatory

COMMONWEALTH OF MASSACHUSETTS

_____ County, ss.

On this _____ day of July 2026, before me, the undersigned notary public, personally appeared Benjamin S. Stone, the Authorized Signatory of 90 Longwood LLC, proved to me through satisfactory evidence of identification, which was (a current driver's license) (a current U.S. passport) (my personal knowledge of the identity of the principal), to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily, in such capacity, for its stated purpose.

Notary Public

My commission expires:

THE COMMONWEALTH OF
MASSACHUSETTS ACTING BY AND
THROUGH THE EXECUTIVE OFFICE OF
HOUSING AND LIVABLE COMMUNITIES

By: _____
Name:
Title:

COMMONWEALTH OF MASSACHUSETTS

Suffolk County, ss.

On this _____ day of July 2026, before me, the undersigned notary public, personally appeared _____, the _____ of The Commonwealth of Massachusetts acting by and through the Executive Office of Housing and Livable Communities, proved to me through satisfactory evidence of identification, which was (a current driver's license) (a current U.S. passport) (my personal knowledge of the identity of the principal), to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily, in such capacity, for its stated purpose, as the voluntary act of such entity.

Notary Public
My commission expires:

TOWN OF BROOKLINE, MASSACHUSETTS,
ACTING BY AND THROUGH ITS SELECT
BOARD, ACTING BY AND THROUGH THE
DEPARTMENT OF PLANNING AND
COMMUNITY DEVELOPMENT

By: _____
Name:
Title:

COMMONWEALTH OF MASSACHUSETTS

Norfolk County, ss.

On this _____ day of July 2026, before me, the undersigned notary public, personally appeared _____, the _____ of The Town of Brookline, acting by and through its Select Board, acting by and through the Department of Planning and Community Development, proved to me through satisfactory evidence of identification, which was (a current driver's license) (a current U.S. passport) (my personal knowledge of the identity of the principal), to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily, in such capacity, for its stated purpose, as the voluntary act of such entity.

Notary Public
My commission expires:

EXHIBIT C: INITIAL AFFORDABILITY MATRIX

		INCOME CATEGORY				
NUMBER/SIZE OF UNITS REQUIRED BY	TERM	HIGH MODERATE INCOME (100% AMI)	MODERATE INCOME (80% AMI)	LOW INCOME (60% AMI)	VERY LOW INCOME (50% AMI)	EXTREMELY LOW INCOME (30% AMI)
BROOKLINE HOME	Fifteen (15) years	0 1-BR	0 1-BR	3 1-BR	0 1-BR	0 1-BR
LOCAL AHT	Perpetual	99 1-BR	0 1-BR	0 1-BR	0 1-BR	0 1-BR
COMPOSITE		96 1-BR	0 1-BR	3 1-BR	0 1-BR	0 1-BR

To: Brookline Select Board
From: Gillian Jackson, Arts Coordinator
Date: July 31, 2026
Subject: Donations to the Brookline Commission for the Arts

Please add the following to the August 11, 2026 Select Board agenda:

Check donations made to the Brookline Commission for the Arts as follows:

Lauren Mistretta & Andrew Dean in the amount of \$600

Lawrence A Kozinn in the amount of \$40

Puppet Showplace Theater in the amount of \$20

Gillian Jackson
BCA Administrator/Arts Coordinator

Memorandum

To: Brookline Select Board

From: Tanya Hong, Assistant Director for Operations

Date: Aug 5, 2026

Re: **Gift Donation from the Brookline Community Foundation and The 84 Movement Grant**

CC: John Kleschinsky, Director of PHHS
Chas Carey, Town Administrator
Melissa Goff, Deputy Town Administrator

Select Board Members,

The Department of Public Health & Human Services respectfully requests the Select Board's authorization to accept the following gifts:

- A \$200 monetary donation from the Brookline Community Foundation to support Brookline Medical Reserve Corps staff who provided sheltering services on the day of the 2026 Boston Marathon.
- A \$300 gift card awarded through The 84 Movement Grant in recognition of the successful management of the grant.

There is no required Town matching contribution or financial obligation associated with accepting these donations.



BROOKLINE

DEPARTMENT OF PUBLIC WORKS

Erin Chute
Town Hall, 4th Floor
333 Washington St.
Brookline, MA 02245
617-730-2156

Memorandum

To: Select Board
Chas Carey, Town Administrator

From: Erin Chute, Commissioner of Public Works
Milee Pradhan, Director of Parks and Open Space

Date: July 24, 2026

Re: PW/27-02 Skyline Park Maintenance

Cc: Dan Murphy, Director of Engineering and Transportation

On June 3, 2026 proposals for "Skyline Park Maintenance", Contract No. PW/27-02, were publicly opened and read. Six bids were received, the lowest three are as follows:

Handy Hub Landscaping, LLC	\$51,912.36 (withdrawn on 7/21/26)
Park Landscape Associates, Inc.	\$62,178.00
Perez Landscaping, Inc.	\$63,930.00

The work in this contract consists of landscape maintenance and snow removal.

Public Works recommends that this contract be awarded to Park Landscape Associates, Inc. of Hyde Park, MA, in the amount of \$62,178.00.

Town Of Brookline

Contract Coding Approval Form

Department: Public Works/Engineering Division

Vendor Name: Park Landscape Associates, Inc.

Vendor Number: 7449 Amount of Contract: \$62,178.00

Contract #: PW/27-02 Skyline Park Maintenance

Purpose of Contract:

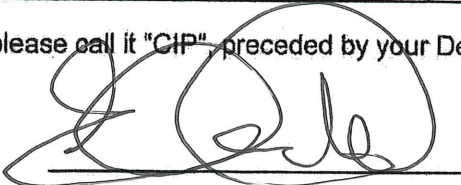
Description: Landscape maintenance and snow removal.

Coding:

Org #	Org Name *	Acct #	Acct Name	Amount
46004650		523599		\$62,178.00

* For "WS" or "C" accounts, please call it "CIP" preceded by your Dept (e.g., 4998WS08 would be "DPW CIP").

Department Head:



Date

7/29/26

Comptroller and Purchasing Approvals

Funds Available/Codes Correct



Comptroller

7/29/26

Date Approved by Comptroller

Complies with Appropriate Procurement Law
(MGL ch 149, ch 30 30 30M, or ch 30B)



Purchasing

7/29/26

Date Approved by Purchasing



BROOKLINE

DEPARTMENT OF PUBLIC WORKS

Erin Chute

Town Hall, 4th Floor
333 Washington St.
Brookline, MA 02245
617-730-2156

Memorandum

To: Select Board
Chas Carey, Town Administrator

From: Erin Chute, Commissioner of Public Works
Milee Pradhan, Director of Parks and Open Space

Date: July 27, 2026

Re: PW/27-04 School Grounds Maintenance 1

Cc: Dan Murphy, Director of Engineering and Transportation

On June 3, 2026 proposals for "School Grounds Maintenance 1", Contract No. PW/27-04, were publicly opened and read. Five bids were received, the lowest three are as follows:

Green Designs Landscaping, Inc.	\$69,517.50	(withdrawn on 7/24/26)
Park Landscape Associates, Inc.	\$87,384.21	
Ciro Carbone & Sons, Inc.	\$98,770.00	

The work in this contract consists of landscape maintenance and snow removal services at Lawrence School, Lincoln School, Pierce School, Old Lincoln School, and the High School Complex.

Public Works recommends that this contract be awarded to Park Landscape Associates, Inc. of Hyde Park, MA, in the amount of \$87,384.21.

Town Of Brookline

Contract Coding Approval Form

Department: Public Works/Engineering Division

Vendor Name: Park Landscape Associates, Inc.

Vendor Number: 7449 Amount of Contract: \$87,384.21

Contract #: PW/27-04 School Grounds Maintenance 1

Purpose of Contract:

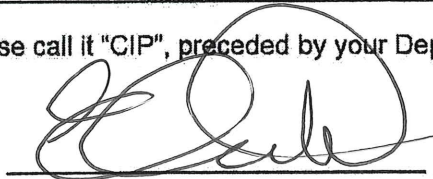
Description: Landscape maintenance of school grounds including weeding, mowing, trimming, raking, edging, pruning sweeping, and snow removal
Additional hourly maintenance at various locations including pruning, raking, weeding, mowing, trimming, seeding, incidental planting, leaf removal and disposal, and snow removal.

Coding:

Org #	Org Name *	Acct #	Acct Name	Amount
46004651		523599		\$80,384.21
42004230		524058		\$7,000

* For "WS" or "C" accounts, please call it "CIP", preceded by your Dept (e.g., 4998WS08 would be "DPW CIP").

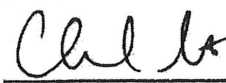
Department Head:



Date 7/29/26

Comptroller and Purchasing Approvals

Funds Available/Codes Correct

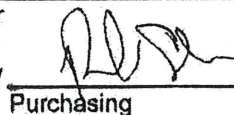


Comptroller

7/29/26

Date Approved by Comptroller

Complies with Appropriate Procurement Law
(MGL ch 149, ch 30 30 30M, or ch 30B)



Purchasing

7/29/26

Date Approved by Purchasing



BROOKLINE

DEPARTMENT OF PUBLIC WORKS

Erin Chute,
Town Hall, 4th Floor
333 Washington St.
Brookline, MA 02245
617-730-2156

Memorandum

To: Select Board
Chas Carey, Town Administrator

From: Erin Chute, Commissioner of Public Works
Milee Pradhan, Director of Parks and Open Space

Date: July 27, 2026

Re: PW/27-05 School Grounds Maintenance 2

Cc: Dan Murphy, Director of Engineering and Transportation

On June 3, 2026 proposals for "School Grounds Maintenance 2", Contract No. PW/27-05, were publicly opened and read. Five bids were received, the lowest three are as follows:

Green Designs Landscaping, Inc.	\$75,457.50	(withdrawn on 7/24/26)
Park Landscape Associates, Inc.	\$96,789.21	
Ciro Carbone & Sons, Inc.	\$118,900.00	

The work in this contract consists of landscape maintenance and snow removal.

Public Works recommends that this contract be awarded to Park Landscape Associates, Inc. of Hyde Park, MA, in the amount of \$96,789.21.

Town Of Brookline

Contract Coding Approval Form

Department: Public Works/Engineering Division

Vendor Name: Park Landscape Associates, Inc.

Vendor Number: 7449 Amount of Contract: \$96,789.21

Contract #: PW/27-05 School Grounds Maintenance 2

Purpose of Contract:

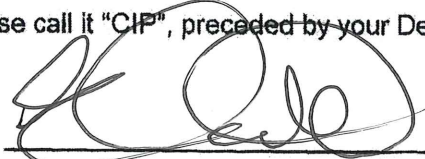
Description: Landscape maintenance of school grounds including weeding, mowing, trimming, raking, edging, pruning sweeping, and snow removal
Additional hourly maintenance at various locations including pruning, raking, weeding, mowing, trimming, seeding, incidental planting, leaf removal and disposal, and snow removal.

Coding:

Org #	Org Name *	Acct #	Acct Name	Amount
46004651		523599		\$77,814.21
42004230		524058		\$9,000.00
4925K073	DPWCIP	6P0044		\$9,975.00

* For "WS" or "C" accounts, please call it "CIP", preceded by your Dept (e.g., 4998WS08 would be "DPW CIP").

Department Head:

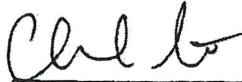


Date

7/29/20

Comptroller and Purchasing Approvals

Funds Available/Codes Correct


Comptroller

7/29/20
Date Approved by Comptroller

Complies with Appropriate Procurement Law
(MGL ch 149, ch 30 30 30M, or ch 30B)


Purchasing

7/29/20
Date Approved by Purchasing

Memorandum

To: Select Board
Chas Carey, Town Administrator
From: Dan Murphy, Director of Engineering and Transportation
Date: August 5, 2026
Re: PW/26-25 Hammond/Woodland Signal and Corridor Improvements
Cc: Erin Chute, Commissioner of Public Works

On July 15, 2026 proposals for “Hammond Street Intersection, Signal and Corridor Improvements from Newton Street to Boylston Street”, Contract No. PW/26-25, were publicly opened and read. Four bids were received, the lowest three are as follows:

J. Marchese & Sons, Inc.	\$3,353,174.00
Charles Contracting Co., Inc.	\$3,536,380.00
I.W. Harding Construction Co., Inc.	\$3,757,318.50

The work in this contract consists of a traffic signal installation at Woodland Road, road diet and corridor improvements from Newton Street to Boylston Street.

Public Works recommends that the Select Board award and execute the contract in the amount of \$3,353,174.00 to J. Marchese & Sons, Inc. of Everett, MA.

This project is funded with the Hammond and Woodland Signal and Road Diet Project capital funding and Road Street Rehabilitation capital funds.

Project History

The Hammond Street at Woodland Road Traffic Signal and Road Diet Project originated from a Town Meeting approved study of safety and operational improvements at this high-crash intersection. The Town held an initial public design meeting on November 9, 2016, and presented the completed intersection improvement study to the Transportation Board on March 19, 2018. The study evaluated several alternatives and identified a traffic signal combined with a road diet as the preferred alternative to address high vehicle speeds, poor sight distance, long pedestrian crossings, school-related traffic, and delays on Woodland Road. Updated preliminary traffic signal plans and the recommended design were subsequently presented to the Transportation Board on September 23, 2019.

The project continued through engineering design and was included in the Town's FY2025 Capital Improvement Program. On May 29, 2024, Annual Town Meeting authorized \$1.95 million for construction of the traffic signal and road diet improvements. The project included a new traffic signal at Hammond Street and Woodland Road, repaving and restriping of Hammond Street, removal of one general-purpose travel lane in each direction, a center turn lane, and painted buffered bicycle lanes between the Soule Recreation Center driveway and Brookline Fire Station No. 6. The road diet starts on the southerly side of Heath Street traffic signal to the north and ends at the Horace James rotatory to the south.

During 2024 and 2025, gas and Town water utility work was underway along the corridor, requiring the roadway and traffic signal project to be placed on hold until the underground utility work could be completed. Construction of the transportation improvements was originally anticipated to begin in early 2025 but was rescheduled due to these utility conflicts. This project was also originally intended to be a maintenance overlay with a Bonded Wearing Course, but since originally planned, was modified for a full mill and overlay and added some new locations for granite curb installation new HMA berm installed along all remaining curb lines. At the request of the Parks and Open Space Division and the Recreation Department, the project scope was also expanded to include sidewalk improvements connecting Hammond Street to the Town Golf Course, improving pedestrian access and connectivity between the surrounding neighborhood and recreational facilities. Paving will extend to the limits of the Boylston Street (Route 9) limits. Following completion of the necessary utility coordination and construction this project was advanced into project implementation and procurement.

Town Of Brookline

Contract Coding Approval Form

Department: Public Works/Engineering Division

Vendor Name: J. Marchese & Sons, Inc.

Vendor Number: _____ Amount of Contract: \$3,353,174.00

Contract #: PW/26-25

Purpose of Contract:

Description: <u>Traffic signal installation at Woodland Road, road dlet and corridor improvements on Hammond Street from Boylston Street to Horace James Circle</u>

Coding:

Org #	Org Name *	Acct #	Acct Name	Amount
4997C239		6H0034	Hammond	\$1,455,500.00
4924K058		6H0026	Street Rehab	\$1,805,076.00
4926K058		6H0026	Street Rehab	\$92,598.00

* For "WS" or "C" accounts, please call it "CIP" preceded by your Dept (e.g., 4998WS08 would be "DPW CIP").

Department Head: _____

Date 7/29/26

Comptroller and Purchasing Approvals

Funds Available/Codes Correct

Comptroller

Date Approved by Comptroller

Complies with Appropriate Procurement Law
(MGL ch 149, ch 30 30 30M, or ch 30B)

Purchasing

Date Approved by Purchasing



Memorandum

To: Select Board

From: Dan Murphy, Director of Engineering and Transportation
Erin Chute, Commissioner of Public Works

Date: August 3, 2026

Re: Amory Playground PW/25-17 Extra Work Order 2

CC: Milee Pradhan, Director of Parks and Open Space
Jessie Waisnor, Senior Landscape Architect
Rob Kefalas, Senior Engineer

Attached for your review and approval is Extra Work Order No. 2 for work performed by JAM Construction Co., Inc. under Contract No. PW/25-17 (Amory Playground).

This project represents a significant investment in two of our community's cherished spaces – Amory Playground and Halls Pond/ Amory Woods Nature Sanctuary. Construction started last summer, and we are excited to share that the park was completed and opened in early July. Additionally, the renovations to the comfort station are underway and are anticipated to be completed in fall.

The additional work and associated costs at both Amory Woods and Amory Playground/ Halls Pond are primarily the result of the requests from the Town. All work associated with Amory Woods was supported by funding from the Community Preservation Act Grant under the Open Space and Recreation Category.

The Extra Work Order performed for Amory Woods includes the following key items:

- Replacement of the existing chain link fence along the Amory Woods at the parking lot
- Resetting stone dust pathway and edging and repair and replacement of asphalt pathway in multiple locations within Amory Woods to ensure ADA compliance
- Installation of additional helical piles that support the boardwalk at Amory Woods

This Extra Work Order performed for Amory Playground and Halls Pond includes the following items:

- Addition of post and rail fence along the parking lot edge
- Relocation of the water fountain
- Repair of additional boardwalk at Halls Pond
- Addition of electrical infrastructure to support outdoor GFCI outlet
- Substitution of drain grate
- Resetting of gates and hinges for Tennis Court
- Additional hardscape work

The total value of Extra Work Order No. 1 is \$196,598.64, as detailed in the attached form.

We respectfully request your approval for this work.

We are excited about the successful completion of this important project and look forward to the completion of the comfort station.

Extra Work Order Number 2

I, Ryan Wambach, duly authorized representative of JAM Corporation, Contractor, agree to perform all labor and supply such materials as may be necessary to perform additional work under the contract for Amory Playground PW 25-17

I further agree that the amount or amounts paid to JAM Corporation, Contractor, for performing the above specified work shall be as follows:

<u>Description</u>	<u>Amount</u>
<u>Three Rail Fence with mesh at the Parking Lot</u>	<u>\$32,687.00</u>
<u>Chain Link Fence along Amory Woods</u>	<u>\$102,545.56</u>
<u>Helical Pile Extensions required at Amory Woods</u>	<u>\$12,204.50</u>
<u>Additional Boardwalk work at Halls Pond</u>	<u>\$19,977.00</u>
<u>Additional Boardwalk work at Amory Woods</u>	<u>\$2,961.00</u>
<u>Relocating Drinking Fountain (approximately 175 feet)</u>	<u>\$5,752.86</u>
<u>Excavate and backfill electrical conduit from comfort station</u>	<u>\$4,819.14</u>
<u>Remove domed grate and install flat pedestrian grate</u>	<u>\$1,767.00</u>
<u>Remodel gates at tennis courts and install bulldog hinges</u>	<u>\$4,267.79</u>
<u>Additional cost associated with redesign of pathway to provide accessible path</u>	<u>\$15,527.00</u>
<u>Repairs to Amory Woods asphalt walkway</u>	<u>\$5,350.00</u>
<u>Irrigation repairs to baseball field irrigation</u>	<u>\$2,088.79</u>
<u>Remove section of wood rail fencing near baseball backstop</u>	<u>\$450.00</u>
<u>Credit for work not performed</u>	<u>(\$13,799.00)</u>
<u>Total</u>	<u>\$196,598.64</u>

The work to be done is in connection with the contract between JAM Corporation, Contractor, and the Town of Brookline, Massachusetts, "Amory Playground" Contract PW 25-17

JAM Corporation
Contractor

Approved:

Date

Approved:


Commissioner of Public Works

By Ryan Wambach
Authorized Representative

Town Administrator



BROOKLINE

ENGINEERING & TRANSPORTATION DIVISION

Dan Murphy, E&T

Town Hall, 4th Floor
333 Washington St.
Brookline, MA 02245
617-730-2138

Memorandum

To: Select Board

From: Dan Murphy, Director of Engineering and Transportation
Erin Chute, Commissioner of Public Works

Date: August 3, 2026

Re: Amory Field House PW/25-17A Extra Work Order 1

CC: Milee Pradhan, Director of Parks and Open Space
Jessie Waisnor, Senior Landscape Architect
Rob Kefalas, Senior Engineer

Attached for your review and approval is Extra Work Order No. 1 for work performed by Northern Contracting Corp under Contract No. PW/25-17A (Amory Fieldhouse).

This project represents a significant investment in a vital community amenity at Amory Playground. The field house comprises of restrooms and a pro shop that serves as a critical support for the tennis program. Construction for the field house started in spring this year and a tremendous progress has been made over the last few months. The work is anticipated to be completed this fall.

The additional work reflects the costs for inspecting asbestos removal, as well as incorporating the Town's request to install extra conduit for power and IT services in the temporary shed. This shed is currently used to support the tennis program during the field house renovation.

This Extra Work Order includes the following items:

- Additional power and IT services for temporary shed and future use - \$6,948.95
- Final Visual Clearance for Asbestos Abatement - \$500

The total value of Extra Work Order No. 1 is \$7,448.95, as detailed in the attached form.

We respectfully request your approval to proceed with this work.

We are excited to oversee the completion of this important project and look forward to welcoming the community to a beautifully renewed Amory Field House.

Town Of Brookline

Contract Amendment Approval Form

Department: DPW Engineering

Contract # : PW25-17A

Vendor Name and Address : Northern Contracting Corp

Change Order/Extra Work Order #: 1

Purchase Order #: 26100232

Amount of Amendment \$ 7,448.95

Purpose of Amendment:

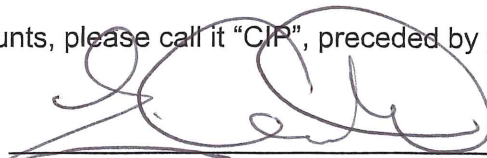
Description:
Addition conduit and IT cable installation for the temporary shed for the tennis program.
Final visual clearance for asbestos abatement.

Coding:

Org #	Org Name *	Acct #	Acct Name	Amount
6328SL04		522400		\$7,448.95

* For "K" or "C" accounts, please call it "CIP", preceded by your Dept (e.g., 4909K001 would be "DPW CIP").

Department Head:



Date 8/5/26

Comptroller and Purchasing Approvals

Funds Available / Codes Correct



Comptroller

8/5/26

Date Approved by Comptroller

Complies with Appropriate Procurement Law
(MGL ch 149, ch 30 30M, or ch 30B)



Purchasing

8/5/26

Date Approved by Purchasing



BROOKLINE

PUBLIC HEALTH & HUMAN SERVICES

John Kleschinsky, DrPH, Director

11 Pierce St.
Brookline, MA 02245
617-730-2300

Memorandum

To: Select Board

From: John Kleschinsky, MPH, DrPH, Director

Date: July 30 2026

Re: Personnel Authorization to Hire

CC: Chas Carey, Town Administrator
Melissa Goff, Deputy Town Administrator
Ann Braga, Director of Human Resources
Leslea Noble, Asst. Director of Human Resources

The Department of Public Health and Human Services respectfully submits the attached Authorization to Hire Request form and associated position description for the Senior Public Health Inspector position. The Department seeks to fill this position following the resignation of Cameron Shamey. The primary function of this position is to conduct inspectional work pertaining to the enforcement of health and safety codes, protection of the environment and control of disease, and investigation relating to unsanitary, dangerous, and/or unsafe conditions.

Sr. Public Health Inspector

Health & Human Services (Public Health Building) ▼

The Town of Brookline is currently seeking a Sr Public Health Inspector to perform Inspection and investigatory work pertaining to the enforcement of applicable health and safety codes, protection of the environment, and control of disease; other related work, as required.

Salary range: \$38.39 - \$40.32/hourly with generous benefits.
Please apply with resume and cover letter. Open until filled.

Essential Duties and Responsibilities

The essential functions or duties listed below are illustrations of the various types of work performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.

- Enforce federal, state and local laws and regulations pertaining to public health and safety; investigate food-borne illness outbreaks; inspect, license and regulate food service establishments, day care centers, nursing homes, elderly food programs, retail food stores and special events; educate food handlers on the prevention of food-borne illness; review plans for the construction of new food establishments.
- Investigate and respond to complaints relating to unsanitary, dangerous and/or unsafe living conditions and environments, including fire and building safety, asbestos removal, lead paint inspections and removal, rodent and insect control, drinking water and septic systems; respond to general complaints, including nuisances, odors, rabies control, air quality, solid waste, hazardous waste, etc.
- Conduct plan reviews, inspect swimming pools, children's camps, [animal inspection/quarantine](#), massage and body art establishments, and tanning salons; oversee demolition projects, tobacco control, snow removal, mosquito control and West Nile Virus control.
- Organize interdepartmental inspections of lodging houses with the Building Department, Fire Department and Police Department.
- Initiate court complaints and prosecute cases of non-compliance using administrative and/or judicial procedures.
- Perform similar or related work as required, or as situation dictates.

Supervision

Works under the direction of the Chief of Environmental Health Services and the Sanitarian in the Chief's absence and in accordance with the applicable provisions of the Massachusetts General Laws, regulations, and appropriate professional standards; the supervisor provides work assignments and assistance, as required; unusual problems or situations are discussed with the supervisor.

Work Environment

Administrative work is performed in office conditions; inspection work is conducted in the field with exposure to unsanitary conditions, possible sources of disease or unhealthy environmental conditions and hazardous conditions associated with construction sites; exposure to hazardous conditions associated with asbestos, lead, infectious waste, biohazards and hazardous materials; the employee follows safety practices and uses safety equipment, as required. The employee operates standard office equipment, hand tools, environmental testing and sampling equipment and an automobile. The employee has contact with the general public, other town inspection personnel and departments, and state regulatory agencies. Errors could result in personal injury, injury to others, or delay or loss of

service.

Recommended Minimum Qualifications

Education and Experience

Bachelor's Degree in public or environmental health science, or a related field; two years of related experience in public health or environmental health; or an equivalent combination of education and experience.

Additional Requirements

- Eligibility to become a registered Sanitarian in Massachusetts
- Valid Massachusetts Driver's License, Class D
- Certified Food Safety Manager

• ~~Certified Soil Evaluator~~
• ~~Septic System Inspector~~
• ~~Licensed Special Use Pesticide Applicator~~
• ~~Licensed Lead Determination Inspector~~
• ~~Certified Pool Operator~~
RESH/RS

- Licensed Lead Determination Inspector
- Certified Pool Operator

Knowledge, Ability, and Skill

Knowledge of the laws, rules and regulations pertaining to public health, sanitation and environmental health, and current inspection techniques.

Ability to enforce codes fairly and impartially, stay informed of code changes, assess the seriousness of public or environmental health problems, interact effectively with the general public, and maintain complete and accurate inspection records. Communication and public relations skills.

Physical Requirements

Minimal physical effort is required when performing office work; moderate physical effort is required to perform field work. The employee is frequently required to stand, walk, sit, speak and hear, reach with hands and arms, use hands to operate equipment, stoop, bend and carry equipment; may be required to lift up to 30 pounds. Physical agility is required to access all areas of inspection sites. Vision requirements include the ability to read technical documents and plans, use a computer and operate a motor vehicle.

This job description does not constitute an employment agreement between the employer and employee, and is subject to change by the employer, as the needs of the employer and requirements of the job change.



Town of Brookline

Massachusetts

Authorization To Hire Request Form

Send the completed form to Human Resources for review/approval. HR will send the approved form to the SB for placement on the agenda. This form is required for all full-time, regular and part-time regular positions. This excludes seasonal and temporary positions.

1. **Position Title:** Senior Public Health Inspector Grade: GN10

2. **Department:** Public Health & Human Services Division: Environmental Health

3. Position Control #: 510000008 Prior Incumbent: Cameron Shamey

a. Reason for Leaving: ☒ Resignation ☐ Retirement ☐ Other: _____

4. **Budgetary Information:**

Department Code: HA 0000 Budget Code: 51005120-510101 % 100

☐ Grant Funded-Name: _____ ☐ Revolving Fund ☐ Enterprise Fund

☒ Full-Time: # of hours/week: ☐ 37 ☒ 37.5 ☐ 40 ☐ 42 or ☐ Part-Time hrs/week: _____

6. **Position Information:**

Summarize the primary function of this position.

Inspection work pertaining to the enforcement of health and safety codes, protection of the environment and control of disease, and investigation relating to unsanitary, dangerous, and/or unsafe conditions.

7. I have considered the following alternatives to filling this position:

There are no acceptable alternatives to filling this essential position.

11. Suggested sources for specialized recruitment advertising:

We will work with HR to actively recruit including posting to MHOA and Mass DPH jobs boards.

13. **Signatures:**

Department Head: <u>John H Kleschinsky</u>	Digitally signed by John H Kleschinsky Date: 2026.07.30 09:02:28 -04'00'	Date: <u>07-30-2026</u>
Human Resources: <u>Leslea Noble</u>	Digitally signed by Leslea Noble Date: 2026.07.31 09:57:10 -04'00'	Date: _____
Town Administrator: _____		Date: _____

14. **Approvals:**

Date on SB Agenda: _____

Date Approved: _____



THE PUBLIC LIBRARY OF BROOKLINE

MEMORANDUM

TO: David Pearlman, Chair Member of the Brookline Select Board

FROM: Jill Mercurio, Town Librarian

DATE: July 26, 2026

SUBJECT: Approval to Library Technology Support Specialist

The Public Library of Brookline seeks to fill the Library Technology Support Specialist position at the Administrative office of the Brookline Village location.

Technology is an essential part of today's public library, shaping how our patrons access information, resources, and services. A dedicated Technology Support Specialist ensures that our digital tools, public computers, online platforms, and staff systems run smoothly, allowing us to provide reliable, equitable service to all visitors. Filling this position will maintain and strengthen our ability to meet community needs, support staff in daily operations, and maintain the high standard of service our patrons expect.

This position designs, administers, secures and maintains a computer network of 130 – 150 personal computers utilizing networking software and tools. They are responsible for the integration and maintenance of all automated systems and equipment, including software, and provides technical support to staff and patrons. They work in consultation with the Town IT department and follow town-wide cybersecurity and other network requirements.

Thank you very much for considering this request.



Town of Brookline

Massachusetts

Authorization To Hire Request Form

Send the completed form to Human Resources for review/approval. HR will send the approved form to the SB for placement on the agenda. This form is required for all full-time, regular and part-time regular positions. This excludes seasonal and temporary positions.

1. **Position Title:** Library Technology Support Specialist Grade: T-10

2. **Department:** Administration Division: Library

3. Position Control #: 610000003 Prior Incumbent: Kaden Casanave

a. Reason for Leaving: ☒ Resignation ☐ Retirement ☐ Other: _____

4. **Budgetary Information:**

Department Code: 6100 6100 Budget Code: 510101 % _____

☐ Grant Funded-Name: _____ ☐ Revolving Fund ☐ Enterprise Fund

☒ Full-Time: # of hours/week: ☐ 37 ☒ 37.5 ☐ 40 ☐ 42 or ☐ Part-Time hrs/week: _____

6. **Position Information:**

Summarize the primary function of this position.

This position provides leadership and technical expertise in the selection, support, development
and implementation of library information technologies.

7. I have considered the following alternatives to filling this position:

There are no acceptable alternatives to filling this essential position.

11. Suggested sources for specialized recruitment advertising:

https://mbhc.state.ma.us/jobs/find_jobs/

13. **Signatures:**

Department Head: <u>Jill Mercurio</u>	Digitally signed by Jill Mercurio Date: 2026.07.24 13:12:54 -04'00'	Date: <u>7/24/26</u>
Human Resources: <u>Leslea Noble</u>	Digitally signed by Leslea Noble Date: 2026.07.27 08:46:15 -04'00'	Date: _____
Town Administrator: _____		Date: _____

14. **Approvals:**

Date on SB Agenda: _____

Date Approved: _____

Library Technology Support Specialist

Rev. 7/2026

Grade: T10

Position Purpose

The purpose of this position is to provide leadership and technical expertise in the selection, development, and implementation of library information technologies. Responsible for the integration and maintenance of all automated systems and equipment, including software, and provides technical support to staff and patrons; manages technical services and circulation operations; Work in consultation with the Town IT department and follow town-wide cybersecurity and other network requirements; performs all other related work as required.

Essential Functions

(The essential functions or duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.)

- Designs, administers, secures and maintains a computer network of 130 – 150 personal computers utilizing networking software and tools. Work with Town IT on library user ID management and security in Active Directory.
- Diagnoses equipment problems. Makes repairs or calls out for repairs as required. Communicates with vendors regarding computers, software, and applications.
- Projects and plans for future technology requirements in compliance with the IT department's vendor security requirements. Makes recommendations to the Library Director. Selects and purchases hardware and software. Investigates new products to determine their potential usefulness within the library.
- Installs and configures hardware and software including terminals, scanners, printers, security software and filtering software.
- Instructs the staff in the use and basic maintenance of computer equipment and peripherals. Coordinates training of patrons in the use of library equipment.
- Manages software training for all staff; provides direct technology training for staff and the general public.
- Assists in the preparation of the library department budget. Manages capital and repair budget for library technologies.
- Acts as Minuteman Library Network Technical Coordinator, the primary liaison to the MLN Central Site for technical support for installation and maintenance of library automated systems equipment. Attends Key User meetings. Stays abreast of innovations in library technology. Integrates library LAN with the Town's LAN/Intranet and Minuteman Library Network's WAN.
- Report to the Library Director, Board of Library Trustees and other professional organizations regarding the library's technology operations.
- Serves as the library's web master. Oversees and updates the library's web page.

- Represents the library on various committees such as the Minuteman Library Network and Technology Committee.
- Coordinates other programs as assigned. Prepares necessary reports, maintains appropriate statistics and makes recommendations.
- Pursues opportunities for professional development. Maintains current knowledge of the field through attendance at conferences, seminars, etc. and by keeping current with literature in the field. Learns all new technology and software programs as well as upgrades in network technology.
- Works with administration in analyzing library's present and future technology needs and makes recommendations for purchase of appropriate hardware and software. Participates in preparing departmental annual budget for technology needs.
- Performs similar or related work as required, directed or as situation dictates.

Recommended Minimum Qualifications

Education, Training and Experience:

BA/BS in computer science, management information systems, engineering or related field; five to seven years of experience in network operations, desktop and server support in a Windows Server enterprise environment; at least 3 years technical expertise with Active Directory; or any equivalent combination of education, training and experience that provides the requisite knowledge, skills, and abilities for this job. Library technology infrastructure and automation systems experience desirable. Masters in Library and Information Science strongly desirable

Additional Requirements

A valid driver's license required.

Knowledge, Ability and Skill

Knowledge: Complete familiarity with automated library systems and related applications. Knowledge of HTML and web page design and administration. Knowledge in Active Directory. Proficiency in TCP/IP, DNS, WINS, DHCP and SFTP. Solid understanding of networking and distributed computing concepts, including the principles of network routing and client/server technology. Broad knowledge of concepts, practices and procedures related to telecommunications and information systems. Thorough knowledge of network management and vendor management. Knowledge and technical expertise of wireless communications, network security, voice and data networking systems. Expert knowledge of a variety of library systems and applications. Expert knowledge of a variety of operating systems. Expert knowledge of desktop computers, mobile devices and internet of things.

Ability: Proven ability to troubleshoot software, hardware, and telecommunications problems. Ability to evaluate technology options and plan for their current and future use and procurement. Ability to communicate effectively and instruct all levels of users within the library. Ability to deal with all members of the public, including children and young adults, in a courteous and tactful manner. Ability to work with a high level of detail. Ability to prioritize multiple tasks and deal effectively with interruptions. Ability to identify and to analyze complex

issues and to develop appropriate recommendations. Ability to efficiently and effectively manage multiple projects at one time.

Skill: Flexibility in order to adapt to constantly changing technology. Strong conceptual, analytical, and writing skills. Skill in administrative and technical work related to information systems, office automation and other technologies. Skill in popular word processing, database, spreadsheet, and presentation computer applications. Advanced skill in computer networking software, procedures and operations. Demonstrated supervisory skills. Skills in operating above mentioned equipment. Demonstrated analytical, documentation and presentation skills.

Supervision

Supervision Scope: Performs varied and responsible duties of a technical nature requiring a thorough knowledge of departmental operations and the exercise of judgment and initiative to independently perform duties, complete assigned tasks, supervise staff, and analyze the facts or circumstances surrounding individual problems. Independent action involves implementing and maintaining all computer systems; monitoring systems' usage and practices. Instructs users in the proper use of their assigned systems; determines priorities and responds to user service requests based upon departmental policy.

Supervision Received: Work is performed under the administrative direction of the Library Director. Employee generally establishes own work plan and completes work in accordance with established policies and standards; only cases involving clarification of library policies and procedures are referred to supervisor.

Supervision Given: Supervises inter-departmental technology projects. In the absence of the Library Director and Assistant Library Director for Administration, assumes management responsibility for the entire library system. May supervise Help Desk Technician, volunteers or interns.

Job Environment

Work is performed under typical library conditions at multiple locations within the Town; the noise level is quiet to moderate at most times. Essential functions are regularly performed without exposure to adverse environmental conditions. Library operating hours may require evening and weekend work. Operates computers and peripherals, telephone, standard office and library equipment. Makes frequent contact with the library staff, Minuteman Library Network, Board of Library Trustees, IT department, other municipal departments, general public, and technical and/or computer vendor representatives. Contacts require a moderate level of persuasiveness, resourcefulness, and discretion to influence the decisions and behavior of others. Handles the more difficult customer service requests. Has access to confidential information including personnel records and information stored on the computer system. Manages the library's technology infrastructure in conjunction with the IT department for cyber security and the Building department for the building security system, cameras, and key cards. Errors could result in reduced levels of service, monetary loss, and significant damage to library resources.

Physical Requirements

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Constant moderate physical effort required to perform work; frequent bending, crouching and reaching required for such tasks as moving and installing computer hardware and related office equipment. Tasks involve extended periods of time at a keyboard or workstation; operates a keyboard at an efficient speed. Position requires the ability to access all library offices on a regular basis, including traversing flights of stairs in various buildings. Position requires fully correctable close vision, color vision, and depth perception. Some tasks require the ability to perceive and discriminate sounds. Occasionally lifts and/or moves objects weighing up to 60 pounds such as computer hardware, books, equipment, and supplies.

(This job description does not constitute an employment agreement between the employer and employee. It is used as a guide for personnel actions and is subject to change by the employer as the needs of the employer and requirements of the job change.)



BROOKLINE

DEPARTMENT OF PUBLIC WORKS

Erin Chute

Town Hall, 4th Floor
333 Washington St.
Brookline, MA 02245
617-730-2156

Memorandum

To: Select Board
From: Erin Chute, Commissioner of Public Works
Date: August 4, 2026
Re: Authorization to Hire
CC: Leslea Noble, Deputy Director of Human Resources
Charlie Young, Assistant Town Administrator, Finance
Melissa Goff, Deputy Town Administrator
Ann Hess Braga, Director of Human Resources
Kevin Johnson, Deputy Director of Operations/Highway & Sanitation Director
James W. Hersey, P.E. Director of Water & Sewer

For your meeting on August 11, 2026, I respectfully submit for your review and approval a request for authorization to hire the following positions within the Department of Public Works:

Water and Sewer Division

Motor Equipment Operator 3 – LN5
Motor Equipment Repairperson – LN6
Water & Sewer Utilities Working Foreperson – LN6
Water Use Analyst – T6

Parks and Open Space Division

Forestry Specialist: Tree Climber – GN9
*Horticulture Supervisor – GN9

Highway, Sanitation & Fleet Services Division

Traffic & Fire Alarm Supervisor – GN13
Signal Maintainer – GN8
Transfer Station Supervisor and Scale Operator – GN11
Traffic Signals & Municipal Light Manager – T9

Authorization to Hire

The Department of Public Works respectfully submits for your review and approval the attached Authorization to Hire Request forms and associated position descriptions. Collectively, these positions provide the operational, technical, supervisory, management, and labor capacity needed to maintain essential public infrastructure and services. They will strengthen emergency response, workplace and public safety, preventive maintenance, regulatory compliance, customer service, project delivery, and accountability across the Department.

Authorization to hire will allow DPW and Human Resources to complete the appropriate internal and external recruitment processes and fill these positions with qualified candidates.

Please see the attached position descriptions for more information.

* May 2026 Override Funded Position



Town of Brookline

Massachusetts

Authorization To Hire Request Form

Send the completed form to Human Resources for review/approval. HR will send the approved form to the SB for placement on the agenda. This form is required for all full-time, regular and part-time regular positions. This excludes seasonal and temporary positions.

1. **Position Title:** Forestry Specialist: Tree Climber Grade: GN9

2. **Department:** Public Works Division: Parks and Open Space

3. **Position Control #:** _____ **Prior Incumbent:** _____

a. Reason for Leaving: ☐ Resignation ☐ Retirement ☒ Other: Override Position FY24

4. **Budgetary Information:**

Department Code: 400 Budget Code: 46004680 510101 % 100

☐ Grant Funded-Name: _____ ☐ Revolving Fund ☐ Enterprise Fund

☒ Full-Time: # of hours/week: ☐ 37 ☐ 37.5 ☒ 40 ☐ 42 or ☐ Part-Time hrs/week: _____

6. **Position Information:**

Summarize the primary function of this position.

Performs advanced tree climbing, supervisory, and skilled manual work maintaining the Town's urban tree canopy

Serving as a lead climber and crew leader, performs and directs skilled, safety-sensitive climbing and bucket work

7. I have considered the following alternatives to filling this position:

No alternatives considered other than new hire.

11. Suggested sources for specialized recruitment advertising:

Human Resources will work with DPW to post the position widely with Diversity Jobs, Indeed & Zip-Recruiter.

13. **Signatures:**

Department Head: [Signature] Date: 7/22/26

Human Resources: [Signature] Date: 7/22/26

Town Administrator: _____ Date: _____

14. **Approvals:**

Date on SB Agenda: _____

Date Approved: _____

FORESTRY SPECIALIST: TREE CLIMBER

DEPT/DIV: Public Works/Parks & Open Space	PAY GRADE: GN-9	FULL/PART TIME: Full Time
FLSA STATUS: Non-Exempt		HOURS PER WEEK:
BARGAINING UNIT/GROUP:		UPDATED AS OF: 12/01/2025

POSITION SUMMARY:

Performs advanced tree climbing, supervisory, and skilled manual work maintaining the Town's urban tree canopy. Serving as a lead climber and crew leader, performs and directs skilled, safety-sensitive climbing and bucket truck operations; high-risk pruning, removal, rigging, and storm response; pest management; and the training of crews in climbing and safety practices, while ensuring compliance with all applicable safety protocols. Performs all other duties as required.

ESSENTIAL DUTIES:

An employee in this position may be called upon to do any or all of the following essential functions. These examples do not include all of the duties which the employee may be expected to perform. To perform this job successfully, an individual must be able to perform each essential function satisfactorily, with or without reasonable accommodation(s).

- Leads municipal tree crew(s), performing and directing skilled, safety-sensitive tree climbing and bucket truck operations to maintain the Town's urban tree canopy and ensure compliance with all safety protocols.
- Plans, assigns, and supervises Town and contract work crews engaged in tree maintenance and repair, coordinating work with other departments and user groups, reviewing instructions with crews, and ensuring proper work methods and general health and safety measures.
- Performs and supervises specialized, safety-sensitive tree care, including high-risk removals, pruning, rigging, and storm response in complex urban environments.
- Evaluates work sites to identify potential hazards and determine the best course of action; inspects equipment and climbing gear for safe operation and proper maintenance; and maintains accurate records of work performed.
- Develops, implements, participates in, and enforces strict safety procedures, and conducts regular safety briefings and training sessions to ensure compliance with industry standards, OSHA requirements, and municipal regulations.
- Monitors tree health and implements tree maintenance programs, including fertilization, cabling or bracing branches, and spraying or injecting to control insects and disease problems; may plant trees or assist in the oversight of in-house crews or contractors planting trees.
- Maintains accurate records of tree inventory, work performed, and materials used through current technology and assigned software programs; documents and geolocates tree assets, condition, and management activities to support the Town's urban forestry program. Works daily with the Division's work-order, service request, and time-and-attendance software and other programs as needed.
- Reviews instructions, sets up assigned jobs, and secures the job site to ensure the work area is safe for the crew and the public; places traffic signs, cones, barricades, and other safety devices; and monitors and adjusts safety conditions throughout the work.
- Climbs trees and operates a bucket truck to prune trees away from and over houses, high-voltage power lines, schools, playground structures, shrubs, and public roads and walkways; trims, shapes, and cuts trees and shrubbery; and picks up, collects, and removes debris caused by pruning and cutting.

FORESTRY SPECIALIST: TREE CLIMBER

- Performs emergency tree care and storm response, removing fallen or hazardous trees, limbs, and debris from roadways, parks, and public property; determines and documents hazardous, diseased, and dying trees; and performs off-hour and emergency tasks as necessary. Carries the department call phone as assigned and may be called back to work; work may be extended or performed outside regular business hours during emergencies.
- Develops, implements, participates in, and enforces safety procedures; conducts safety briefings and regular safety appraisals; takes prompt corrective action as needed; and ensures compliance with industry standards, OSHA requirements, and municipal regulations.
- Participates in the department's winter maintenance program, supervising assigned personnel during emergency response operations and managing snow removal from assigned areas.
- Inspects and monitors work performed by outside contractors to ensure standards and expectations are met.
- Maintains equipment, including power saws, chain saws, brush cutters, and other tools; inspects equipment and climbing gear for safe operation and proper maintenance; and anticipates and prepares for the seasonal requirements of the Department, ensuring equipment operates at peak efficiency and safety at all times.
- Responds to public inquiries, requests, and complaints related to tree activities courteously and promptly, resolving matters when possible and referring to the Director or other staff as appropriate.
- Works collaboratively with other Parks and Open Space staff and trains and mentors less experienced, seasonal, and new crew members in climbing, pruning, rigging, and safety procedures and proper arboricultural practices.
- Follows and enforces staff compliance with safety and workplace practices, policies, and procedures.
- Demonstrates professionalism and respect in all interactions with employees, residents, visitors, and the general public.
- Works collaboratively with others to address and resolve concerns, provide assistance, and support the overall functions of the department and positive community relations.
- Keeps up to date on industry trends and maintains required training, licensure, and/or certification(s), including membership in professional organizations.
- Works independently and plans tasks accordingly to meet established deadlines.

POSITION SCOPE:

Work is distinguished by the ability to perform and direct skilled, safety-sensitive climbing and rigging operations and to lead crews safely to project completion within established timeframes, where the potential impact of decisions and actions could be critical in terms of personal injury, injury to others, poor public relations, delay or loss of service, and/or damage to equipment.

Work is performed under the general direction of the Forestry General Foreperson in accordance with established policies and procedures; the incumbent generally establishes an own work plan, works independently to complete assignments according to prescribed time schedules, and provides status updates to the supervisor as requested.

Contact with others includes handling complaints and non-routine problems requiring in-depth discussion and/or persuasion to resolve the problem, and handling more difficult contacts referred by others.

Position has limited access to confidential or privileged information which, if disclosed, may adversely impact operations, employee morale, public relations, or have legal ramifications.

FORESTRY SPECIALIST: TREE CLIMBER

SUPERVISION SCOPE:

Reports to the Forestry General Foreperson; provides supervision to multiple Town and contract work crews, typically two to five full-time and/or seasonal employees and one to three contract crews during emergencies or for special projects, and oversees contractors performing work on behalf of the Town.

EDUCATION, TRAINING, AND EXPERIENCE:

Associates or Bachelor's degree preferred; additional technical training desired; three to five years of tree climber experience, including required safety training; experience with pesticides and in the maintenance of parks and grounds desirable; some supervisory experience desirable; or an equivalent combination of education and experience.

LICENSE AND/OR CERTIFICATION:

- Valid Commercial Driver's License, Class B.
- Valid MA Hoisting Engineer's License, Class 2B.
- MA Pesticide Applicators License, Category 36.
- First Aid and CPR training.

KNOWLEDGE:

Principles and practices of arboriculture and of tree and shrub care and maintenance, including ropes and knots; use and types of pesticides; equipment and tools used for tree, shrub, and park maintenance and landscaping; equipment, vehicle, and arborist safety procedures, practices, and protocols; supervisory principles and practices; advanced tree climbing and rigging techniques; OSHA and industry safety standards for tree work; tree inventory and records software.

SKILLS:

Climbing trees and making appropriate tree cuts; specialized pruning, cutting, and rigging of trees and shrubs; identifying and assessing the condition of trees, shrubs, and other plants and determining appropriate maintenance actions; evaluating work sites to identify hazards and plan safe work; directing and supervising assigned work crews and training others in proper climbing, rigging, and safety technique while supporting a collaborative work environment; troubleshooting and problem solving within the assigned area of responsibility; reading and interpreting drawings and diagrams; monitoring the use of assigned resources; communicating verbally and in writing consistent with position expectations, including in a safety-sensitive environment; establishing and maintaining effective working relationships with coworkers, work crews, residents, contractors, and other stakeholders; and using, repairing, and troubleshooting heavy equipment, hand and power tools, and specialized equipment.

PHYSICAL DEMANDS AND WORK ENVIRONMENT:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodation(s) may be made to enable individuals with disabilities to perform the essential job functions in a manner that does not pose a direct threat to the health or safety of the employee or others in the workplace.

The physical requirements for this position regularly include the ability to sit, stand, walk, talk, and hear; use hands and fingers to handle, feel, or operate objects, tools, controls, and equipment; and reach with hands and arms. The employee is regularly required to bend, climb, balance, stoop, kneel, or crouch, access and reach difficult places, and negotiate varied terrain, including working at significant heights. The employee may frequently be required to lift and/or move up to one hundred (100) pounds. Specific vision abilities required by this job on a daily basis include close vision, distance vision, peripheral vision, depth

FORESTRY SPECIALIST: TREE CLIMBER

perception, and the ability to adjust focus. This position may require the incumbent to perform strenuous physical labor for extended periods of time.

The work environment for the position is regularly outdoors and subject to working near constant loud noise and potential exposure to equipment with moving mechanical parts, such as chain saws. The employee may frequently be exposed to adverse weather and other unpleasant conditions such as heat, cold, wetness and humidity, dust, odors, noise, vibrations, toxic agents, smoke, high-voltage power lines, and heavy machinery. The employee may be required to respond to emergency situations.

The Town of Brookline is an equal opportunity employer and prohibits discrimination and harassment of any kind based on any protected characteristic as outlined by federal, state, or local laws. This policy applies to all employment practices.



Town of Brookline

Massachusetts

Authorization To Hire Request Form

Send the completed form to Human Resources for review/approval. HR will send the approved form to the SB for placement on the agenda. This form is required for all full-time, regular and part-time regular positions. This excludes seasonal and temporary positions.

1. **Position Title:** Water Use Analyst **Grade:** T-06

2. **Department:** Public Works **Division:** Water and Sewer Division

3. **Position Control #:** _____ **Prior Incumbent:** _____

a. Reason for Leaving: ☐ Resignation ☐ Retirement ☒ Other: New

4. **Budgetary Information:**

Department Code: 400 Budget Code: 499EW40 510101 % 100

☐ Grant Funded-Name: _____ ☐ Revolving Fund ☐ Enterprise Fund

☒ Full-Time: # of hours/week: ☐ 37 ☐ 37.5 ☒ 40 ☐ 42 or ☐ Part-Time hrs/week: _____

6. **Position Information:**

Summarize the primary function of this position.

Administrative, technical, and supervisory work, including monitoring, tracking, analyzing, managing, and

reporting water consumption on all public and private accounts. Coordinate water meter installation & public tow

7. I have considered the following alternatives to filling this position:

No alternatives considered other than new hire.

11. Suggested sources for specialized recruitment advertising:

Human Resources will work with DPW to post the position widely with Diversity Jobs, Indeed & Zip-Recruiter.

13. **Signatures:**

Department Head: [Signature] Date: 7/22/26

Human Resources: [Signature] Date: 7/22/26

Town Administrator: _____ Date: _____

14. **Approvals:**

Date on SB Agenda: _____

Date Approved: _____

WATER USE ANALYST: WATER & SEWER DIVISION

DEPT/DIV: Public Works/Water and Sewer	PAY GRADE: T-06	FULL/PART TIME: Full Time
FLSA STATUS: Exempt		HOURS PER WEEK: 40
BARGAINING UNIT/GROUP:		UPDATED AS OF: 08/2025

POSITION SUMMARY:

Administrative, technical, and supervisory work, including monitoring, tracking, analyzing, managing, and reporting water consumption on all public and private accounts. Focusing on efficient and sustainable public water use, performs work involving the public water system, including coordinating water meter installations; recordkeeping and reporting; managing the Advanced Metering Infrastructure (AMI); and managing billing and other water usage tracking and monitoring systems to ensure that accurate readings translate to correct charges to the consumer. Ensures that losses due to unforeseen leaks can be quickly identified and remedied. Performs all other related duties as assigned.

ESSENTIAL DUTIES:

An employee in this position may be called upon to do any or all of the following essential functions. These examples do not include all of the duties which the employee may be expected to perform. To perform this job successfully, an individual must be able to perform each essential function satisfactorily, with or without reasonable accommodation(s).

- Monitors daily water consumption on all public and private accounts to ensure there are no discrepancies or leaks; investigates changes in consumption patterns to identify issues and take appropriate corrective action; and manages customer communications and creates toolkits for customers to manage, track, and identify unnecessary water usage.
- Monitors and tracks trends in water usage to determine whether proper water conservation measures are being conducted; and researches the latest tools, equipment, and standards for water conservation and management.
- Collaborates with the Division's meter shop, leak detection, billing, and other Town departments to monitor monthly billing and report to users above normal usage.
- Analyzes usage and trends and makes recommendations for site-specific or system-wide improvements to serve the intended function and minimize waste.
- Oversees water consumption management and reporting of municipal water systems, including irrigation, water features, drinking fountains, and comfort stations; manages, oversees, controls, and updates an Irrigation Management, Monitoring, and Control software platform (IMMS); and works with Town departments to estimate and prepare budgets to cover annual usage, repairs, and maintenance.
- Manages the maintenance, upkeep, monitoring, reporting, installation, and repair of municipal water use systems, including seasonal start-up and shut-down and the installation, maintenance, repair, and reporting of all irrigation, water play, and comfort station facilities for the Town; and serves as the primary liaison with the Town for these issues.
- Coordinates and maintains comprehensive recordkeeping and work order management for all DPW-managed water systems, including irrigation systems, water play features, and comfort stations.
- Develops, updates, and ensures that Best Management Practices and Standard Operating Procedures are followed; assigns service crews to complete various tasks while documenting performance and ensuring that work is completed correctly, in accordance with safety protocol, and in a timely manner; and supports day-to-day operations.

WATER USE ANALYST: WATER & SEWER DIVISION

- Maintains records and prepares reports required by regulatory agencies.
- Identifies and recommends solutions concerning operational and personnel problems; and participates in the establishment and implementation of work and safety standards.
- Develops and coordinates the preparation and maintenance of water system cost-effectiveness studies and programs; assists in department budget preparation; tracks and creates reports on the amount of water billed out versus the amount of revenue received; and assists with the preparation of regulatory reports.
- Supports the Division in coordinating inspections, project management, meter replacements, water service line installations, and water and sewer system maintenance and upgrades as assigned; and troubleshoots and resolves issues related to ACLARA One, VADAR, and any other technologies associated with water metering, data reporting, and billing operations.
- Provides office and field support to the Director and Operations Manager as needed in emergency response, leak detection, water shutdown, repairs, and the supervision of employees and contractors; and participates in the coordination of the Division's storm readiness and response activities.
- Develops and distributes educational materials; maintains and updates website content; and utilizes social media, letters, briefings, and other communication tools to inform and engage the public and staff on topics related to water quality, water use, conservation, and sustainability; and represents the Water and Sewer Division at community events, providing outreach and education to promote sustainable water practices.
- Provides backup support for key administrative and asset management functions during the absence of the Business Manager or Asset Manager, ensuring continuity of operations within the Water and Sewer Division.
- Performs similar or related work as required, or as the situation dictates.

POSITION SCOPE:

Work is distinguished by defined latitude for independent judgment and initiative within established guidelines and policies, with most duties being of a diverse nature requiring the ability to problem-solve, where errors could result in injury to others, excessive costs, delay or loss of service, over- or undercharging customers, and damage to equipment and facilities.

Work is performed under the general direction of the Director of Water and Sewer, the Operations Manager, and/or their designee, in accordance with departmental rules, regulations, and policies; the incumbent generally establishes an own work plan, and only unusual cases are referred to the supervisor.

Contact with others generally includes Division staff, consumers, contractors, consultants, and other Town departments.

SUPERVISION SCOPE:

Works under the general direction of the Director of Water and Sewer, the Operations Manager, and/or their designee; provides direction, coordination, and oversight for certain Water and Sewer activities for Division staff and Town departments.

EDUCATION, TRAINING, AND EXPERIENCE:

Associate's degree in business management or a related field and five to ten years of experience in a public works or related environment, with a focus on data analysis and reporting; experience with water meter data collection and tracking, water conservation, and AMI and billing system management preferred; or an equivalent combination of education and experience.

WATER USE ANALYST: WATER & SEWER DIVISION

LICENSE AND/OR CERTIFICATION:

- Valid Driver's License, Class D.

KNOWLEDGE:

Familiarity with water consumption and billing software systems operations and maintenance, including but not limited to metering, testing, service line installations, piping, clocks, and remote sensors, and computer software to monitor precipitation, soil moisture content, and other parameters to track the amount of water used. Knowledge of computerized inventory systems, recordkeeping, and the tracking of water consumption and billing.

SKILLS:

Problem-solving and excellent verbal and written communication skills; skill in managing resources and in maintaining detailed, accurate records and preparing reports; and the ability to collaborate effectively with internal and external stakeholders.

PHYSICAL DEMANDS AND WORK ENVIRONMENT:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodation(s) may be made to enable individuals with disabilities to perform the essential job functions in a manner that does not pose a direct threat to the health or safety of the employee or others in the workplace.

Moderate physical effort is often required. The employee is frequently required to walk, stand, sit, speak, hear, reach with hands and arms, and lift or move items weighing up to thirty (30) pounds. Vision requirements include the ability to read routine documents, prepare reports, and use a computer.

Work is performed in office and shop conditions. The workload is subject to seasonal fluctuations, which can generally be anticipated. The employee may be required to respond to emergencies. The employee generally has contact with Division staff, consumers, contractors, consultants, and other Town departments.

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Town of Brookline

Massachusetts

Authorization To Hire Request Form

Send the completed form to Human Resources for review/approval. HR will send the approved form to the SB for placement on the agenda. This form is required for all full-time, regular and part-time regular positions. This excludes seasonal and temporary positions.

1. **Position Title:** Transfer Station Supervisor & Scale Operat Grade: G11

2. **Department:** Public Works Division: Highway&Sanitation

3. Position Control #: 430000008 Prior Incumbent: Ed Walker

a. Reason for Leaving: ☐ Resignation ☒ Retirement ☒ Other: _____

4. **Budgetary Information:**

Department Code: 400 Budget Code: 40004300-510101 % 100

☐ Grant Funded-Name: _____ ☐ Revolving Fund ☐ Enterprise Fund

☒ Full-Time: # of hours/week: ☐ 37 ☐ 37.5 ☒ 40 ☐ 42 or ☐ Part-Time hrs/week: _____

6. **Position Information:**

Summarize the primary function of this position.

Oversees the operations of the Transfer Station, including site activities, site conditions, contractors, deliveries, and personnel, to ensure compliance with Town and facility requirements, permits, rules, and related regulations

7. I have considered the following alternatives to filling this position:

No alternatives considered other than new hire.

11. Suggested sources for specialized recruitment advertising:

Human Resources will work with DPW to post the position widely with Diversity Jobs, Indeed & Zip-Recruiter.

13. **Signatures:**

Department Head: _____ Date: 7/22/26

Human Resources: _____ Date: 7/22/26

Town Administrator: _____ Date: _____

14. **Approvals:**

Date on SB Agenda: _____

Date Approved: _____

TRANSFER STATION SUPERVISOR AND SCALE OPERATOR

DEPT/DIV: Public Works/Highway & Sanitation	PAY GRADE: GN-11	FULL/PART TIME: Full Time
FLSA STATUS: Non-Exempt		HOURS PER WEEK: 40
BARGAINING UNIT/GROUP: AFSCME		UPDATED AS OF: 09/2025

POSITION SUMMARY:

Oversees the operations of the Transfer Station, including site activities, site conditions, contractors, deliveries, and personnel, to ensure compliance with Town and facility requirements, permits, rules, and related regulations. Performs manual labor relating to the inspection of waste loads from Town collection personnel and contractors; and other related work as required.

ESSENTIAL DUTIES:

An employee in this position may be called upon to do any or all of the following essential functions. These examples do not include all of the duties which the employee may be expected to perform. To perform this job successfully, an individual must be able to perform each essential function satisfactorily, with or without reasonable accommodation(s).

- Oversees and coordinates customer service for vendors and the public utilizing waste disposal services; inspects incoming waste loads from Town personnel and contractors to ensure compliance; directs vehicles to proper offloading and loading areas; and assists vehicle operators with offloading vehicles.
- Weighs incoming and outgoing materials at the transfer station using a computerized scale system; and confers with subcontractors daily on the expected incoming loads and related planning.
- Monitors the offloading waste stream and removes hazardous waste and recyclable items; and inspects outgoing waste loads for proper waste product and covering.
- Generates computerized tickets for all transactions and verifies accuracy; enters necessary corrections in the system; and handles all telephone inquiries regarding the operation of the transfer station and the surrounding area.
- Supervises staff assigned to or operating at the Transfer Station, including equipment operators, laborers, and scale operators, to ensure productivity and adherence to Town work standards, policies, and practices; trains staff on safety protocols, equipment operation, and waste handling procedures; addresses employee performance issues; maintains staff morale; and conducts evaluations.
- Establishes and maintains safety programs for assigned staff and implements related action plans; conducts employee safety meetings and ensures that all OSHA and environmental safety guidelines are followed; responds to and investigates work-related injury and/or illness; ensures division activities are carried out in a safe and efficient manner; and implements and enforces safety protocols for staff and facility users.
- Oversees the maintenance and security of the transfer station facility and equipment; conducts daily visual inspection of all transfer station areas and equipment to ensure safety and identify needed repairs; manages and oversees repairs on-site as appropriate; maintains the scale house in a clean and orderly manner; reports on the conditions, repair, and facility needs of the Transfer Station site, building, and support infrastructure to administration; and controls the security of the area.
- Inspects and maintains the grounds of the transfer station free of waste and debris; maintains and coordinates the removal of unsuitable material from bins; ensures that all material and equipment are stored correctly; and removes snow and ice and ensures areas are not dangerous.

TRANSFER STATION SUPERVISOR AND SCALE OPERATOR

- Ensures that the Transfer Station and associated property are maintained in compliance with DEP landfill closure permit requirements; and provides accurate records and reports as requested.
- Oversees transfer station operations during a snow emergency or participates in sanding and plowing operations during snow and ice emergencies for assigned areas; supervises personnel operating sanders, heavy plows, and front-end loaders; oversees contractors involved in snow plowing; and operates sanders, plows, front-end loaders, and a small snow plow to remove snow and ice and sand the streets as needed.
- Performs similar or related work as required, or as the situation dictates.

POSITION SCOPE:

Work is distinguished by responsibility for overseeing the operations, safety, and regulatory compliance of the Transfer Station, where errors could result in personal injury, injury to others, unsanitary conditions, poor public relations, and damage to equipment.

Work is performed under the direct supervision of the Environmental Health Supervisor or designee; the incumbent follows instructions, and work is checked by the supervisor.

The employee has contact with other department employees and contractors.

SUPERVISION SCOPE:

Works under the direct supervision of the Environmental Health Supervisor or designee; supervises employees from all DPW divisions assigned to the transfer station and contractors assigned to or utilizing the facility.

EDUCATION, TRAINING, AND EXPERIENCE:

High school diploma; two to five years of supervisory experience working in a waste collection transfer station or as a scale house operator; experience supervising multiple work crews; or an equivalent combination of education and experience.

LICENSE AND/OR CERTIFICATION:

- Valid Commercial Driver's License, Class B.
- Valid MA Hoisting Engineer's License.
- DEP Hazardous Waste Training.
- OSHA 30 Training Certificate.

KNOWLEDGE:

General knowledge of equipment operations, safety practices, work zone safety, and labor practices.

SKILLS:

Ability to operate a computerized scale, maintain detailed records, follow instructions, assist other personnel, lift heavy objects, and perform strenuous work. Good communication and supervisory skills; maintenance skills; and basic computer and math skills.

PHYSICAL DEMANDS AND WORK ENVIRONMENT:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodation(s) may be made to enable individuals with disabilities to perform the essential job functions in a manner that does not pose a direct threat to the health or safety of the employee or others in the workplace.

TRANSFER STATION SUPERVISOR AND SCALE OPERATOR

Strenuous physical effort is required. The employee is frequently required to use hands to operate equipment, walk, stand, sit, speak, hear, reach with hands and arms, crouch, crawl, stoop, and climb, and to continuously lift or move items weighing up to seventy-five (75) pounds. The employee is required to work in adverse weather conditions. Vision requirements include the ability to read routine documents and operate a computer and equipment.

Work is performed outside in field conditions, with exposure to constant loud noise and potential exposure to equipment with moving mechanical parts; work may be performed in adverse weather conditions, with exposure to hazards associated with waste products and the use of heavy equipment. The employee uses hand tools and operates a computerized scale and other light equipment. The employee has contact with other department employees and contractors.

The Town of Brookline is an equal opportunity employer and prohibits discrimination and harassment of any kind based on any protected characteristic as outlined by federal, state, or local laws. This policy applies to all employment practices.



Town of Brookline

Massachusetts

Authorization To Hire Request Form

Send the completed form to Human Resources for review/approval. HR will send the approved form to the SB for placement on the agenda. This form is required for all full-time, regular and part-time regular positions. This excludes seasonal and temporary positions.

1. **Position Title:** Traffic Signals & Municipal Lighting Manage Grade: T-09

2. **Department:** Public Works Division: Highway & Sanitation

3. Position Control #: 420000006 Prior Incumbent: Pat Carroll

a. Reason for Leaving: ☐ Resignation ☒ Retirement ☐ Other: _____

4. **Budgetary Information:**

Department Code: 400 Budget Code: 42004250-510101 % 100

☐ Grant Funded-Name: _____ ☐ Revolving Fund ☐ Enterprise Fund

☒ Full-Time: # of hours/week: ☐ 37 ☐ 37.5 ☒ 40 ☐ 42 or ☐ Part-Time hrs/week: _____

6. **Position Information:**

Summarize the primary function of this position.

Supervisory, highly technical, and electrical work relating to the installation, diagnosis, repair, maintenance, operation, and modification of the municipal traffic signal systems, roadway, street, and public grounds lighting,

7. I have considered the following alternatives to filling this position:

No alternatives considered other than new hire.

11. Suggested sources for specialized recruitment advertising:

Human Resources will work with DPW to post the position widely with Diversity Jobs, Indeed & Zip-Recruiter.

13. **Signatures:**

Department Head: _____	Date: <u>7/22/26</u>
Human Resources: _____	Date: <u>7/22/26</u>
Town Administrator: _____	Date: _____

14. **Approvals:**

Date on SB Agenda: _____	Date Approved: _____
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TRAFFIC SIGNALS AND MUNICIPAL LIGHTING MANAGER

DEPT/DIV: Public Works/Highway, Sanitation & Fleet	PAY GRADE: T-09	FULL/PART TIME: Full Time
FLSA STATUS: Non-Exempt	HOURS PER WEEK:	
BARGAINING UNIT/GROUP:	UPDATED AS OF: 09/2025	

POSITION SUMMARY:

Supervisory, highly technical, and electrical work relating to the installation, diagnosis, repair, maintenance, operation, and modification of the municipal traffic signal systems, roadway, street, and public grounds lighting, the wireless fire alarm system, and related electrical and electronic systems and equipment; and all other related work as required.

ESSENTIAL DUTIES:

An employee in this position may be called upon to do any or all of the following essential functions. These examples do not include all of the duties which the employee may be expected to perform. To perform this job successfully, an individual must be able to perform each essential function satisfactorily, with or without reasonable accommodation(s).

- Plans, manages, and oversees the operation, maintenance, and modernization of the Town's Intelligent Transportation System (ITS) infrastructure, including traffic controllers, vehicle detectors, internet protocol (IP) cameras, variable message signs (VMS), and fiber optic networks; and ensures systems are reliable, integrated, and maintained according to Town standards and industry best practices.
- Supervises technical staff and contractors engaged in the installation, maintenance, repair, and replacement of traffic signal systems, street and roadway lighting, and municipal fire alarm systems; establishes work priorities, assigns tasks, and reviews performance; and ensures compliance with electrical codes, safety regulations, and Town standards.
- Coordinates testing, inspections, preventive maintenance, firmware installation, and system upgrades, including pole changeovers, cable relocations, and other field operations performed by staff and contractors, to maintain operational reliability and public safety.
- Researches, produces, and maintains maps, plans, and infrastructure databases using Geographic Information System (GIS) and related software; and ensures data accuracy, consistency, and accessibility, integrating mapping work into operational planning and project oversight.
- Records, tracks, and manages daily work activities, tool and material usage, and equipment deployment for all assigned projects; and uses specialized software to capture data, generate reports, and maintain accurate inventory control of items ordered, received, issued, and stocked.
- Documents, maps, and marks all municipal wiring for Dig Safe compliance within the public right-of-way and all municipal properties, responding to requests and locating underground conduit and loop wires to prevent damage.
- Maintains and updates engineering files, both electronically and in printed plan sets; and ensures data accuracy, regulatory compliance, and integration with ongoing construction, maintenance, and ITS projects.
- Oversees installation, testing, calibration, and preventive maintenance of traffic signal devices, video detection, and video surveillance systems, including operation of electronic and electrical diagnostic equipment such as voltmeters, oscilloscopes, multimeters, and signal generators; provides technical guidance to staff and contractors; and ensures work meets engineering specifications.

TRAFFIC SIGNALS AND MUNICIPAL LIGHTING MANAGER

- Coordinates with Public Safety, Engineering, IT, and DPW divisions to ensure operational continuity, emergency response, and system integration; responds to major outages or emergency malfunctions as needed; and supervises after-hours response coverage.
- Provides training, guidance, and performance feedback to technical staff; and enforces safety procedures, standard operating protocols, and Town work standards.
- Performs related duties, including hands-on technical duties as required to support the Traffic Systems Division's operations, which may include assisting with troubleshooting, testing, or installation of ITS and traffic signal systems when necessary.

POSITION SCOPE:

Work is distinguished by responsibility for the reliable operation of the Town's traffic signal, lighting, and fire alarm systems, where errors could result in monetary loss, injury to others, delay or loss of service, and damage to equipment.

Work is performed under the general direction of the Director of Highway, Sanitation, and Fleet Services, following department rules and regulations; work results are reviewed.

This position is considered essential personnel and must be available for on-call emergency response as needed outside of normal working hours within one hour, including but not limited to rotating on-call shifts or inclement weather conditions.

The employee has regular contact with contractors and other Town departments.

SUPERVISION SCOPE:

Works under the general direction of the Director of Highway, Sanitation, and Fleet Services; supervises one to three employees, work crews as assigned, and contractors.

EDUCATION, TRAINING, AND EXPERIENCE:

High school diploma; additional technical training and certification in electronics, computer technology, or a related field; five to seven years of experience in traffic control systems and roadway, street, and light maintenance; experience working as an electrician; and experience with wireless fire alarm systems; or an equivalent combination of education and experience. Bachelor's degree preferred.

LICENSE AND/OR CERTIFICATION:

- Licensed Electrician.
- International Municipal Signal Association (IMSA) Work Zone Safety Training.
- Minimum of two years holding a valid Level 2 IMSA Traffic Signal Field Technician Certification, or an equivalent combination of education and experience.
- OSHA 30 Supervisor Training.
- Valid MA Hoisting Engineer's License.
- Certification to operate a bucket truck.
- Valid Driver's License, Class D.

KNOWLEDGE:

Knowledge of the methods, tools, materials, and equipment used in the construction, installation, operation, maintenance, and repair of electrical and electronic traffic signal and lighting systems; of municipal fire alarm systems and electrical systems, the electrical code, and safety procedures; and of applicable Federal, State, and local laws, codes, and regulations, including but not limited to the National

TRAFFIC SIGNALS AND MUNICIPAL LIGHTING MANAGER

Electric Code, the Electrical Safety Orders of the Division of Industrial Safety, and Manual on Uniform Traffic Control Devices (MUTCD) standards and specifications.

SKILLS:

Ability to climb ladders, obtain certification to operate a bucket truck, and work in confined spaces; supervise personnel and make work assignments; troubleshoot problems and identify solutions; use diagrams and schematics; and keep records of all asset work. Ability to read, interpret, and work from plans, detail drawings, and specifications, including but not limited to blueprints and wiring and electronic circuit diagrams. Excellent problem-solving, communication, supervisory, analytical, planning, and design skills.

PHYSICAL DEMANDS AND WORK ENVIRONMENT:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodation(s) may be made to enable individuals with disabilities to perform the essential job functions in a manner that does not pose a direct threat to the health or safety of the employee or others in the workplace.

Work is performed in an office or shop environment and in the field; moderate physical effort is often required when performing field duties. The employee is required to speak and hear, walk, stand, and lift or move items weighing up to sixty (60) pounds. The employee may be required to work in adverse weather conditions and at moderate heights when performing installations or making repairs. Vision requirements include the ability to read routine documents and operate equipment and vehicles.

Work is performed in a shop setting and outside in field conditions, with exposure to constant loud noise and potential exposure to equipment and hazards associated with electricity. The workload is generally stable; the employee responds to knock-downs or open circuits in off hours. The employee operates standard office equipment, hand and power tools, light trucks, and light equipment, including electric jackhammers, a bucket truck, a sandblaster, a voltage meter, portable generators, cable take-up reels, and other equipment. The employee has regular contact with contractors and other Town departments.

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Town of Brookline

Massachusetts

Authorization To Hire Request Form

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1. **Position Title:** Horticulture Supervisor Grade: GN-9

2. **Department:** Public Works Division: Parks and Open Space

3. Position Control #: _____ Prior Incumbent: Jacquelyn Jackson

a. Reason for Leaving: ☒ Resignation ☐ Retirement ☐ Other: _____

4. **Budgetary Information:**

Department Code: 400 Budget Code: 46004650/51 510101 % 100

☐ Grant Funded-Name: _____ ☐ Revolving Fund ☐ Enterprise Fund

☒ Full-Time: # of hours/week: ☐ 37 ☐ 37.5 ☒ 40 ☐ 42 or ☐ Part-Time hrs/week: _____

6. **Position Information:**

Summarize the primary function of this position.

Performs supervisory, administrative, and manual work overseeing and implementing the care, maintenance, planning, design and installation of special horticulture areas and landscape improvement projects

7. I have considered the following alternatives to filling this position:

No alternatives considered other than new hire.

11. Suggested sources for specialized recruitment advertising:

Human Resources will work with DPW to post the position widely with Diversity Jobs, Indeed & Zip-Recruiter.

13. **Signatures:**

Department Head: [Signature] Date: 7/22/26

Human Resources: [Signature] Date: 7/22/26

Town Administrator: _____ Date: _____

14. **Approvals:**

Date on SB Agenda: _____

Date Approved: _____

HORTICULTURE SUPERVISOR

DEPT/DIV: Public Works/Parks and Open Space	PAY GRADE: G9	FULL/PART TIME: Full Time
FLSA STATUS:		HOURS PER WEEK: 40
BARGAINING UNIT/GROUP:		UPDATED AS OF: 12/01/2025

POSITION SUMMARY:

Performs supervisory, administrative, and manual work overseeing and implementing the care, maintenance, planning, design, and installation of special horticulture areas and landscape improvement projects; performs all other duties as required.

ESSENTIAL DUTIES:

An employee in this position may be called upon to do any or all of the following essential functions. These examples do not include all of the duties which the employee may be expected to perform. To perform this job successfully, an individual must be able to perform each essential function satisfactorily, with or without reasonable accommodation(s).

- Plans, organizes and oversees staff performing the management, maintenance and care of horticulture areas and other areas as assigned including, but not limited to, directing crews performing maintenance activities; coordinating work with other departments and user groups; ensuring that horticulture areas are prepared for presentation and/or completion in accordance with deadlines and schedules; and, preparing daily and seasonal work crew schedules and plans.
- Provides quality, innovative, appropriate and cost-effective designs for presentation and implementation including irrigation, grading, drainage, masonry, planting and other related work.
- Prepares contract documents for bidding, including specifications and cost estimates for contract services and supplies; obtains quotes, orders materials and tracks costs; and, coordinates, prioritizes and oversees multiple projects.
- Creates, improves and executes a comprehensive horticulture maintenance/management plan including plan of care for Town plants and grounds.
- Uses assigned technology to record work orders and daily performance.
- Serves as the division horticulturist and assists the Director and Operations Manager in setting the goals and objectives, preparing the Division budget and monitoring annual expenditures.
- Participates in the annual planning, plant selection, design, construction, installation and maintenance of the Town's flower and shrub bed planting, streetscape beautification, and restoration projects.
- Oversees and manages the plant health Town wide including but not limited to soil health, fertilization, pest and disease management, invasive management, and overall plant vitality.
- Oversees and inspects for compliance with plans, contract documents and town standards.
- Monitors work crew and employee performance; ensures that proper safety practices are followed; instructs employees on the latest safety practices, techniques and procedures for pruning, soil preparation, tree, shrub and flower installations and maintenance practices.
- Prepares monthly and periodic progress/work completion reports as required.
- Responds to public inquiries; answers questions regarding new landscape projects, or general questions concerning trees, shrub plantings, flowerbeds and planters.
- Ensures compliance with applicable regulations related to use, storage, transportation, and all other aspects of using pesticides.
- Leads or participates in community events for Capital Improvement Projects and other departmental wide efforts for community building.

HORTICULTURE SUPERVISOR

- Operates all landscaping equipment including trucks, tractors, mowers, mechanical seeders, chain saws, edgers, power weed trimmers, blowers, irrigation systems, hydro seeding, other miscellaneous hand and power tools and equipment as they relate to turf installations, restoration, and general landscape planting projects.
- Performs outdoor physical labor incidental to landscape installation and maintenance work.
- Follows and enforces staff compliance with safety and workplace practices, policies and procedures.
- Demonstrates professionalism and respect in all interactions with employees, residents, visitors, and the general public.
- Works collaboratively with others to address and resolve concerns, provide assistance, and support the overall functions of the department and positive community relations.
- Keeps up to date on industry trends and maintains required training, licensure, and/or certification(s) including membership in professional organizations.
- Provides administrative and operations support, such as scheduling, preparing, and breaking down or setting up meals, break areas, and other support functions, during and after weather-related and other emergencies as declared by the Town. May lead a crew in response for weather operations.
- Works independently and plans tasks accordingly to meet established deadlines.

POSITION SCOPE:

Work is distinguished by the ability to effectively organize and schedule staff to ensure project completion within established timeframes including collaborating with internal and external stakeholders as needed where the potential impact for decisions and actions could be serious in terms of personal injury, injury to others, poor public relations, delay or loss of service, and/or damage to equipment.

Work is performed under the general direction of the General Foremen in accordance with established policies and procedures; works independently to complete assignments according to prescribed time schedules and provides daily status updates to the supervisor as requested.

Contact with others includes handling complaints and non-routine problems requiring in-depth discussion and/or persuasion to resolve the problem; handles more difficult contacts referred by others.

Position has limited access to confidential or privileged information which, if disclosed may adversely impact operations, employee morale, public relations, or have legal ramifications.

SUPERVISION SCOPE:

Reports to the General Foreperson and/or Operations Manager; provides supervision to assigned full-time and seasonal staff and oversees contractors performing work on behalf of the Town.

EDUCATION, TRAINING AND EXPERIENCE:

Extensive technical or specialized training such as that which would be acquired by an Associate's Degree or two years of technical and seven years of progressively responsible parks or grounds maintenance, landscaping or horticulture work; or an equivalent combination of training and experience.

LICENSE AND/OR CERTIFICATION:

- Valid MA Hoisting Engineer's License Class 2B
- MA Pesticide Applicators License

HORTICULTURE SUPERVISOR

- Preferred: Valid Commercial Driver's License, Class B

KNOWLEDGE:

Principles and practices of park and grounds maintenance including soil and turf maintenance, drainage and irrigation systems and landscaping best practices; use and types of pesticides; trees, shrubs, and common plants used within park settings; playground and sports field maintenance and applicable regulatory and safety standards; equipment, and tools used for grounds maintenance and repair and construction; equipment, vehicle and other applicable safety practices and procedures; supervisory principles and practices.

SKILLS:

Recognize and identify trees, shrubs and other plants applicable within assigned responsibility; developing horticultural plans and diagrams for assigned areas; planning and scheduling the work of others in order to meet deadlines; planning, directing, and supervising assigned staff and supporting and fostering a positive work environment while holding employees accountable for achieving goals and objectives; reading and interpreting plans and diagrams; planning for and monitoring the use of assigned resources including but not limited to, staff, budget, and equipment; taking initiative and utilizing independent judgment within position scope; communicating verbally and in written form consistent with position expectations; establishing and maintaining effective working relationships with internal and external stakeholders; operating and troubleshooting assigned equipment, power tools, hand tools; operating standard office equipment, including computers and related software.

PHYSICAL DEMANDS AND WORK ENVIRONMENT:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodation(s) may be made to enable individuals with disabilities to perform the essential job functions in a manner that does not pose a direct threat to the health or safety of the employee or others in the workplace.

The physical requirement for this position regularly include the ability to sit, stand, walk, talk, and hear; use hands and fingers to handle, feel, or operate objects, tools, controls, and equipment; and reach with hands and arms. The employee is regularly required to bend, climb, balance, stoop, kneel, or crouch; access and reach difficult places and negotiate varied terrain. The employee may frequently be required to lift and/or move up to (100) pounds. Specific vision abilities required by this job on a daily basis include close vision, distance vision, peripheral vision, depth perception, and the ability to adjust focus. This position may require the incumbent to respond to emergency situations.

The work environment for the position is regularly outdoors and subject to working near or in moving or mechanical equipment, and/or occasionally in confined spaces. The employee may frequently be exposed to adverse weather and other unpleasant conditions such as heat, cold, wetness, and humidity, dim or bright lights, dust, odors, noise, vibrations, toxic agents, smoke, electrical current, and heavy machinery. The volume of work is subject to seasonal and weather-related variations.

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Town of Brookline

Massachusetts

Authorization To Hire Request Form

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1. **Position Title:** MEO3 Grade: LN-5

2. **Department:** PUBLIC WORKS Division: WATER & SEWER

3. Position Control #: 499000003 Prior Incumbent: HERMAN HENRIQUEZ

a. Reason for Leaving: ☒ Resignation ☐ Retirement ☐ Other: _____

4. **Budgetary Information:**

Department Code: 4000 Budget Code: 4999EW40 % 100

☐ Grant Funded-Name: _____ ☐ Revolving Fund ☐ Enterprise Fund

☒ Full-Time: # of hours/week: ☐ 37 ☐ 37.5 ☒ 40 ☐ 42 or ☐ Part-Time hrs/week: _____

6. **Position Information:**

Summarize the primary function of this position.

Work with field crews to complete various utility repairs, maintenance, and emergency response activities

Operates various types of heavy and specialized construction equipment. Also use construction power tools.

7. I have considered the following alternatives to filling this position:

No alternatives considered other than a new hire.

11. Suggested sources for specialized recruitment advertising:

Human Resources with work with DPW to post the position widely using recruiting software.

13. **Signatures:**

Department Head: [Signature] Date: 7/22/26

Human Resources: [Signature] Date: 7/22/26

Town Administrator: _____ Date: _____

14. **Approvals:**

Date on SB Agenda: _____

Date Approved: _____

MOTOR EQUIPMENT OPERATOR #3

PRIMARY PURPOSE

Heavy equipment operation and manual labor relating to installing, repairing and maintaining water and sewer lines, or maintaining or constructing highways; other related work, as required.

ESSENTIAL DUTIES AND RESPONSIBILITIES

The essential functions or duties listed below are illustrations of the various types of work performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.

Operate heavy equipment, such as back hoes, vactor-jet truck, crane truck, dump trucks, bobcat, front-end loaders, bucket trucks and tractor trailers; ensure that vehicles and equipment are clean and operating properly.

Depending on division assignment, an employee may excavate broken water pipes, fire hydrants, sewer and drain pipes, and highways, assist with asphalt work, trench work, and sidewalk work, assist with the installation of fire hydrants, move heavy pipes, move plates to cover trenches, and drive trailers to haul material.

During snow and ice emergencies, drive sanders, plows, and front-end loaders and remove snow and ice.

Perform other labor duties when not operating equipment, including operating jack hammers, wheel barreling concrete, raking asphalt, assisting other personnel installing pipes, or other necessary tasks.

May provide technical supervision at a job site.

Perform similar or related work as required, or as situation dictates.

SUPERVISION

Works under the direct supervision of the Division I Foreman or Working Foreman, following department rules, regulations and policies; the supervisor provides specific instructions and reviews work performed.

WORK ENVIRONMENT

Work is performed outside in field conditions, with exposure to constant loud noise and potential exposure to equipment with moving mechanical parts and traffic; work may be performed in adverse weather conditions with exposure to hazards associated with maintenance and construction sites, sanding and plowing, and use of heavy equipment. The workload is subject to seasonal fluctuations which generally can be anticipated. The employee responds to weather and other emergency situations.

The employee operates light equipment and heavy equipment, such as back hoes, vactor-jet truck, crane truck, dump trucks, bobcat, front-end loaders, bucket trucks and tractor trailers; the employee uses hand, pneumatic and power tools.

*Brookline, Massachusetts
Motor Equipment Operator #3 - Water and Sewer Division*

1

The employee has contact with other DPW employees and utility companies.

Errors could result in personal injury, injury to others, unsanitary conditions, poor public relations, delay or loss of service and damage to equipment.

RECOMMENDED MINIMUM QUALIFICATIONS

EDUCATION AND EXPERIENCE

High school diploma; one or two years of experience driving heavy equipment and trucks; experience working on a packer, performing snow and ice removal, and using heavy equipment; or an equivalent combination of education and experience.

ADDITIONAL REQUIREMENTS

Valid Commercial Driver's License, Class A

Valid MA Hoisting Engineer's License

KNOWLEDGE, ABILITY AND SKILL

Knowledge of operation and maintenance of heavy equipment, safety practices and the use of equipment at construction sites, and knowledge of excavation practices.

Ability to drive and operate a range of potentially dangerous heavy equipment safely in congested areas, recognize hazards and conditions surrounding the work environment, lift heavy objects and perform heavy manual labor.

Equipment operation and driving skills.

PHYSICAL REQUIREMENTS

Strenuous physical effort is required when performing field duties. The employee is frequently required to use hands to operate equipment, walk, stand, sit, speak, hear, reach with hands and arms, crouch, crawl, stoop, and climb. The employee is required to work in adverse weather conditions, continuously mount and dismount from a truck and lift or move items weighing up to 75 pounds. Vision requirements include the ability to read routine documents and operate vehicles.

This job description does not constitute an employment agreement between the employer and employee, and is subject to change by the employer, as the needs of the employer and requirements of the job change.



Town of Brookline

Massachusetts

Authorization To Hire Request Form

Send the completed form to Human Resources for review/approval. HR will send the approved form to the SB for placement on the agenda. This form is required for all full-time, regular and part-time regular positions. This excludes seasonal and temporary positions.

1. **Position Title:** MOTOR EQUIPMENT REPAIRPERSON Grade: LN-6

2. **Department:** PUBLIC WORKS Division: WATER & SEWER

3. Position Control #: 499000020 Prior Incumbent: KEVIN KAYE

a. Reason for Leaving: ☐ Resignation ☐ Retirement ☒ Other: PROMOTION

4. **Budgetary Information:**

Department Code: 4000 Budget Code: 4999EW40 % 100

☐ Grant Funded-Name: _____ ☐ Revolving Fund ☐ Enterprise Fund

☒ Full-Time: # of hours/week: ☐ 37 ☐ 37.5 ☒ 40 ☐ 42 or ☐ Part-Time hrs/week: _____

6. **Position Information:**

Summarize the primary function of this position.

Conducts repairs and maintenance on a variety of heavy and small equipment. Provides crew support in the field during regular and emergency operations.

7. I have considered the following alternatives to filling this position:

No alternatives considered other than a new hire.

11. Suggested sources for specialized recruitment advertising:

Human Resources with work with DPW to post the position widely using recruiting software.

13. **Signatures:**

Department Head: [Signature] Date: 7/22/26

Human Resources: [Signature] Date: 7/22/26

Town Administrator: _____ Date: _____

14. **Approvals:**

Date on SB Agenda: _____

Date Approved: _____

MOTOR EQUIPMENT REPAIRPERSON

PRIMARY PURPOSE

Skilled technical work in the maintenance and repair of vehicles and equipment; other related work, as required.

ESSENTIAL DUTIES AND RESPONSIBILITIES

The essential functions or duties listed below are illustrations of the various types of work performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.

Diagnose failures in equipment; troubleshoot problems and determine appropriate repairs; repair heavy and light trucks and automobiles; repair drilling machines, air motors, and other equipment.

Perform routine preventive maintenance and inspections of trucks and equipment, including checking brakes, suspensions, and steering components; change oil and check fluid and grease equipment; respond to equipment breakdowns and conduct field repairs; set up appointments with body shops for repairs resulting from accidents.

Diagnose and repair vehicles; inspect vehicles, including under-carriage, suspension systems, brakes and brakes lines, frames, cooling and heating systems, electrical systems and other parts; inspect air compressors (on-board and tag-along), jack hammers, cement mixers, bobcat, backhoe, crane truck, video camera truck, and other trucks, vans and cars.

Perform small engine repair, and repair gas and diesel engines, hydraulic and air brake systems.

Operate heavy equipment and trucks; use hand, pneumatic and power tools; lift transmissions, truck tires, and other truck parts.

Follow appropriate work practices and operating procedures; follow applicable safety practices and standards.

Perform similar or related work as required, or as situation dictates.

SUPERVISION

Works under the general direction of the Motor Equipment Repair Foreman, following department rules, regulations and policies to complete assignments; assignments are provided daily and work may be reviewed as completed.

WORK ENVIRONMENT

Most work is performed in a shop environment, and may be performed outside in field conditions; work involves exposure to constant loud noise and potential exposure to equipment with moving mechanical parts and hydraulic systems; field work may be performed in adverse weather conditions, with exposure to hazards associated with chemicals and use of heavy equipment. The workload is subject to seasonal fluctuations which are expected, but cannot be specifically anticipated. The employee may respond to emergency situations to repair equipment.

The employee operates a variety of special motor equipment and other equipment, such as trucks and other heavy and light equipment. The employee also operates various hand, and power tools, and pneumatic tools, including small and large vehicle lifts, jacks, jack stands, overhead cranes, torches, hydraulic press and computer diagnostic equipment.

The employee has contact with other departments and town employees.

Errors could result in personal injury, injury to others, delay or loss of service and damage to equipment.

RECOMMENDED MINIMUM QUALIFICATIONS

EDUCATION AND EXPERIENCE

High school diploma; additional technical training; two to three years of light and heavy truck and equipment maintenance and repair experience; or an equivalent combination of education and experience.

ADDITIONAL REQUIREMENTS

Valid Commercial Driver's License, Class A with Tanker Endorsement

Valid MA Hoisting Engineer's License 2A and 4E

KNOWLEDGE, ABILITY AND SKILL

Thorough knowledge of the techniques and principles of equipment maintenance and repair, equipment and truck systems, all phases of automotive, diesel, and electric vehicle diagnosis and equipment troubleshooting, safety practices and procedures, and computer diagnostic systems.

Ability to troubleshoot mechanical problems, develop maintenance solutions, operate heavy and other motor equipment, power tools and hand tools, read technical manuals and equipment specifications, work orders and instructions.

Mechanical skills; skill in assessing mechanical problems and finding solutions.

Ability to use computers, tablets, and phones to access records, process work orders, trouble shoot/diagnose issues, program/reprogram, and generate reports.

PHYSICAL REQUIREMENTS

Work is performed in shop conditions; strenuous physical effort is often required when performing maintenance and repair duties. The employee is frequently required to use hands to operate equipment, walk, stand, sit, speak, hear, reach with hands and arms, balance, crouch, crawl, stoop, and climb, and lift or move items weighing up to 100 pounds. Stamina is required to work in adverse weather conditions. Vision requirements include the ability to read routine and technical documents, operate vehicles and equipment and use a computer.

This job description does not constitute an employment agreement between the employer and employee, and is subject to change by the employer, as the needs of the employer and requirements of the job change.

Brookline, Massachusetts
Motor Equipment Repairperson (Mechanic) - Water and Sewer Division



Town of Brookline

Massachusetts

Authorization To Hire Request Form

Send the completed form to Human Resources for review/approval. HR will send the approved form to the SB for placement on the agenda. This form is required for all full-time, regular and part-time regular positions. This excludes seasonal and temporary positions.

1. **Position Title:** UTILITIES WORKING FOREPERSON Grade: LN-6

2. **Department:** PUBLIC WORKS Division: WATER & SEWER

3. Position Control #: 499000017 Prior Incumbent: JORGE LEON

a. Reason for Leaving: ☐ Resignation ☐ Retirement ☒ Other: TERMINATION

4. **Budgetary Information:**

Department Code: 4000 Budget Code: 4999EW40 % 100

☐ Grant Funded-Name: _____ ☐ Revolving Fund ☐ Enterprise Fund

☒ Full-Time: # of hours/week: ☐ 37 ☐ 37.5 ☒ 40 ☐ 42 or ☐ Part-Time hrs/week: _____

6. **Position Information:**

Summarize the primary function of this position.

Oversee field crews for repairs and maintenance of water mains, service pipes, hydrants, valves,
sewer & drain lines, and manholes. Operates various hand/power tools and heavy construction equipment.

7. I have considered the following alternatives to filling this position:

No alternatives considered other than a new hire.

11. Suggested sources for specialized recruitment advertising:

Human Resources with work with DPW to post the position widely using recruiting software.

13. **Signatures:**

Department Head: _____	Date: <u>7/22/26</u>
Human Resources: _____	Date: <u>7/22/26</u>
Town Administrator: _____	Date: _____

14. **Approvals:**

Date on SB Agenda: _____	Date Approved: _____
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WORKING UTILITIES FOREPERSON

PRIMARY PURPOSE

Supervisory and manual work relating to the repair and maintenance of the water, sewer, and drainage systems; other related work, as required.

ESSENTIAL DUTIES AND RESPONSIBILITIES

The essential functions or duties listed below are illustrations of the various types of work performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.

Receive work assignments and assign personnel and equipment; instruct personnel on assigned jobs; direct the activities of a work crew performing repair and reconstruction of catch basins, manholes, drains and sewer pipes; clean catch basins; service and test hydrants and replace and repair, as necessary; direct the repair and replacement of sections of water mains and installation of service pipes.

Perform inspection and troubleshooting work, identifying sewer line blockages and correct problems using combination Jet & Vactor truck or rodding machine.

Perform and direct the performance of general maintenance and cleaning of water related storage facilities, reservoirs and associated grounds; cut grass, rake leaves and shovel snow; maintain hydrant gates and water main gates.

Work with contractors on new construction of water, sewer, and drainage facilities; repair and maintain trenches.

Ensure that job sites are appropriate and safely organized and all workzone and trench safety procedures and practices are followed; ensure that road signs and barricades are properly placed on roadways and during night jobs, ensure that proper light equipment is available

May be assigned specific responsibilities, such as operating computerized equipment used to inspect sewer and drain pipes and baiting catch basins with insecticides to control mosquito population.

Prepare "as built" drawings on work orders to facilitate record keeping; complete data entry of work orders for inventory control and recording time and materials use.

Perform snow removal tasks as assigned.

Respond to emergencies relating to sewer and drain problems and water leaks.

Perform similar or related work as required, or as situation dictates.

SUPERVISION

Works under the general direction of the Division Foreman and Utilities Foreman, following department rules, regulations and policies to complete assignments; the supervisor provides general oral instructions and suggestions; assignments are provided daily and weekly; work is reviewed as completed.

SUPERVISORY RESPONSIBILITIES

Supervises work crews of up to 10 full-time employees.

WORK ENVIRONMENT

Work is performed outside in field conditions, with exposure to constant loud noise and potential exposure to equipment with moving mechanical parts; work may be performed in adverse weather conditions, with exposure to hazards associated with chemicals, use of heavy equipment and confined spaces. The workload is subject to seasonal fluctuations. The employee responds to weather and other water, sewer, and drain related emergency situations.

The employee operates hand, power and pneumatic tools, light and heavy trucks, light and heavy equipment, and standard office equipment.

The employee has contact with other DPW personnel to coordinate projects, other town departments, and the general public.

Errors could result in personal injury, injury to others, monetary loss, poor public relations, delay or loss of service and damage to equipment.

RECOMMENDED MINIMUM QUALIFICATIONS**EDUCATION AND EXPERIENCE**

High school diploma; additional technical training; five years of experience working in water and sewer maintenance and construction, snow and ice removal, and construction related work; supervisory experience desirable; or an equivalent combination of education and experience.

ADDITIONAL REQUIREMENT

Valid Massachusetts Commercial Driver's License, Class B
Valid Massachusetts Hoisting Engineer's License 2A

KNOWLEDGE, ABILITY AND SKILL

Thorough knowledge of water, sewer and drainage systems and the components of those systems, techniques and principles of maintenance of water, sewer and drainage systems, excavation of utility trenches, oversight of construction and repair work, safety practices and procedures, and supervisory practices.

*Brookline, Massachusetts
Division Foreperson - Water and Sewer Division*

2

Ability to direct work, set priorities, follow written and oral instructions, communicate effectively with employees, instruct personnel on work tasks, determine equipment, materials and personnel required to perform job assignments, and read and interpret work instructions.

Supervisory skills; skill in assessing maintenance and repair problems; skill in operating heavy equipment.

PHYSICAL REQUIREMENTS

Some work is performed in an office; most work is performed in the field; moderate physical effort is often required when performing field duties. The employee is frequently required to use hands, walk, stand, sit, hear, speak, and lift or move items weighing up to 100 pounds. The employee is required to work in adverse weather conditions. Vision requirements include the ability to read routine documents, operate vehicles and use a computer.

This job description does not constitute an employment agreement between the employer and employee, and is subject to change by the employer, as the needs of the employer and requirements of the job change.



Town of Brookline

Massachusetts

Authorization To Hire Request Form

Send the completed form to Human Resources for review/approval. HR will send the approved form to the SB for placement on the agenda. This form is required for all full-time, regular and part-time regular positions. This excludes seasonal and temporary positions.

1. **Position Title:** Traffic & Fire Alarm Supervisor Grade: GN-13

2. **Department:** Public Works Division: Highway & Sanitation

3. Position Control #: 420000004 Prior Incumbent: Thomas Kelley

a. Reason for Leaving: ☐ Resignation ☐ Retirement ☒ Other: Separation

4. **Budgetary Information:**

Department Code: 400 Budget Code: 42004250 510101 % 100

☐ Grant Funded-Name: _____ ☐ Revolving Fund ☐ Enterprise Fund

☒ Full-Time: # of hours/week: ☐ 37 ☐ 37.5 ☒ 40 ☐ 42 or ☐ Part-Time hrs/week: _____

6. **Position Information:**

Summarize the primary function of this position.

Administrative, supervisory and manual work related to the installation and maintenance of traffic and regulatory signs, maintenance of pavement markings, oversight of parking meters, fire boxes, and assets within the ROW.

7. I have considered the following alternatives to filling this position:

No alternatives considered other than new hire.

11. Suggested sources for specialized recruitment advertising:

Human Resources will work with DPW to post the position widely with Diversity Jobs, Indeed & Zip-Recruiter.

13. **Signatures:**

Department Head: [Signature] Date: 7/22/26

Human Resources: [Signature] Date: 7/22/26

Town Administrator: _____ Date: _____

14. **Approvals:**

Date on SB Agenda: _____

Date Approved: _____

TRAFFIC AND FIRE ALARM SYSTEM SUPERVISOR

PRIMARY PURPOSE

Administrative, supervisory and manual work related to the installation and maintenance of traffic and regulatory signs, maintenance of pavement markings, and oversight of the installation and maintenance of the municipal fire alarm system; other related work, as required.

ESSENTIAL DUTIES AND RESPONSIBILITIES

The essential functions or duties listed below are illustrations of the various types of work performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.

Coordinate traffic system personnel and contractors concerned with the installation, maintenance, fabrication and repair of signs, traffic signals, pavement markings, street lights and maintenance of parking meters; prepare reports.

Coordinate and oversee municipal fire alarm personnel and contractors concerned with the installation, maintenance, and repair of the municipal fire alarm system

Oversee the maintenance of traffic signals, including work of maintenance contractor, and respond to maintenance requests, as necessary.

Maintain the street and roadway signs, including street name signs and roadway regulatory signs; install sign posts and signs in accordance with appropriate standards and guidelines; complete work orders generated by the Transportation Division.

Maintain electronic parking meters, including data entry in the meter management software; oversee the maintenance of pavement marking performed by traffic system personnel or pavement marking contractors.

Maintain ornamental street lights and oversee the maintenance of utility street lights by a contractor; dispatch personnel to clean graffiti in commercial or school areas; maintain sandwich boards (located in high traffic areas describing events in the town); assist with elections by setting up and dismantling voting equipment; coordinate crews for road closures and detours for annual events.

Ensure that appropriate work practices and operating procedures are followed to ensure compliance with applicable safety practices and standards.

Perform similar or related work as required, or as situation dictates.

SUPERVISION

Works under the general supervision of the Operations Manager, following department rules, regulations and policies to complete assignments.

SUPERVISORY RESPONSIBILITIES

*Brookline, Massachusetts
Traffic and Fire Alarm System Supervisor
Highway & Sanitation Division*

1

Generally supervises nine full-time employees.

WORK ENVIRONMENT

Approximately 50 percent of work is performed in the office and 50 percent outside in field conditions; work involves exposure to loud noise and potential exposure to traffic and equipment with moving mechanical parts; work may be performed in adverse weather conditions. The workload is subject to weather emergencies and emergency situations to repair equipment.

The employee operates a light truck and heavy motor equipment, various hand, power, and pneumatic tools, testing equipment, and standard office equipment.

The employee generally has contact with other departments, the general public, vendors, and contractors.

Errors could result in personal injury, injury to others, delay or loss of service and damage to equipment.

RECOMMENDED MINIMUM QUALIFICATIONS

EDUCATION AND EXPERIENCE

High school diploma; additional technical training; five years of experience maintaining and repairing traffic signal lights; knowledge of municipal fire alarm systems, supervisory experience desirable; or an equivalent combination of education and experience.

ADDITIONAL REQUIREMENTS

Valid Massachusetts Commercial Driver's License, Class B

Valid Massachusetts Hoisting Engineer's License

Appropriate certifications from the International Municipal Signal Association (Work Zone Safety, Signs and Markings Level I, and Signs and Markings Level II)

Licensed electrician desired

KNOWLEDGE, ABILITY AND SKILL

Comprehensive knowledge of the principles of traffic control, signals and street markings, the Manual of Uniform Traffic Control Devices, the repair of parking meters, equipment and truck systems; knowledge of municipal fire alarm systems and electrical systems, knowledge of computer applications associated with traffic signaling.

Ability to distribute work assignments, inspect work and give advice, troubleshoot and diagnose problems, oversee the work of contractors, develop maintenance solutions, operate heavy and other motor equipment, effectively communicate with the public, adapt new technology to work situations, read and interpret engineering plans, diagrams, drawings and operating manuals, knowledge of the electrical code.

Supervisory, problem-solving, mechanical, and computer skills.

PHYSICAL REQUIREMENTS

*Brookline, Massachusetts
Traffic and Fire Alarm System Supervisor
Highway & Sanitation Division*

2

Work is performed in an office and in outdoor conditions; strenuous physical effort is often required when performing maintenance and repair duties. The employee is routinely required to use hands to operate equipment, walk, stand, sit, speak, hear, reach with hands and arms, balance, crouch, crawl, stoop, and climb and lift or move items weighing up to 100 pounds, such as bags of cement, traffic signal poles, street lights and parking meters. Stamina is required to work in adverse weather conditions. Vision requirements include the ability to read routine and technical documents, operate vehicles and equipment and use a computer.

This job description does not constitute an employment agreement between the employer and employee, and is subject to change by the employer, as the needs of the employer and requirements of the job change.



Town of Brookline

Massachusetts

Authorization To Hire Request Form

Send the completed form to Human Resources for review/approval. HR will send the approved form to the SB for placement on the agenda. This form is required for all full-time, regular and part-time regular positions. This excludes seasonal and temporary positions.

1. **Position Title:** Signal Maintainer **Grade:** G8

2. **Department:** Public Works **Division:** Highway & Sanitation

3. **Position Control #:** 420000007 **Prior Incumbent:** Brian Slavin

a. Reason for Leaving: ☐ Resignation ☒ Retirement ☐ Other: _____

4. **Budgetary Information:**

Department Code: 400 Budget Code: 42004250-510101 % 100

☐ Grant Funded-Name: _____ ☐ Revolving Fund ☐ Enterprise Fund

☒ Full-Time: # of hours/week: ☐ 37 ☐ 37.5 ☒ 40 ☐ 42 or ☐ Part-Time hrs/week: _____

6. **Position Information:**

Summarize the primary function of this position.

Manual and electrical work relating to the municipal traffic signal and safety systems, roadway, street, and public grounds lighting, EV charging, and fire alarm systems

7. I have considered the following alternatives to filling this position:

No alternatives considered other than new hire.

11. Suggested sources for specialized recruitment advertising:

Human Resources will work with DPW to post the position widely with Diversity Jobs, Indeed & Zip-Recruiter.

13. **Signatures:**

Department Head: _____	Date: <u>7/22/26</u>
Human Resources: _____	Date: <u>7/22/26</u>
Town Administrator: _____	Date: _____

14. **Approvals:**

Date on SB Agenda: _____	Date Approved: _____
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SIGNAL MAINTAINER

DEPT/DIV: Public Works/Highway	PAY GRADE: GN8	FULL/PART TIME: Full Time
FLSA STATUS:		HOURS PER WEEK:
BARGAINING UNIT/GROUP:		UPDATED AS OF: 12/01/2025

POSITION SUMMARY:

Performs manual and electrical work relating to the maintenance of the municipal fire alarm system and street lights and traffic system; performs all other duties as required.

ESSENTIAL DUTIES:

An employee in this position may be called upon to do any or all of the following essential functions. These examples do not include all of the duties which the employee may be expected to perform. To perform this job successfully, an individual must be able to perform each essential function satisfactorily, with or without reasonable accommodation(s).

- Assists in the maintenance of the fire alarm signal service plant.
- Inspects, installs, repairs, and tests fire alarm signal lines and related equipment.
- Locates and corrects aerial or underground cable problems.
- Installs pole line hardware and fuse boxes and lighting arrester.
- Checks and adjusts the timing on fire alarm master box and tests the fire alarm system.
- Performs system maintenance such as cleaning boxes, removing graffiti and changing light bulbs.
- Sandblasts and paints fire boxes, junction boxes, and fire alarm related equipment.
- Performs electrical work and repairs in fire stations on components such as notifying circuits, VOC alarm systems, and small electrical installation (switches and receptacles).
- Installs, repairs and maintains portable and mobile radios and distributes radios and batteries.
- Performs street lighting repairs and works with the contractor during repairs and outages.
- Performs street lighting repairs and works with the contractor during repairs and outages.
- Installs, maintains, and oversees traffic signals, street/public lighting, and wireless fire boxes; performs cable installations, equipment testing, painting, and coordinates alarm system access.
- Responds to traffic signal malfunction requests at all hours and works with contractor while troubleshooting outages and making repairs.
- Operates standard office equipment, hand and power tools, ladders, light trucks and light equipment, including, but not limited to, electric jack hammers, bucket truck, sandblaster, voltage meter, portable generators, and cable take-up reels.
- Washes and cleans equipment and vehicles and assists in keeping work areas clean and orderly.
- Follows safe work practices and adheres to policies, procedures, ordinances as adopted.
- Demonstrates professionalism and respect in all interactions with employees, residents, visitors and the general public.
- Works collaboratively with others to address and resolve concerns, provide assistance, and support the overall functions of the department and positive community relations.
- Keeps up to date on industry trends and maintains required training, licensure and/or certification(s).

POSITION SCOPE:

Work is distinguished by the ability to diagnose, troubleshoot and repair specialized alarm and traffic system equipment while adhering to applicable safety procedures and technical standards as errors could result in critical personal injury, injury to others, delays in service or damage to equipment.

SIGNAL MAINTAINER

Work is performed under general direction following department rules, regulations and policies to complete assignments. Assignments are provided daily, and work is reviewed for progress and results.

Contact with others includes internal and external communications generally on routine matters such as furnishing or obtaining information.

Position has no access to confidential or privileged information.

SUPERVISION SCOPE:

General direction is received from the assigned supervisor; position may monitor contractors performing work on behalf of the Town.

EDUCATION, TRAINING AND EXPERIENCE:

Extensive technical or specialized training such as that which would be acquired by an Associate's Degree or two years of technical school and four years of electrical maintenance experience; or, an equivalent combination of training and experience.

LICENSE AND/OR CERTIFICATION:

- International Municipal Signal Association Work Zoning Safety Training
- Valid Commercial Driver's License, Class B
- Valid MA Hoisting Engineer's License

KNOWLEDGE:

Tools and techniques for diagnosing and performing electrical maintenance work; practices, protocols and electrical codes applicable to electrical work; applicable safety practices and procedures.

SKILLS:

Operating and using applicable equipment and power and hand tools appropriate for assigned tasks; troubleshooting electrical system issues and identifying repair or maintenance solutions; reading and using diagrams and schematics; communicating verbally and in writing consistent with position expectations; following written or verbal instructions; performing strenuous manual labor.

PHYSICAL DEMANDS AND WORK ENVIRONMENT:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodation(s) may be made to enable individuals with disabilities to perform the essential job functions in a manner that does not pose a direct threat to the health or safety of the employee or others in the workplace.

The physical requirement for this position regularly include the ability to sit, stand, walk, talk, and hear; handle, feel, or operate objects, tools, controls and equipment; and reach with hands and arms. The employee is regularly required to bend, climb, balance, stoop, kneel, crouch, or crawl; access or reach difficult places and negotiate varied terrain. The employee is occasionally required to lift and/or move up to sixty (60) pounds. Vision requirements include the ability to read documents and operate equipment and vehicles.

The work environment for the position is regularly in a maintenance shop environment as well as regularly outdoors and frequently near moving traffic, around or in moving or mechanical equipment, and occasionally in confined spaces. The employee may frequently be exposed to adverse weather and other

SIGNAL MAINTAINER

unpleasant conditions such as heat, cold, wetness, and humidity, dim or bright lights, dust, odors, noise and electrical current.

The Town of Brookline is an equal opportunity employer and prohibits discrimination and harassment of any kind based on any protected characteristic as outlined by federal, state, or local laws. This policy applies to all employment practices.

TRAFFIC SIGNALS AND MUNICIPAL LIGHTING MANAGER

Electric Code, the Electrical Safety Orders of the Division of Industrial Safety, and Manual on Uniform Traffic Control Devices (MUTCD) standards and specifications.

SKILLS:

Ability to climb ladders, obtain certification to operate a bucket truck, and work in confined spaces; supervise personnel and make work assignments; troubleshoot problems and identify solutions; use diagrams and schematics; and keep records of all asset work. Ability to read, interpret, and work from plans, detail drawings, and specifications, including but not limited to blueprints and wiring and electronic circuit diagrams. Excellent problem-solving, communication, supervisory, analytical, planning, and design skills.

PHYSICAL DEMANDS AND WORK ENVIRONMENT:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodation(s) may be made to enable individuals with disabilities to perform the essential job functions in a manner that does not pose a direct threat to the health or safety of the employee or others in the workplace.

Work is performed in an office or shop environment and in the field; moderate physical effort is often required when performing field duties. The employee is required to speak and hear, walk, stand, and lift or move items weighing up to sixty (60) pounds. The employee may be required to work in adverse weather conditions and at moderate heights when performing installations or making repairs. Vision requirements include the ability to read routine documents and operate equipment and vehicles.

Work is performed in a shop setting and outside in field conditions, with exposure to constant loud noise and potential exposure to equipment and hazards associated with electricity. The workload is generally stable; the employee responds to knock-downs or open circuits in off hours. The employee operates standard office equipment, hand and power tools, light trucks, and light equipment, including electric jackhammers, a bucket truck, a sandblaster, a voltage meter, portable generators, cable take-up reels, and other equipment. The employee has regular contact with contractors and other Town departments.

The Town of Brookline is an equal opportunity employer and prohibits discrimination and harassment of any kind based on any protected characteristic as outlined by federal, state, or local laws. This policy applies to all employment practices.

Memorandum

To: Select Board

From: Alexandra Vecchio, Sustainability & Natural Resources Director
Shelly Dein, Deputy Director of Sustainability

Date: August 6, 2026

Re: Accepting MassDOER Green Communities Competitive Grant

Cc: Erin Chute, Public Works Commissioner
Charlie Simmons, Director of Public Buildings Division
Charles Carey, Town Administrator

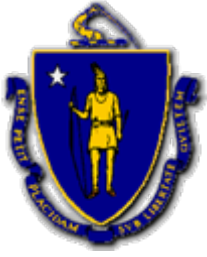
The Department of Public Works Sustainability and Natural Resources Division respectfully requests that the Select Board accept a grant from the Commonwealth of Massachusetts - Department of Energy Resources in the amount of \$125,000 to support a group of approved energy-conservation measures and authorize the Town Administrator to sign all necessary contractual, fiscal and electronic funds transfer agreements associated with the grant.

The Sustainability and Natural Resources Division applied for and was awarded a Green Communities Competitive Grant, to reduce the Town's energy use. Administered by the Massachusetts Department of Energy Resources, this Green Communities grant will support (a) exterior LED lighting installations at the Municipal Service Center, Brookline HS, and Old Lincoln School, (b) heat pump installation in certain Brookline High School classrooms, and (c) pipe insulation at the Unified Arts Building and Brookline High School to reduce energy loss.

This grant, totaling \$125,000, will also be combined with utility incentives of \$77,942.50. The remaining cost will be funded through Public Building Division's capital budget.

This is the first time the Town has received an energy reduction grant through the Green Communities program in seven years. This achievement marks an important step towards reducing the town's energy use and greenhouse gas emissions, and achieving our climate action goals as outlined in the recently adopted Climate Action and Resiliency Plan. These actions are expected to save 922 MMBTUs annually and 50 GHG metric tons annually.

The Sustainability and Natural Resources Division respectfully requests the Select Board accept the DOER Green Communities Competitive Grant of \$125,000 and authorize the Town Administrator to sign all necessary contractual, fiscal, and electronic fund transfer agreements associated with this grant.



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF
ENERGY AND ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENERGY RESOURCES
100 CAMBRIDGE ST., 9th FLOOR
BOSTON, MA 02114
Telephone: 617-626-7300

Maura T. Healey
Governor

Kimberley Driscoll
Lt. Governor

Rebecca L. Tepper
Secretary

Elizabeth Mahony
Commissioner

July 29, 2026

Chas (Charles) Carey, Town Administrator
Town of Brookline
333 Washington Street
Brookline, MA 02127

Dear Town Administrator Chas (Charles) Carey,

I am pleased to inform you that the Department of Energy Resources (DOER) Green Communities Division has approved an award of \$125,000.00 for the following projects proposed in the Town of Brookline Green Communities Competitive Grant application.

List of projects funded:

- \$31,680, High School — Heat Pump system
- \$9,085, DPW — LED Lighting
- \$12,219, High School — LED Lighting
- \$4,180, Old Lincoln School — LED Lighting
- \$56,438, Unified Arts Building — Pipe insulation
- \$11,398, High School – Pipe insulation

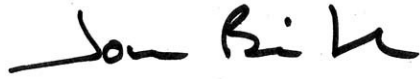
The Division reviewed Brookline's grant application and has determined these are viable projects that meet the eligibility requirements of our Competitive Grant program. **Please note that, due to the competitive nature of this grant program, the use of these funds is restricted to the specifically approved projects listed above.**

A member of the Green Communities Division will follow up with the contacts listed in your competitive grant application to discuss the next steps, including coordination of the grant contract process. We congratulate you on your grant award and applaud your efforts to create a cleaner energy future for your community and the Commonwealth as a whole.

We request that you hold off on publicizing your award until DOER formally announces the grant awards.

Please do not hesitate to contact me at 617-823-4029 or by email at Joanne.Bissetta@mass.gov with any questions you may have regarding your grant award.

Sincerely,

A handwritten signature in black ink, appearing to read "Joanne Bissetta". The signature is fluid and cursive, with the first name "Joanne" written in a larger, more prominent script than the last name "Bissetta".

Joanne Bissetta, Director
Green Communities Division

Cc:

David Pearlman, Chair, Select Board
Alexandra Vecchio, Sustainability Director
Lincoln Heineman, Finance Director-Treasurer/Collector
Dillan Patel, Northeast Regional Coordinator

COMMONWEALTH OF MASSACHUSETTS | STANDARD CONTRACT FORM



This form is jointly issued and published by the Office of the Comptroller, the Executive Office for Administration and Finance, and the Operational Services Division as the default contract for all Commonwealth Departments when another form is not prescribed by regulation or policy. The Commonwealth deems void any changes made on or by attachment (in the form of addendum, engagement letters, contract forms or invoice terms) to the terms in this published form or to the [Standard Contract Form Instructions and Contractor Certifications](#), the [Commonwealth Terms and Conditions](#), the [Commonwealth Terms and Conditions for Human and Social Services](#), or the [Commonwealth IT Terms and Conditions](#) which are incorporated by reference herein. Additional non-conflicting terms may be added by Attachment. Contractors are required to access forms at macomptroller.org/forms or mass.gov/lists/osd-forms.

CONTRACTOR INFORMATION		COMMONWEALTH INFORMATION	
Contractor Legal Name Town of Brookline		Department ENE100	Mosaic Department Code
d/b/a		Contract Manager Name Caitlin Hart	
Legal Address As entered on Form W-9 or Form W-4 333 Washington Street, Brookline, MA 02127		Business Mailing Address 100 Cambridge Street, 9th Floor, Boston, MA 02114	
Contract Manager Name Chas (Charles) Carey		Billing Address If Different	
Phone 617-730-2054	Fax 617-730-2200	Phone 617-626-7319	Fax
Email ccarey@brooklinema.gov		Email GC-Grants@mass.gov	
Vendor Code VC 6000191738		Mosaic Transaction ID(s)	
Vendor Code Address ID e.g. "AD001". AD001		RFR/Procurement or Other ID Number DOER PON-ENE-2026-001	
Note: The Address ID must be set up for Electronic Funds Transfer (EFT) payments.			
☒ NEW CONTRACT		☐ CONTRACT AMENDMENT	
Procurement or Exception Type (Check one option only)		Current Contract End Date PRIOR to Amendment	
☐ Statewide Contract (OSD or an OSD-designated department.) ☐ Collective Purchase (Attach OSD approval, scope, and budget.) ☒ Department Procurement - Includes all Grants 815 CMR 2.00 . (Attach Solicitation Notice or RFR, and Response or other procurement supporting documentation.) ☐ Emergency Contract (Attach justification for emergency, scope, and budget.) ☐ Contract Employee (Attach Employee Status Form, scope, and budget.) ☐ Interim Contract with new Contractor (Attach justification for Interim Contract and updated scope/budget.) ☐ Other Procurement Exception (Attach authorizing language, legislation with specific exemption or earmark, and exception justification, scope, and budget.)		Amendment Amount Or Enter "No Change" Amendment Type Check one option only. Attach details of amendment changes. ☐ Amendment to Date, Scope, or Budget (Attach updated scope and budget.) ☐ Interim Contract with Current Contractor (Attach justification for Interim Contract and updated scope/budget.) ☐ Contract Employee (Attach any updates to scope or budget.) ☐ Other Procurement Exception (Attach authorizing language/justification and updated scope/budget.)	
TERMS AND CONDITIONS			
The Standard Contract Form Instructions and Contractor Certifications and the following document are incorporated by reference into this Contract and are legally binding. Check ONE option:			
☒ Commonwealth Terms and Conditions ☐ Commonwealth Terms and Conditions for Human and Social Services ☐ Commonwealth IT Terms and Conditions			
COMPENSATION			
Check ONE option.			
The Department certifies that payments for authorized performance accepted in accordance with the terms of this Contract will be supported in the state accounting system by sufficient appropriations or other non-appropriated funds, subject to intercept for Commonwealth owed debts under 815 CMR 9.00 .			
☐ Rate Contract (No Maximum Obligation). (Attach details of all rates, units, calculations, conditions or terms and any changes if rates or terms are being amended.) ☒ Maximum Obligation Contract. Total maximum obligation for total duration of this contract (or new total if contract is being amended): \$125,000.00			

Mosaic Transaction ID(s)

PROMPT PAYMENT DISCOUNTS (PPD)

Commonwealth payments are issued through Electronic Funds Transfer (EFT) 45 days from invoice receipt. See [Prompt Pay Discounts Policy](#).

Contractors requesting accelerated payments must identify a PPD as follows:

Payment issued within:	10 days	% PPD.
	15 days	% PPD.
	20 days	% PPD.
	30 days	% PPD.

If PPD percentages are left blank, identify reason:

☐ Statutory/legal	☐ Ready Payments (M.G.L. c. 29, § 23A)	☒ Agree to standard 45-day cycle	☐ Only initial payment
--	---	--	---

BRIEF DESCRIPTION OF CONTRACT PERFORMANCE or REASON FOR AMENDMENT

Enter the Contract title, purpose, fiscal year(s) and a detailed description of the scope of performance or what is being amended for a Contract Amendment.
Attach all supporting documentation and justifications.

This is a contract to award a grant to the Town of Brookline for fiscal years FY2027-2029 under the Green Communities Competitive Grant Program in the amount of One Hundred Twenty Five Thousand Dollars and No Cents (\$125,000). The grant is intended to fund energy conservation measures, heat pump, LED lighting, and pipe insulation, in municipal facilities including High School, DPW, Old Lincoln School, and Unified Arts Building to be provided for the benefit of, and subject to the direction and oversight of, the Grantee as detailed in Attachment C.

SUPPLIER DIVERSITY PROGRAM (SDP) PLAN

Does the Supplier Diversity Program apply?

- ☐ YES If YES, the Contractor's annual SDP commitment for this Contract is
- ☒ NO If NO, and the department is an Executive Department, enter the appropriate exemption:

ANTICIPATED START DATE (Complete ONE option only.)

The Department and Contractor certify for this Contract, or Contract Amendment, that Contract obligations:

- ☒ 1. may be incurred as of the Effective Date (latest signature date below) and no obligations have been incurred prior to the Effective Date.
- ☐ 2. may be incurred as of _____, 20____, a date **LATER** than the Effective Date below and **no** obligations have been incurred **prior** to the Effective Date.
- ☐ 3. were incurred as of _____, 20____, a date **PRIOR** to the Effective Date below, and the parties agree that payments for any obligations incurred prior to the Effective Date are authorized to be made either as settlement payments or as authorized reimbursement payments, and that the details and circumstances of all obligations under this Contract are attached and incorporated into this Contract. Acceptance of payments forever releases the Commonwealth from further claims related to these obligations.

CONTRACT END DATE

Contract performance shall terminate as of **September 30, 2028**, with no new obligations being incurred after this date unless the Contract is properly amended, provided that the terms of this Contract and performance expectations and obligations shall survive its termination for the purpose of resolving any claim or dispute, for completing any negotiated terms and warranties, to allow any close out or transition performance, reporting, invoicing or final payments, or during any lapse between amendments.

CERTIFICATIONS

Notwithstanding verbal or other representations by the parties, the "**Effective Date**" of this Contract or Amendment shall be the latest date that this Contract or Amendment has been executed by an authorized signatory of the Contractor, the Department, or a later Contract or Amendment Start Date specified above, subject to any required approvals. The Contractor certifies that they have accessed and reviewed all documents incorporated by reference as electronically published and the Contractor makes all certifications required under the Standard Contract Form Instructions and Contractor Certifications under the pains and penalties of perjury, and further agrees to provide any required documentation upon request to support compliance, and agrees that all terms governing performance of this Contract and doing business in Massachusetts are attached or incorporated by reference herein according to the following hierarchy of document precedence, the applicable Commonwealth Terms and Conditions, this Standard Contract Form, the Standard Contract Form Instructions and Contractor Certifications, the Request for Response (RFR) or other solicitation, the Contractor's Response (excluding any language stricken by a Department as unacceptable, and additional negotiated terms, provided that additional negotiated terms will take precedence over the relevant terms in the RFR and the Contractor's Response only if made using the process outlined in [801 CMR 21.07](#), incorporated herein, provided that any amended RFR or Response terms result in best value, lower costs, or a more cost effective Contract.

AUTHORIZING SIGNATURE FOR THE CONTRACTOR

Signature and date must be captured at time of signature.

Signature	Date
Print Name Chas (Charles) Carey	Print Title Town Administrator

AUTHORIZING SIGNATURE FOR THE DEPARTMENT

Signature and date must be captured at time of signature.

Signature	Date
Print Name	Print Title

BACKGROUND

1. The DOER has selected the Grantee to receive Green Communities grant funds for projects described in the Grantee’s response to the PON.
2. The DOER approves the expenditure of funds as described in Attachment D (Budget) for the work planned and described in Attachment C (Scope of Grant Award).
3. The Grantee agrees to complete the projects described in the Scope of Grant Award (collectively referred to as “the Project”).

This agreement (Agreement) incorporates and makes part hereof certain attachments and forms which have been provided and accepted by the parties as part to this Agreement. Copies of such agreed upon attachments and forms are attached hereto set forth in their entirety and made part of this Agreement by reference:

THE COMMONWEALTH STANDARD CONTRACT FORM

BACKGROUND

ATTACHMENT A: GREEN COMMUNITIES COMPETITIVE GRANT APPLICATION

MATERIALS

ATTACHMENT B: GRANTEE RESPONSE

ATTACHMENT C: SCOPE OF GRANT AWARD

ATTACHMENT D: BUDGET

THE COMMONWEALTH OF MASSACHUSETTS STANDARD CONTRACT ATTACHMENTS

1. COMMONWEALTH TERMS AND CONDITIONS
2. GRANTEE AUTHORIZED SIGNATORY LISTING
3. W-9 FORM
4. EFT

ATTACHMENT A – Green Communities Competitive Grant Application Materials

The Program Opportunity Notice (PON) was provided to the municipality via Commbuys, the Commonwealth's procurement website.

DOER PON-ENE-2026-001 Green Communities Competitive Grant Program Opportunity Notice

Bid # **BD-26-1041-ENE01-ENE01-120677**

ATTACHMENT B – Grantee Response

(All documents listed below are available to DOER fiscal staff at:

<https://massdoer.imeetcentral.com/greencommunities/dbapp=7ary4jojv3xnh83ficwf09s252274943&ac=v&view=1266925>

1. competitive grant table cpt14 amended jan 2026.xlsx
2. certification of application.pdf
3. grant worksheets cpt14 amended jan 2026.docx
4. brookline hs comprehensive building assessment.pdf
5. brookline hs work order gym doors weatherization.pdf
6. dpw lighting supporting documents except spec sheets.pdf
7. brookline hs lighting supporting documents except spec sheets.pdf
8. old lincoln school lighting supporting documents except spec sheets.pdf
9. led lighting + controls specs for dpw bhs old lincoln.pdf
10. brookline hs heat pumps supporting documents.pdf
11. unified arts building pipe accessory insulation documentation.pdf
12. brookline hs pipe accessory insulation documentation.pdf
13. brookline hs heat pump balance point from aecom.xlsx
14. rebate commitment letter templatev3.pdf

ATTACHMENT C – SCOPE OF GRANT AWARD

***COMMONWEALTH OF MASSACHUSETTS
SCOPE OF GRANT AWARD AGREEMENT***

**By and Between
Department of Energy Resources
and
Town of Brookline**

SCOPE OF GRANT AWARD

1. Overview

The purpose of this contract is to award a grant to the Town of Brookline (Grantee) for a maximum obligation amount not to exceed One Hundred Twenty Five Thousand Dollars and No Cents (\$125,000.00) to fund energy conservation measures, heat pump, LED lighting, and pipe insulation, in municipal facilities including High School, DPW, Old Lincoln School, and Unified Arts Building, as more particularly described in Attachment B (Project). In connection with the above referenced grant, the Grantee requested One Hundred Twenty Five Thousand Dollars and No Cents (\$125,000.00) in public funding out of Four Hundred Forty Four Thousand Twenty Three Dollars and Ninety Two Cents (\$444,023.92) in total project costs for energy conservation measures listed in attachment B. The energy conservation measures funded are heat pump, LED lighting, and pipe insulation.

The Grantee is responsible for informing the Department of Energy Resources (DOER) of all eligible expenses and Project deliverables as compared to the original proposal as set forth in Attachment B.

Note that no changes in Project scope can occur or proceed without the prior written authorization from the DOER.

2. Contingencies

The Grantee shall provide to the DOER's satisfaction, the required information as stated below as applicable to the Project(s), as soon as the information becomes available.

1. Documentation that the municipality has met, teleconferenced, or had an email exchange with its gas and/or electric public utility representatives regarding the availability of utility incentives for any eligible energy conservation or efficiency measures.
2. Documentation of having **applied for all gas and electric rebates** provided for eligible energy conservation or efficiency measures. The Grantee is required to have documentation from utilities regarding rebates before selection and installation of products.

3. Procurement

All procurement contracts and subcontracts entered into by public agencies and governmental bodies shall be governed by and in accordance with Massachusetts General Laws. Where applicable, such procurements, contracts and subcontracts shall be governed by the all provisions of either M.G.L. c.25A, § 11C or §11I, M.G.L. c.30B, or M.G.L c.149. All designer selection for building projects shall be governed by M.G.L. c.7, §§38A1/2 - O.

4. Program Schedule

The following are milestones to ensure timely completion of the Project(s). If the Grantee is unable to meet these milestones Grantee shall promptly contact the DOER.

- (1) Complete construction of the Project(s) – August 1, 2028
- (2) End of grant period – September 30, 2028

5. Disbursement of Funds

Initial Disbursement: Twenty-five percent (25%) of the award in the amount of Thirty One Thousand Two Hundred Fifty Dollars and No Cents (\$31,250.00) will be disbursed by the DOER subsequent to the execution of this grant agreement and upon the DOER's agreement that contingency number one as stated under Section Two Contingencies of this Scope of Grant Award has been fully satisfied.

Second Disbursement: Fifty percent (50%) of the award in the amount of Sixty Two Thousand Five Hundred Dollars and No Cents (\$62,500.00), shall be disbursed upon verification by the DOER that twenty-five percent (25%) of the grant funds have been expended and that contingency number two as stated in Section Two Contingencies of this Scope of Grant Award has been fully satisfied and that all reporting requirements have been met. Reporting requirements will include submittal by the Grantee to the DOER of detailed dated invoices of Grantee's costs incurred to date.

Final Disbursement: Twenty-five percent (25%) of the award in the amount of Thirty One Thousand Two Hundred Fifty Dollars and No Cents (\$31,250.00) shall be disbursed after a site visit by the DOER, a review of the detailed invoices of the Project(s) and any other requested documentation and verification by the DOER that the Project(s) are complete, that one hundred percent (100%) of grant funds have been expended, evidence of approved utility incentives have been provided, and that all reporting requirements and requests by the DOER have been met, including submittal and approval of the Final Report.

Funds shall not be used for the reimbursement of any work related to this Project(s) performed before the contract Effective Date.

6. Grantee Warrants to Keep Facility Open

For Project(s) involving services or construction at facility(s) owned by or under the control of the Grantee, the Grantee hereby warrants and certifies that the facility (s) for which grant funds are designated will remain open and in service for at least five (5) years following completion of proposed project(s).

7. Separate Accounts

The Grantee shall at all times conduct its business and affairs in such a manner that any and all ledger accounts and records pertaining to the receipt and expenditure of the DOER funds under this Agreement shall be kept separate and distinct from all ledger accounts and records of the Grantee relative to any other enterprise which the Grantee has engaged in, developed, or administered.

8. Unused Funds

Any funds undisbursed or uncommitted by the Grantee after September 30, 2028, shall be promptly returned to the DOER within sixty (60) days.

9. Administrative Costs

Grantee's administrative costs shall not exceed ten percent (10%) of the maximum obligation contract amount of One Hundred Twenty Five Thousand Dollars and No Cents (\$125,000.00).

10. Publicity

The municipality will coordinate with the DOER on all publicity regarding this Project(s).

11. Reporting and Other Required Documentation

- A. Should Grantee engage a third party to manage administrative functions of the program and rely on the internal controls of that third party, the third party shall provide the results of an internal controls audit annually according to the provisions Statements of Auditing Standards No. 70 to the DOER and Grantee.
- B. Grantee shall have a program to combat fraud, waste and abuse of funds and shall incorporate into its program guidance provided by the Office of the State Comptroller.
- C. **Quarterly reports:** The Grantee shall be required to file progress and financial reports once every quarter, unless specifically exempted in writing by the DOER. Quarterly reports are due by 5PM four (4) days after the completion of each of the following quarters:
 - a. July 1 – Sept 30
 - b. Oct 1 – Dec 30
 - c. Jan 1 – Mar 30
 - d. Apr 1 – June 30

Quarterly reports shall include:

- a. The progress and status of activities performed in relation to the Scope of Grant Award including an explanation of any delays or obstacles encountered in meeting the performance schedule as well as a description of efforts taken to resolve delays; and
 - b. The actual costs incurred to date by the Project, breaking down all costs in such manner as the DOER may prescribe.
- D. **Final report:** The final report shall be submitted within two (2) months after completion of the final project receiving funding, and shall include a summary of the projects completed, including project locations and capacity. All quarterly and final reports above shall be submitted to:

Green Communities Grants Email
GC-Grants@mass.gov

NOTE: If the services funded by this Agreement are solicited pursuant to M.G.L. Ch. 25A § 11C or § 11I, then the Grantee shall also comply with the monitoring and reporting requirements set forth in the DOER's regulations at 225 C.M.R. 10.00, 19.00 or other applicable regulations. For solar PV systems, registration with and reporting to the Massachusetts Clean Energy Center Production Tracking System (PTS) is required.

- E. **Ownership of Reports and Other Required Documentation:** The deliverables shall be owned by the Commonwealth of Massachusetts and treated as public documents. Following the completion of the contract both the Commonwealth of Massachusetts and the Grantee retain the right to make further use of the deliverables.

**VII. COMMONWEALTH OF MASSACHUSETTS
STANDARD CONTRACT ATTACHMENTS (ENCLOSED)**

1. COMMONWEALTH TERMS AND CONDITIONS
2. GRANTEE AUTHORIZED SIGNATORY LISTING
3. W-9 FORM
4. EFT



OFFICE OF THE COMPTROLLER

ELECTRONIC FUNDS TRANSFER (EFT) AUTHORIZATION AGREEMENT FORM

Complete this form to enroll, modify, or terminate an existing Electronic Funds Transfer (EFT) agreement with the Commonwealth of Massachusetts departments.

Part I: Reason for Submission			See Instructions on Page 3
☐ New Enrollment	☐ Change Enrollment	☐ Cancel Enrollment	
Document Included (Optional)			
☐ Voided Check	☐ Bank Letter		
Part II: Account Holder Information			See Instructions on Page 3
Account Holder Legal Name			
dba Name If different from above			
Legal Address Number, Street, Apartment/Suite Number			
City		State	Zip Code
Account Holder Tax Identification Number 9 digits	Employer Identification Number (EIN)	Social Security Number (SSN)	
Part III: Financial Institution Information			See Instructions on Page 3
Financial Institution Name			
Routing Number Only 9 digits	Account Number	Account Type ☐ Checking ☐ Savings	
If this is an Enrollment Modification, you must include your old financial institution information or your request will be returned.			
Old Financial Institution Name			
Old Routing Number Only 9 digits	Old Account Number	Old Account Type ☐ Checking ☐ Savings	
Part IV: Vendor/Customer Information			See Instructions on Page 3
This is the person we will contact for any questions regarding this EFT Authorization			
Contact Person's Name		Contact Person's Title	
Contact Person's Phone		Contact Person's Email	



OFFICE OF THE COMPTROLLER

ELECTRONIC FUNDS TRANSFER (EFT) AUTHORIZATION AGREEMENT FORM

Part V: Authorization

See Instructions on Page 3

By signing below, I hereby certify that the account(s) indicated on this form is under my direct control and access; therefore, I authorize the State Treasurer as fiscal agent for the Commonwealth of Massachusetts to initiate, change, or cancel credit entries to the account(s) as indicated on this form.

For ACH debits consistent with the International ACH Transaction (IAT) rules check one:

☐

I affirm that payments authorized by this agreement are not to an account that is subject to being transferred to a foreign bank account.

☐

I affirm that payments authorized by this agreement are to an account that is subject to being transferred to a foreign bank account.

This authority is to remain in full force and effect until the Office of Comptroller (CTR) has received written notification from either me or an authorized officer of the organization of the account's termination in such time and in such a manner as to afford CTR a reasonable opportunity to act upon it.

Account Holder Authorized Signature

Print Name

Title

Date

Part VI: Verification from the Commonwealth Department

See Instructions on Page 3

I hereby certify the Vendor/Customer is an authorized signatory and verified by internal records and verbal confirmation initiated by our department.

VCC/VCM Document ID

Three letter Department Code

Signature

Print Name

Title

Phone Number

Date



OFFICE OF THE COMPTROLLER

ELECTRONIC FUNDS TRANSFER (EFT) AUTHORIZATION AGREEMENT FORM

INSTRUCTIONS

All EFT requests are subject to a 5 (five) day pre-certification period in which all accounts are verified by the qualifying financial institution before any direct deposits are made.

Part I: Reason for Submission

Indicate your reason for completing this form by checking the appropriate box: New EFT enrollment, a change to your EFT enrollment account information, or cancellation of your EFT enrollment. The Commonwealth of Massachusetts reserves the right to request additional documentation such as Voided Check as verification of account ownership.

Part II: Account Holder Information

- **Account Holder Name:** Enter the accounts holder legal name (individual or business name), as reported to the Internal Revenue Service (IRS).
- **d/b/a Name:** Enter the d/b/a name if applicable.
- **Street Address:** Enter the account holder's street address. Enter the account holder's city, state, and zip code.
- **Account Holder Tax Identification Number:** Enter the tax identification number as reported to the IRS. If the business is a group, organization or corporation, provide the Federal employer identification number (EIN). If enrolling as an individual provide your Social Security Number.

Part III: Financial Institution Information

- **Financial Institution Name:** Enter your Financial Institution's name (this is the name of the bank or qualifying depository that will receive the funds). **NOTE:** The account name to which EFT payments will be paid is to the name submitted on Part II of this form.
- **Routing Number:** Enter the bank or financial institutional nine-digit routing number, including applicable leading zeros.
- **Account Number:** Enter the account holder's account number with the financial institution, including applicable leading zeros.
- **Account Type:** Select the account type (Checking or Savings).
- **Old Financial Institution Name:** Enter your Old Financial Institution's name (this is the name of the bank or qualifying depository that has been receiving the funds).
- **Old Routing Number:** Enter the old bank or financial institutional nine-digit routing number, including applicable leading zeros.
- **Old Account Number:** Enter the old account holder's account number with the financial institution, including applicable leading zeros.
- **Account Type:** Enter the old account type (Checking or Savings).

NOTE: Supporting bank documents must be in the account holder legal name only.

Part IV: Contact Information

- Enter the name, title, telephone number, and email address of a contact person who can answer questions about the information submitted on this EFT Authorization Form.

Part V: Authorization

- By your signature on this form, you are certifying that the account is drawn in the Name of an Individual, or the Legal Business Name of the person or entity who has sole control of the account to which EFT deposits are made.
- The EFT authorization form must be signed and dated by the same account holder name in Part II and include a title and telephone number.
- Submit this form electronically, or mail it with the original signature in black or blue ink to the Commonwealth of Massachusetts Department that you are doing business with.

Part VI: Verification from the Commonwealth Department

By your signature on this form, you are certifying that authentication of the vendor/customer's authorized signatory was conducted by review of the Contractor Signatory Authorization Form (CASL) or by another internal verification process, and additional verification was conducted to confirm banking or address change request. Departments should have multiple known vendor contacts to confirm any registration change.



Commonwealth of Massachusetts

CONTRACTOR AUTHORIZED SIGNATORY LISTING

This form is jointly issued and published by the Office of the Comptroller (CTR) and the Operational Services Division (OSD) as the default form for all Commonwealth Departments when another form is not prescribed by regulation or policy.

Signature for Corporation (C or S), Partnership, Trust/Estate, Limited Liability Company

(must match Form W-9 tax classification)

Contractor Legal Name	Contractor Vendor/Customer Code (if available, not the Taxpayer Identification Number or Social Security Number)
-----------------------	--

INSTRUCTIONS: Any Contractor (other than a sole-proprietor or an individual contractor) must provide a listing of individuals who are authorized as legal representatives of the Contractor who can sign contracts and other legally binding documents related to the contract on the Contractor’s behalf. In addition to this listing, any state department may require additional proof of authority to sign contracts on behalf of the Contractor, or proof of authenticity of signature (a notarized signature that the Department can use to verify that the signature and date that appear on the Contract or other legal document was actually made by the Contractor’s authorized signatory, and not by a representative, designee or other individual.)

For privacy purposes **DO NOT ATTACH** any documentation containing personal information, such as bank account numbers, social security numbers, driver’s licenses, home addresses, social security cards or any other personally identifiable information that you do not want released as part of a public record. The Commonwealth reserves the right to publish the names and titles of authorized signatories of contractors.

There are three types of electronic signatures that will be accepted on this form: **1) Traditional “wet signature” (ink on paper); 2) Electronic signature that is either: a. hand drawn using a mouse or finger if working from a touch screen device; or b. An upload picture of the signatory’s hand drawn signature; 3) Electronic signature affixed using a digital tool such as Adobe Sign or DocuSign.** Typed text of a name not generated by a digital tool, computer generated cursive, or an electronic symbol are not acceptable forms of electronic signature.

Authorized Signatory Name	Signature (Signature as it will appear on contract or other documents)	Title	Phone Number	Email Address

Acceptance of any payment under a Contract or Grant shall operate as a waiver of any defense by the Contractor challenging the existence of a valid Contract due to an alleged lack of actual authority to execute the document by the signatory.

I certify that I am a responsible authorized officer of the Contractor and as an authorized officer of the Contractor I certify that the names of the individuals identified on this listing are current as of the date of execution and that these individuals are authorized to sign contracts and other legally binding documents related to contracts with the Commonwealth of Massachusetts on behalf of the Contractor. I understand and agree that the Contractor has a duty to ensure that this listing is immediately updated and communicated to any state department with which the Contractor does business whenever the authorized signatories above retire, are otherwise terminated from the Contractor’s employ, have their responsibilities changed resulting in their no longer being authorized to sign contracts with the Commonwealth or whenever new signatories are designated.

Please note you cannot self-certify your own signature as a single signer listed above.

Signature	Date
Print Name	Phone Number
Title	Email Address

A copy of this listing must be attached to the “record copy” of a contract filed with the department.



City of Boston, Massachusetts
Office of the Mayor
Michelle Wu

August 4, 2026

Honorable John Thune
511 Dirksen Senate Office Building
Washington, DC 20510

Honorable Chuck Schumer
322 Hart Senate Office Building,
Washington, DC 20510

Re: 104 Mayors, Cities, Local Officials Call on U.S. Senate to Pass S. 4814 and Extend Temporary Protected Status (TPS) for Haiti

Honorable Majority Leader Thune and Minority Leader Schumer,

As mayors and local leaders from communities across the United States, we write to urge the U.S. Senate to act immediately to protect our families, local businesses, health care institutions, and communities from the great harms caused by the expiration of Temporary Protected Status (“TPS”) for Haiti. Congressional action is now necessary to restore legal status and work authorization to more than 350,000 Haitian TPS holders, following the Supreme Court’s decision in *Mullin v. Doe* and one of the largest de-legalization events in U.S. history. We ask that you act with utmost urgency to pass [S. 4814](#), which would extend TPS for Haiti until early 2029, and assert Congress’s power to act in the face of injustice and disregard for our residents and communities. We offer the following arguments in support.

The United States government’s official position is that Haiti remains unsafe, justifying Congressional extension of TPS.

The former Secretary of Homeland Security’s decision to end TPS for more than 350,000 people living and working legally in the United States flies in the face of the federal government’s own understanding of the conditions on the ground in Haiti. The State Department has applied a “Level 4: Do Not Travel” warning to Haiti, and the Federal Aviation Administration has issued a Notice to Airmen that prohibits U.S. air carriers from flying to Port-au-Prince.¹ The State Department’s advisory is driven by concerns of “rampant” violent crime and “widespread” risks of kidnapping. Circumstances in Haiti are so dire that the federal government encourages U.S. citizens to prepare proof of life protocols and write a will prior to traveling.² These extreme measures are justified by realities on the ground: more than 8,100 killings were

¹ [Haiti Travel Advisory](#), U.S. DEPT. OF STATE, <https://travel.state.gov/content/travel/en/traveladvisories/traveladvisories/haiti-travel-advisory.html> (last visited July 24, 2026); FED. AVIATION ADMIN., KICZ A0024/26 NOTAM, UNITED STATES OF AMERICA PROHIBITION AGAINST CERTAIN FLIGHTS IN THE TERRITORY AND AIRSPACE OF HAITI (2026).

² [Haiti Travel Advisory](#), U.S. DEPT. OF STATE, <https://travel.state.gov/content/travel/en/traveladvisories/traveladvisories/haiti-travel-advisory.html> (last visited July 24, 2026).

documented between January and November 2025, and violent gangs control wide swaths of territory in the country.³

Congress's failure to protect Haitian TPS holders puts them in immediate danger. The conditions in Haiti have only worsened since the last time the Trump Administration extended TPS for Haiti in 2017.

Ending TPS for Haiti will damage the economy and harm communities across the United States.

350,000 Haitian TPS holders have earned their place in America as workers, taxpayers, and leaders in our communities. In the 16 years since TPS for Haiti was established, Haitian TPS holders have contributed greatly to our local economies, including filling tens of thousands of health care jobs and working in other essential roles. Following the Supreme Court's wrongful decision in *Mullin v. Doe*, these workers and their families will be subject to the loss of status, loss of work authorization, and threat of deportation if Congress does not act.

Local governments and their leaders, including many of the signatories to this letter, argued as *amici* in *Mullin v. Doe* that the Secretary's decision was unlawful. The amicus brief made clear that TPS holders provide immense value to our communities and described the disorder that would result from putting 350,000 people at risk of immediate removal from the U.S.⁴ Removing legal status from hundreds of thousands of hard-working, law-abiding community members will create massive disruptions for health care providers,⁵ other employers, and our social safety nets. It will also harm the country's economy—Haitian TPS holders contribute between \$4.4 billion and \$5.9 billion annually.⁶ Parents will be forced to make the impossible choice to either leave their American citizen children behind or remain together in highly dangerous conditions. Instead of being allowed to lawfully work and contribute, TPS holders will be subject to immediate removal from their homes of many years. Surges in federal immigration activity will endanger our residents and strain local law enforcement and first responders.

Congress has the authority to act now to extend TPS.

Although the Administration and the Court have failed to act responsibly, Congress can still protect TPS for Haiti.⁷ But it must act urgently. The House passed [H.R. 1689](#) in April, and now, the Senate must pass S. 4814.

TPS status may be applied when “conditions in [a] country. . . temporarily prevent the country's nationals from returning safely, or in certain circumstances, where the country is unable to handle the return of its

³ Daniel Dickinson, [Haiti explained: why the crisis is deepening — and what comes next](#), UN News (January 21, 2026), <https://news.un.org/en/story/2026/01/1166801>.

⁴ See [Amicus Brief](#) of Local Governments, *Mullin v. Doe*, No. 25-1083, (2026).

⁵ See *Id.* Many Haitian TPS holders are caregivers working in health, disability, and elder-care fields that have faced a workforce crisis caused by extreme labor shortages. An estimated 13,000 Haitian TPS holders are nursing assistants, and an additional 8,000 are caregivers. Miriam Jordan, [Haitians Are Vital to U.S. Health Care. Many Are About to Lose Their Right to Work](#), N.Y. Times (Jan. 29, 2026), <https://perma.cc/6VPJ-DY9P> (“Haitians filled about 111,000 health care positions in the United States in 2023...”); [Haitian TPS Holders Make the U.S. Stronger](#), UndocuBlack Network, Haitian Bridge Alliance, & FWD.us (Jan. 2026), <https://perma.cc/BRB9-ABJV>.

⁶ See Letter from Maura Healey, Governor of Mass., to Kristi Noem, Secretary of the Dep’t of Homeland Security (Jan. 30, 2026), <https://perma.cc/9FYM-H4YB> (estimated contribution of \$4.4 billion); [Haitian TPS Holders Make the U.S. Stronger](#), UndocuBlack Network, Haitian Bridge Alliance, & FWD.us (Jan. 2026), <https://perma.cc/BRB9-ABJV> (estimated contribution of \$5.9 billion).

⁷ *Mullin v. Doe*, 609 U.S. ___, slip. op. at 13 (2026) (Holding that the Secretary of Homeland Security’s decision to terminate TPS for Haiti was not subject to judicial review).

nationals adequately.”⁸ The conditions in Haiti today are precisely what Congress had in mind when establishing TPS, and Congress has the authority to extend protections where the Secretary has failed to.

Terminating Haiti’s TPS designation—even as the U.S. government itself acknowledges the country’s extreme danger—contradicts longstanding U.S. policy and undermines the very purpose established by Congress for the TPS program. We are urging you to pass S. 4814 to protect our residents and the institutions that rely on their contributions.

Sincerely,



Michelle Wu
Mayor of Boston



Ruthzee Louijeune
Boston City Councilor At-Large

Additional Signatories

The City of Albany, New York
The City of Burlington, Vermont
The City of Cambridge, Massachusetts
The Town of Chapel Hill, North Carolina
The City of Chelsea, Massachusetts
The City of Chicago, Illinois
The City of Cincinnati, Ohio
The City and County of Denver, Colorado
The City of Fitchburg, Massachusetts
The Village of Hempstead, New York
The City of Lima, Ohio
The City of New York, New York
The City of Omaha, Nebraska
The City of Portland, Oregon
The County of Santa Clara, California

⁸ Temporary Protected Status, U.S. Citizenship and Immigration Services, <https://www.uscis.gov/humanitarian/temporary-protected-status> (last visited July 24, 2026).

The City of Seattle, Washington
The City of Somerville, Massachusetts
The City of Spokane, Washington
The City of Worcester, Massachusetts

Mayors

Jim Ross
Mayor, City of Arlington, Texas

Michael Cahill
Mayor, City of Beverly, Massachusetts

Joseph Ganim
Mayor, City of Bridgeport, Connecticut

John Cowen
Mayor, City of Brownsville, Texas

Sumbul Siddiqui
Mayor, City of Cambridge, Massachusetts

Jess Anderson
Mayor and Town Council, Town of Chapel Hill, North Carolina

Brandon Johnson
Mayor, City of Chicago, Illinois

Aftab Pureval
Mayor, City of Cincinnati, Ohio

Justin Bibb
Mayor, City of Cleveland, Ohio

Barbara Buffaloe
Mayor, City of Columbia, Missouri

Andrew Ginther
Mayor, City of Columbus, Ohio

Gay Lynn Bennion
Mayor, City of Cottonwood Heights, Utah

Derrick Henry
Mayor, City of Daytona Beach, Florida

Leonardo Williams
Mayor, City of Durham, North Carolina

Daniel Biss
Mayor, City of Evanston, Illinois

Theresa Rich
Mayor, City of Farmington Hills, Michigan

Christina Muryn
Mayor, City of Findlay, Ohio

Samantha Squailia
Mayor, City of Fitchburg, Massachusetts

Harvey Ward
Mayor, City of Gainesville, Florida

Michael J. Nicholson
Mayor, City of Gardner, Massachusetts

James Solomon
Mayor, Jersey City, New Jersey

Mayor Quinton Lucas
Mayor, City of Kansas City, Missouri

Keith Sydnor
Mayor, City of Laurel, Maryland

Kyle Schlachter
Mayor, City of Littleton, Colorado

Jack Bradley
Mayor, City of Lorain, Ohio

Jared Nicholson
Mayor, City of Lynn, Massachusetts

Karen Bass
Mayor, City of Los Angeles, California

Gary Christenson
Mayor, City of Malden, Massachusetts

Annette Blackwell
Mayor, City of Maple Heights, Ohio

Girmay Zahilay
County Executive, Martin Luther King Jr. County, Washington

Breanna Lungo-Koehn
Mayor, City of Medford, Massachusetts

Jennifer Grigoraitis
Mayor, City of Melrose, Massachusetts

D.J. Beauregard
Mayor, City of Methuen, Massachusetts

Eileen Higgins
Mayor, City of Miami, Florida

Jacob Frey
Mayor, City of Minneapolis, Minnesota

Wayne Messam
Mayor, City of Miramar, Florida

Shawyn Patterson-Howard
Mayor, City of Mount Vernon, New York

Phillip Jones
Mayor, City of Newport News, Virginia

Marc Laredo
Mayor, City of Newton, Massachusetts

Gina-Louise Sciarra
Mayor, City of Northampton, Massachusetts

Angelo Castillo
Mayor, City of Pembroke Pines, Florida

Adrian Mapp
Mayor, City of Plainfield, New Jersey

Keith Wilson
Mayor, City of Portland, Oregon

Brett Smiley
Mayor, City of Providence, Rhode Island

Janet Cowell
Mayor, City of Raleigh, North Carolina

Joseph Begeny
Mayor, City of Reynoldsburg, Ohio

Dominick Pangallo
Mayor, City of Salem, Massachusetts

Todd Gloria
Mayor, City of San Diego, California

Chad Jason Ashmore
Mayor, City of Sesser, Illinois

Jake Wilson
Mayor, City of Somerville, Massachusetts

Domenic J. Sarno
Mayor, City of Springfield, Massachusetts

Regina Romero
Mayor, City of Tucson, Arizona

Anne McEnerny-Ogle
Mayor, City of Vancouver, Washington

William Reichelt
Mayor, Town of West Springfield, Massachusetts

Joseph M. Petty
Mayor, City of Worcester, Massachusetts

Local Government Leaders

Elizabeth Breadon
Boston City Council President, District 9, City of Boston, Massachusetts

Julia Mejia
City Councilor At-Large, City of Boston, Massachusetts

Erin Murphy
City Councilor At-Large, City of Boston, Massachusetts

Henry Santana
City Councilor At-Large, City of Boston, Massachusetts

Gabriela Coletta Zapata
City Councilor, District 1, City of Boston, Massachusetts

Ed Flynn, U.S. Navy (Retired)
City Councilor, District 2, City of Boston, Massachusetts

John FitzGerald
City Councilor, District 3, City of Boston, Massachusetts

Brian Worrell
City Councilor, District 4, City of Boston, Massachusetts

Enrique Pepén
City Councilor, District 5, City of Boston, Massachusetts

Benjamin Weber
City Councilor, District 6, City of Boston, Massachusetts

Miniard Culpepper, Sr., Esq.
City Councilor, District 7, City of Boston, Massachusetts

Sharon Durkan
City Councilor, District 8, City of Boston, Massachusetts

Jeff Charnel
City Councilor, City of Brockton, Massachusetts

Charles Carey
Town Administrator, Town of Brookline, Massachusetts

William Moehle
Supervisor, Town of Brighton, New York

Marc McGovern
Vice Mayor and City Councilor, City of Cambridge, Massachusetts

Megan Bayer
City Solicitor, City of Cambridge, Massachusetts

Catherine Zusy
City Councilor, City of Cambridge, Massachusetts

Zach Klein
City Attorney, City of Columbus, Ohio

Toni Preckwinkle
President of the Board of Commissioners, County of Cook, Illinois

Burhan Azeem
Vice Mayor and City Councilor, City of Cambridge, Massachusetts

Patricia Nolan
City Councilor, City of Cambridge, Massachusetts

Jonathan Nieuwsma
City Councilor, City of Evanston, Illinois

Natasha Megie-Maddrey
City Councilor, Ward 4, City of Lynn, Massachusetts

Sameer Kanal
City Councilor, City of Portland, Oregon

Mitch Green
City Councilor, City of Portland, Oregon

Angelita Morillo
City Councilor, City of Portland, Oregon

Dan Ryan
City Councilor, City of Portland, Oregon

Pat McRae
Supervisor, Charter Township of Redford, Michigan

David Chiu
City Attorney, City and County of San Francisco, California

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Nick

First Name

Fetzer

Last Name

Email Address

Home Address

Brookline

City

MA

State

02467

Postal Code

What Precinct do you live in (if known)?

☒ Precinct 16

Which Boards would you like to apply for?

Police Commissioners Advisory Committee: Not Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

Are you involved in any other Town activities? If so, describe.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

Demographics

Nicholas Fetzer, MPA

Brookline, Massachusetts | [REDACTED]

Strategic higher-education financial leader with extensive experience guiding institutional budgeting, financial planning, and resource allocation in complex academic environments. Proven ability to partner with executive leadership to align financial strategy with institutional priorities while advancing data-informed planning, multi-year forecasting, and operational efficiency. Experienced in leading cross-functional teams, developing financial models that support strategic decision-making, and building collaborative relationships across academic and administrative units. Recognized for translating complex financial information into actionable insights that support sustainable growth and long-term institutional planning.

Industry Experience

Massachusetts College of Art and Design

Associate Vice President of Administration and Finance | February 2025–Present

Provide executive leadership for institutional fiscal strategy, overseeing budget planning, financial operations, and administrative services supporting the college's strategic priorities.

- Direct institutional budget development and execution cycles, ensuring alignment between financial planning and strategic resource allocation.
- Partner closely with the Vice President for Administration and Finance and executive leadership to develop financial plans that support institutional goals and operational sustainability.
- Provide leadership and oversight for multiple administrative functions including Fiscal Affairs, Bursar, Business Office, Financial Aid, Procurement, and Event Services.
- Lead cross-divisional coordination with Human Resources, Technology, and Facilities to support integrated planning and operational effectiveness.
- Serve as Chief of Staff to the VP of Administration and Finance, coordinating institutional strategy and initiatives with the President's Cabinet.
- Collaborate with the MassArt Foundation and Institutional Advancement leadership on strategic financial planning and resource coordination between the College and the Foundation.

Virginia Commonwealth University

Assistant Vice Provost, Finance and Administration—VCU Shared Services | January 2023–February 2025

Led the launch of a centralized shared services administrative and financial unit within the Provost's Office, supporting multiple academic units.

- Directed financial planning and administrative operations for five academic units with a combined budget of \$44M.
- Built and managed an 8-person administrative team delivering budgeting, financial planning, procurement, HR, and IT services.
- Partnered with deans and academic leadership to support budget development, financial forecasting, and operational planning.
- Developed new financial processes and service models to improve efficiency and coordination across academic units.
- Served as president of the Staff Senate and staff representative to the Board of Visitors, contributing to institution-wide strategic discussions.
- Member of the University Budget Advisory Committee, supporting institutional budget planning and policy.

Assistant Vice Provost, Finance and Administration—VCU Life Sciences | December 2021–January 2023

Provided senior financial leadership for a large interdisciplinary research unit.

- Led financial planning, modeling, and budget development for Life Sciences initiatives and research centers.
- Produced enrollment, revenue, and long-range expenditure forecasts to support strategic planning.
- Delivered financial reporting and trend analysis across research funding, philanthropic revenue, and academic activity metrics.
- Developed multi-year personnel and staffing projections aligned with institutional growth.
- Oversaw planning and financial coordination for capital projects and infrastructure investments.
- Authored and implemented operational policies to strengthen compliance and administrative efficiency.

Senior Director, Finance and Administration—VCU Life Sciences | March 2019–December 2021

- Directed administrative operations including budget and finance, sponsored programs, HR, and IT.
- Supervised the full administrative team supporting research and academic programs.
- Strengthened financial oversight and internal controls supporting research operations.

Director of Sponsored Programs—VCU Life Sciences | May 2017–March 2019

- Led administration of the full research proposal and award portfolio, overseeing pre- and post-award activity.
- Held exclusive signatory authority for all research proposals submitted by the unit.

Travel and Events Contract Administrator—VCU Procurement | March 2014–May 2017

- Negotiated and managed university contracts including travel management agreements.
- Served as institutional liaison for travel and event-related vendor contracts.

Education

Masters of Public Administration: Policy Analysis—Virginia Commonwealth University

Post-baccalaureate Certificate: Public Management—Virginia Commonwealth University

IExcel Leadership Certificate: Diversity and Inclusion—Virginia Commonwealth University

Bachelor of Arts: Political Science (Minor: Arabic)—The Ohio State University, *Cum Laude*

Core competencies

Institutional budget development; financial modeling and forecasting; strategic resource Allocation; higher education finance; financial planning and analysis; data-driven decision support; research administration; policy development; organizational leadership; stakeholder engagement; process improvement and operational efficiency

Application Form**Translation Available****Profile****Select whether your application is for reappointment or a new application: ***☒ New Application

Jeffrey

First Name

Berry

Last Name

Email Address

Home Address

Brookline

City

MA

State

02446

Postal Code

What Precinct do you live in (if known)?☒ Precinct 2

Primary Phone

Which Boards would you like to apply for?

Housing Advisory Board: Submitted

Do you have an existing contract with the Town?☐ Yes ☒ No**Interests & Experiences****If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.**

Before my recent retirement, I was a professor of political science at Tufts University. Among other interests, I taught and did scholarly work on urban politics. I had a particular specialty on neighborhoods and citizen advocacy and wrote books and articles in that area. A related focus was on nonprofits and I did research on that topic as well. On a personal basis I've been active in nonprofits here in the Boston area. I served as chair of the board for the Alzheimer's Association of Massachusetts and New Hampshire, and I now volunteer at the Cummings Foundation where I work with small nonprofits and evaluate grant proposals that they submit.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

I do not have an agenda of specific proposals or policies that I plan to push for, but I do have a strong interest in both economic development and housing. Most of us in Brookline believe we need more of each but moving from the abstract to the specific is challenging. As a political scientist I know that moving forward on these matters requires bringing neighborhoods together with developers and town officials. Collaboration is a difficult process but we have seen some recent successes in Brookline. Without going into great detail here, I hope Brookline will find ways to push forward with transit oriented development. Urbanists prioritize TOD as it stimulates business development, incentivizes construction of new housing, and promotes beneficial environmental practices.

Are you involved in any other Town activities? If so, describe.

For a year and a half I chaired the Moderator’s Committee on Forms of Government. Our mandate from Town Meeting was to determine if Brookline should become a city instead of a town. We produced nine research reports that covered a range of topics, including economic development, civic engagement, legislative process, and municipal elections. Most of our work compared Brookline to two cities (Cambridge and Newton) and two towns (Arlington and Wellesley). We submitted our work to Town Meeting but there is no movement that I know of to push forward to a charter commission.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

No


Upload a Resume

Demographics

Ethnicity

☒ Caucasian/Non-Hispanic

Gender

☒ Male


Date of Birth

JEFFREY M. BERRY

Department of Political Science
Tufts University
Medford, MA 02155
(617) 407-0343 (c)
jeffrey.berry@tufts.edu

EDUCATION:

Ph.D., Johns Hopkins University, 1974
M.A., Johns Hopkins University, 1972
A.B., University of California, Berkeley, 1970

EXPERIENCE:

Assistant Professor (1974-2023) to Professor of Political Science, Tufts University. Affiliated faculty, Tisch College of Civic Life, Professor Emeritus, Tufts University
Cummings Foundation, Grants Consultant, 2025-
Chair, Moderator's Committee on Forms of Government, Brookline, MA, 2024-
SOAR (Pro bono consulting for Boston area nonprofits), 2023-
Board of Advisors, Center for State Policy Analysis, Tisch College, Tufts University, 2020-2023
Chair, Board of Directors, Alzheimer's Association of Massachusetts and New Hampshire, 2008-09; Treasurer 2004-2006; Vice-Chair 2006-2008
Tenure and Promotion Committee, Tufts University, 1995-1996, 2005-2008, 2012-13; Chair 2007-2008
Scholar in Residence, Tufts European Center, Talloires, France, summer, 2005
Faculty, Salzburg Seminar, Political Processes and Institutions of Government and Politics, July, 1995
Chairman, Department of Political Science, Tufts University, 1990-1993; 2006
Visiting Professor, Department of Government, Harvard University, 1988
Co-founder and Director, Graduate Program in Public Policy and Citizen Participation, 1980-82, 1984-85
Governing Board, Common Cause/Massachusetts, 1983-86; Issue Manager, Campaign Finance Reform, 1979-1980
American Specialist Lecturer, U.S. Department of State, 1978; Lectures in Osaka, Kyoto, Sapporo, Nagoya, Fukuoka, and Singapore
Brookings Institution Guest Scholar, 1973-74, 1976-77, 2000

PROFESSIONAL ACTIVITIES:

Invited Lectures/Presentations (partial listing): Boston College, 2024; West Point, 2021; ARNOVA/Independent Sector, 2019; Tech Networks of Boston, 2017; Boston University, 2016; University of Massachusetts, Lowell, 2016; Scholars Strategy Network, 2015; National Academy of Sciences, 2014; Hewlett Foundation, 2013, 2010; Harvard School of Public Health, 2012, 2010; Massachusetts State

Legislature, 2012; University of North Carolina, Chapel Hill, 2012; Johns Hopkins University, 2010; Texas A&M, 2009; Colby College, 2008; University of Chicago, 2008; University of Minnesota, 2008; Yale University, 2007; Massachusetts Mayors Association, 2007; MASSCAP, 2007; Kennedy School of Government, 2006; American Public Health Association, 2006; Public Affairs Council, 2005; Hudson Institute, 2005; Boston Foundation, 2004; Harvard University, 2002; Independent Sector, 2000; National Press Club, 1999

Rules and Election Committee, American Political Science Association, 2017-2018
 Governance Reform Committee, American Political Science Association, 2014-17
 Governing Council, American Political Science Association, 2010-2012
 Editorial Board, *Party Politics*, 2008-
 Committee on Civic Education and Engagement, American Political Science Association, 2002-2005
 President, section on Political Organizations and Parties, American Political Science Association, 1999-2001
 Division Head, annual conference American Political Science Association, 1995, panels for the section on Political Organizations and Parties
 Testimony, United States House of Representatives, Committee on Administration, Task Force on Elections, July, 1983
 Associate Editor, *Citizen Participation* magazine, 1979-1986
 Committee on Professional Ethics and Academic Freedom, American Political Science Association, 1974-76

HONORS

Leon D. Epstein Best Book Award, American Political Science Association, Political Organizations and Parties Section, for *Lobbying and Policy Change: Who Wins, Who Loses and Why* (with Frank R. Baumgartner, Marie Hojnacki, David C. Kimball, and Beth L. Leech) (Chicago: University of Chicago Press, 2009)
 Samuel J. Eldersveld Career Achievement Award, 2009, American Political Science Association, Political Organizations and Parties Section
 Distinguished Scholar Award, Tufts University, 2006
 Leon D. Epstein Best Book Award, American Political Science Association, Political Organizations and Parties Section, for *A Voice for Nonprofits* (with David F. Arons), 2004
 John Richard Skuse, Class of 1941 Chair, Department of Political Science, Tufts University, 2001-2023
 Aaron Wildavsky Award (Best Book Award), Policy Studies Organization, for *The New Liberalism*, 1999
 Best Book Award, Urban Politics Section, American Political Science Association, for *The Rebirth of Urban Democracy* (with Kent E. Portney and Ken Thomson), 1994
 Gladys Kammerer Award, American Political Science Association, Best Book on American politics for *The Rebirth of Urban Democracy* (with Kent E. Portney and Ken Thomson), 1994
 Ph.D. awarded with "Distinction," Johns Hopkins University, 1974

RESEARCH GRANTS

Senior Faculty Research Fellowship, Tufts University, 2009

Bernstein Faculty Fellows Program, *The Outrage Industry* (with Sarah Sobieraj), 2008
 National Science Foundation grant, *Lobbying and Issue Definition* (with Frank Baumgartner, Marie Hojnacki, Beth Leech, and David Kimball), 2001
 David and Lucile Packard Foundation grant, *Strengthening Nonprofit Advocacy* (with David Arons and Gary Bass), 2000
 Robert Wood Johnson Foundation grant, *Strengthening Nonprofit Advocacy* (with David Arons and Gary Bass), 2000
 Surdna Foundation grant, *Strengthening Nonprofit Advocacy* (with David Arons and Gary Bass), 1999
 Aspen Institute, Nonprofit Sector Research Fund grant, *Strengthening Nonprofit Advocacy* (with David Arons and Gary Bass), 1999
 National Science Foundation grant, *Collaborative Research on Lobbying* (with Frank Baumgartner, Marie Hojnacki, Beth Leech, and David Kimball), 1999
 Ford Foundation grant *Participation and Democracy in Five American Cities*, (with Kent Portney and Ken Thomson), 1986-1988
 Tufts University Faculty Fellowship, 1978
 Moody Grant, Lyndon B. Johnson Foundation, 1977
 Ford Foundation grant in Government and Law, *Administrative Rulemaking and the Food Stamp Program*, 1976-1977

PUBLICATIONS:

Books:

Everyday Democracy: Liberals, Conservatives, and Their Routine Political Lives (with James M. Glaser and Deborah J. Schildkraut) (Chicago: University of Chicago Press, 2025)

The Outrage Industry: Political Opinion Media and the New Incivility (with Sarah Sobieraj) (New York: Oxford University Press, 2014)

Lobbying and Policy Change: Who Wins, Who Loses, and Why (with Frank R. Baumgartner, Marie Hojnacki, David C. Kimball, and Beth L. Leech) (Chicago: University of Chicago Press, 2009)

Democracy at Risk: How Political Choices Undermine Citizen Participation and What We Can Do About It (With Stephen Macedo et al) (Washington, D.C.: Brookings Institution, 2005)

A Voice for Nonprofits (with David F. Arons) (Washington, D.C.: Brookings Institution, 2003)

Surveying Nonprofits: A Methods Handbook (with David F. Arons, Gary D. Bass, Matthew Carter, and Kent Portney) (Washington, D.C.: Aspen Institute, 2003)

The New Liberalism: The Rising Power of Citizen Groups (Washington, D.C.: Brookings Institution, 1999). Japanese translation, Minerva Shobo, 2009

The Rebirth of Urban Democracy (with Kent E. Portney and Ken Thomson) (Washington, D.C.: Brookings Institution, 1993)

The Challenge of Democracy (with Kenneth Janda, Jerry Goldman, Deborah Schildkraut, and Paul Manna), (Boston: Houghton Mifflin, 1987); Fifteenth edition, 2022 (Boston: Cengage).

Abridged version translated and published in Russian, Czech, Korean, Hungarian, and Georgian

Feeding Hungry People: Rulemaking in the Food Stamp Program (New Brunswick, NJ: Rutgers University Press, 1984)

The Interest Group Society (Boston: Little, Brown, 1984); sixth edition (New York: Routledge, 2018) (from 4th ed., with Clyde Wilcox). Korean translation, fifth ed., Pearson Longman and Bobmun, 2011. Selected as one of 21 Contemporary Political Science Classics by Renmin University Press and fifth edition translated into Chinese by Pearson Education Asia, 2013

Lobbying for the People: The Political Behavior of Public Interest Groups (Princeton: Princeton University Press, 1977)

To Enact a Law: Congress and Campaign Financing (with Robert L. Peabody, William G. Frasure, and Jerry Goldman), (New York: Praeger, 1972)

Edited Volumes:

Interest Groups & Advocacy, guest editor, symposium on “Foundations, Public Policy, and Democracy” (with Kristin A. Goss), 7 (2018)

The Oxford Handbook of American Political Parties and Interest Groups, ed. (with L. Sandy Maisel) (Oxford, UK: Oxford University Press, 2010)

Articles:

“Ideology and Support for Federalism in Theory—And in Practice” (with James M. Glaser and Deborah J. Schildkraut), *Publius* 53:4 (Fall, 2023) <https://doi.org/10.1093/publius/pjad003>

“The Age of Urban Advocacy,” *Interest Groups & Advocacy* 11:2 (June, 2022), <https://rdcu.be/cIEb8>

“Education and the Curious Case of Conservative Compromise” (with James M. Glaser and Deborah J. Schildkraut), *Political Research Quarterly* 74:1 (March, 2021)

“Race and Gender on Fox and MSNBC,” (with James M. Glaser and Deborah J. Schildkraut), *The Forum: A Journal of Applied Research in Contemporary Politics*, 18:3 (February, 2021)

“Expanding Nonprofit Advocacy,” *Nonprofit Policy Forum* 11 (December, 2020)

“Ideological Bubbles and Two Types of Conservatives” (with James M. Glaser and Deborah J. Schildkraut), *Public Opinion Quarterly* 84:2 (Summer, 2020).

“Interest Groups and Elections,” *The Oxford Handbook of Electoral Persuasion*, Elizabeth Suhay, Bernard Grofman, and Alexander H. Trechsel, eds. (New York: Oxford University Press, 2020)

“Charge and Retreat: Asymmetric Patterns of Political Engagement among Liberals and Conservatives,” *The Dynamics of American Democracy* (with Deborah J. Schildkraut and James M. Glaser), Eric Patashnik and Wendy Schiller, eds. (Lawrence: University Press of

Kansas, 2020)

“Donors for Democracy? Philanthropy and the Challenges Facing America in the 21st Century” (with Kristin A. Goss), *Interest Groups & Advocacy* 7 (2018)

“Compromising Positions: Why Republican Partisans are More Rigid than Democrats” (with James M. Glaser), *Political Science Quarterly* 133:1 (Spring, 2018). Reprinted in Marylena Mantas and Robert Y. Shapiro, eds., *Political Conflict in American Politics* (New York: Academy of Political Science, 2024)

“The Tea Party versus Agenda 21: Local Groups and Sustainability Policies in U.S. Cities” (with Kent E. Portney), *Environmental Politics* 26:1 (January, 2017)

“Negative Returns: The Impact of Impact Investing on Empowerment and Advocacy,” *PS* 49:3 (July, 2016)

“The Impact of Local Environmental Advocacy Groups on City Sustainability Policies and Programs” (with Kent E. Portney), *Policy Studies Journal*, 44 (July, 2016)

“Images of an Unbiased Interest System” (with David Lowery et al.), *Journal of European Public Policy* 22:8 (2015)

“Assessing Business Advantage in Washington Lobbying” (with Marie Hojnacki, Kathleen Marchetti, Frank R. Baumgartner, David C. Kimball, and Beth Leech), *Interest Groups & Advocacy* 4 (September 2015)

Measuring Research and Development Expenditures in the U.S. Nonprofit Sector: Conceptual and Design Issues (contributor) (Washington, DC: National Academy of Sciences, 2015).

“The Group Basis of City Politics” (with Kent E. Portney), in *Nonprofits and Advocacy: Engaging Community and Government in an Era of Retrenchment*, Robert Pekkanen, Steven Rathgeb Smith, and Yutaka Tsukinaka, eds. (Baltimore: Johns Hopkins University Press, 2014)

“Governing Local Sustainability: Agency Venues and Business Group Access” (with Richard C. Feiock, Kent E. Portney, and Jungah Bae), *Urban Affairs Review* 50 (March 2014)

“Money, Priorities, and Stalemate: How Lobbying Affects Public Policy” (with Frank R. Baumgartner, Marie Hojnacki, David C. Kimball, and Beth L. Leech), *Election Law Journal* 13 (2014)

“Civil Society and Sustainable Cities” (with Kent E. Portney), *Comparative Political Studies* 47 (2014)

“Outrageous Opinion Media and Political Anxiety in the US” (with Sarah Sobieraj and Amy Connors), *Poetics: Journal of Empirical Research on Culture, the Media and the Arts* 41 (October 2013)

“Business Politics in an Era of Demographic Change,” *The Forum* 11:1 (2013)

- "Sustainability and Interest Group Participation in City Politics" (with Kent E. Portney), *Sustainability* 5 (2013)
- "Lessons from the 'Lobbying and Policy Change' Project" (with Beth L. Leech, Frank R. Baumgartner, Marie Hojnacki, and David C. Kimball), in *Interview Research in Political Science*, Layna Mosley, ed. (Ithaca, NY: Cornell University Press, 2013)
- "Studying Organizational Advocacy and Influence: Reexamining Interest Group Research," (with Marie Hojnacki, David C. Kimball, Frank R. Baumgartner, and Beth L. Leech, *Annual Review of Political Science* 15 (2012)
- "Who Cares About the Lobbying Agenda?" (with David C. Kimball, Frank R. Baumgartner, Marie Hojnacki, Beth L. Leech, and Bryan Summary), *Interest Groups & Advocacy* 1 (2012)
- "Understanding the Rise of Talk Radio" (with Sarah Sobieraj), *PS: Political Science & Politics* 44 (October 2011)
- "From Incivility to Outrage: Political Discourse in Blogs, Talk Radio, and Cable News" (with Sarah Sobieraj), *Political Communication* 28 (February 2011)
- "Participation and the Pursuit of Sustainability in U.S. Cities" (with Kent E. Portney), *Urban Affairs Review* 46 (September 2010)
- "Urban Interest Groups," in L. Sandy Maisel and Jeffrey M. Berry, eds., *The Oxford Handbook of American Political Parties and Interest Groups* (Oxford, UK: Oxford University Press, 2010)
- "The State of Research on Political Parties and Interest Groups" (with L. Sandy Maisel), in L. Sandy Maisel and Jeffrey M. Berry, eds., *The Oxford Handbook of American Political Parties and Interest Groups* (Oxford, UK: Oxford University Press, 2010)
- "An Ever Fainter Voice," in Gary King, Kay Lehman Schlozman, and Norman Nie, eds., *The Future of Political Science* (New York: Routledge, 2009)
- "Nonprofit Organizations as Interest Groups: The Politics of Passivity," in Allan J. Cigler and Burdett A. Loomis, *Interest Group Politics*, 7th ed. (Washington, D.C.: CQ Press, 2007)
- "Neighborhoods, Neighborhood Associations, and Social Capital," (with Kent E. Portney), in Susan Ostrander and Kent Portney, eds., *Acting Civically: From Local Neighborhoods to Higher Education* (Hanover, NH: University Press of New England, 2007)
- Power and Interest Groups in City Politics* (with Kent E. Portney, Robin Liss, Jessica Simoncelli, and Lisa Berger), Rappaport Institute for Greater Boston, Kennedy School of Government, Harvard University, December, 2006
- "Nonprofits and Civic Engagement," *Public Administration Review* 65 (September/October 2005)
- "Validity and Reliability Issues in Elite Interviewing" *PS: Political Science & Politics* 35 (December 2002)

- "Interest Groups and Gridlock," in Allan J. Cigler and Burdett A. Loomis, *Interest Group Politics*, 6th ed. (Washington, D.C.: CQ Press, 2002)
- "Organized Interests and Issue Definition in Policy Debates" (with Beth L. Leech, Frank R. Baumgartner, Marie Hojnacki, and David C. Kimball), in Allan J. Cigler and Burdett A. Loomis, *Interest Group Politics*, 6th ed. (Washington, D.C.: CQ Press, 2002)
- "Lobbying," in Neil J. Smelser and Paul B. Baltes, eds., *International Encyclopedia of the Social and Behavioral Sciences* (Oxford, England: Elsevier, 2001)
- "Effective Advocacy for Nonprofits," in Elizabeth J. Reid and Maria D. Montilla, eds., *Exploring Organizations and Advocacy* (Washington, D.C.: Urban Institute, 2001)
- "Die Vereingten Staaten im Zeitalter des Postmaterialismus," in Ulrich Willems and Thomas von Winter, eds., *Politische Repräsentation schwacher Interessen* (Opladen, Germany: Leske and Budrich, 2000)
- "The Rise of Citizen Groups," in Theda Skocpol and Morris Fiorina, eds., *Civic Engagement in American Democracy* (Washington, D.C.: Brookings Institution and the Russell Sage Foundation, 1999)
- "Citizen Groups, Political Parties, and Electoral Coalitions" (with Deborah Schildkraut), in Anne N. Costain and Andrew S. McFarland, eds., *Social Movements and American Political Institutions* (New York: Rowman and Littlefield, 1998)
- "Technology, Participation, and Community," *Journal of the American Planning Association* 63 (Spring 1997)
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“Ideological (In)consistency in Attitudes toward Federalism in the United States” (with James M. Glaser and Deborah J. Schildkraut), paper presented at the annual meeting of the American Political Science Association, Montreal, September, 2022

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"Producing Political Porn: Understanding the Ascent of Outrageous Political Commentary in the United States" (with Sarah Sobieraj), paper presented at the Annual Meetings of the American Sociological Association, Las Vegas, August, 2011)

"The Culture of Right: Outrage Politics and Political Anxiety in the U.S" (with Sarah Sobieraj and Amy Connors), paper delivered at the annual meeting of the Eastern Sociological Society, Philadelphia, February, 2011

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"Lessons from the *Lobbying and Policy Change* Project" (with Beth L. Leech, Frank R. Baumgartner, Marie Hojnacki, and David Kimball), paper delivered at the Conference on Interview Methods in Political Science, Duke University, January, 2010

"Urban Nonprofits, City Governance, and the Pursuit of Sustainability in American Cities" (with Kent E. Portney, Kelli Farrington, and Kathryn Bond), paper delivered at the annual meeting of the American Political Science Association, Toronto, September, 2009

"Mapping the Outrage Industry: Political Discourse in Blogs, Talk Radio, and Cable News" (with Sarah Sobieraj), paper delivered at the annual meeting of the American Sociological Association, San Francisco, August 2009

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"Interests, Organizations, and Lobbying" (with Éric Montpetit), paper prepared for the Conference on the North American Experiment, University of British Columbia, March 2008

"Lobbying, Advocacy, and Democracy" (with Frank R. Baumgartner, Marie Hojnacki, David C. Kimball, and Beth L. Leech), paper delivered at the Connex Thematic Workshop, University of Antwerp, September 2007

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"Does Money Buy Power? Interest Group Resources and Policy Outcomes" (with Beth Leech, Frank R. Baumgartner, Marie Hojnacki, and David Kimball), paper delivered at the annual meeting of the Midwest Political Science Association, Chicago, April 2007

“Power and Interest Groups in City Politics” (with Kent E. Portney, Robin Liss, Jessica Simoncelli, and Lisa Berger), paper delivered at the annual meeting of the American Political Science Association, Philadelphia, August, 2006

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“The Structure of Conflict” (with Frank R. Baumgartner, Marie Hojnacki, David C. Kimball, and Beth L. Leech), paper delivered at the annual meeting of the Midwest Political Science Association, Chicago, April, 2006

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“Ensuring Nonprofit Passivity,” paper delivered at the annual meeting of the American Political Science Association, Washington, D.C., September 2005. Revised for the Conference on Institutional Barriers to Mobilizing Democracy, Russell Sage Foundation, New York, January, 2006

“Nonprofits and Civic Engagement,” paper delivered at the conference on “Civic Engagement in the 21st Century,” Jesse M. Unruh Institute of Politics, University of Southern California, October, 2004

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“Report of the Working Group on the Nonprofit, Voluntary, and Philanthropic Sectors,” ASPA Standing Committee on Civic Education and Engagement, (with Rob Reich, Michael Brinthal, Margaret Levi, and Meira Levinson), paper presented at the annual meeting of the American Political Science Association, Philadelphia, August, 2003. A revised version was delivered at the Workshop on Civic Education and Engagement, Princeton University, February, 2004.

“Empowering Nonprofits,” paper presented at the Urban Seminar Series on Children’s Health and Safety, Kennedy School of Government, Harvard University, May 2003. An expanded and revised version of this paper was delivered as “Government Regulation and Nonprofit Advocacy,” at the annual meeting of the Association for Research on Nonprofit Organizations and Voluntary Action, Denver, November 2003

“Issue Advocacy and Interest-Group Influence” (with Frank Baumgartner, Marie Hojnacki, David C. Kimball, and Beth L. Leech), paper presented at the First General Conference, European Consortium for Political Research, University of Kent, Canterbury, England, September, 2001

“Validity and Reliability Issues in Elite Interviewing,” paper presented at the Workshop on Elite Interviewing, Political Organizations and Parties section, American Political Science Association, San Francisco, August, 2001

“Building an Effective Lobby,” paper presented at the annual meeting of the American Political Science Association, San Francisco, August, 2001

“Organizational Capacity and Nonprofit Advocacy” (with David Arons), paper presented at the annual meeting of the Association for Research on Nonprofit Organizations and Voluntary Action, New Orleans, November, 2000. A version of this paper was also presented at the Workshop on Organized Interests, Penn State University, March, 2001

“Advocacy and Policy Argumentation” (with Frank B. Baumgartner, Marie Hojnacki, David C. Kimball, and Beth L. Leech), paper presented at the annual meeting of the American Political Science Association, Washington, D.C., September, 2000

“Effective Advocacy for Nonprofits,” paper presented at the Center for Nonprofits and Philanthropy, Urban Institute, Washington, D.C., September, 2000

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“Neighborhoods, Neighborhood Associations, and Social Capital” (with Kent E. Portney), paper presented at the conference on Civil Society and Good Governance, Georgetown University, June, 1999

“Nonprofits and Advocacy: The Best of Times or the Worst of Times?”, paper presented to the Nonprofit Sector Strategy Group, Aspen Institute, Wye River, Maryland, November, 1998

“Interest Groups and Gridlock,” paper presented at the annual meeting of the American Political Science Association, Boston, September, 1998

“Interest Group Democracy or Participatory Democracy?”, paper presented at the conference on Revitalizing Urban Democracy, Russell Sage Foundation, New York City, April, 1998

“America in the Age of Postmaterialism,” paper presented at the Conference on Political Representation of Minority Interests, Study Group on Organized Interests, German Political Science Association, Hamburg, Germany, January, 1998

“Christians and Environmentalists in the 104th Congress,” paper presented at the conference on American Democracy Entering the 21st Century, Northeastern University Centennial, Boston, October, 1997

“The Rise of Citizen Groups,” paper presented at the conference on Civic Engagement in American Democracy, Portland, Maine, September, 1997

“The Changing Face of American Liberalism,” paper presented at the conference on The Politics of Equality in the Twentieth Century, Kennedy School of Government, Harvard University, September, 1996

"The Rise of Postmaterialism in American Politics," paper presented at the annual meeting of the American Political Science Association, San Francisco, September, 1996

"Parties, Citizen Groups, and Political Change" (with Deborah Schildkraut), paper delivered at the Conference on Party Politics in the Year 2000, Manchester, England, January, 1995. A revised version of this paper, "Citizen Groups, Political Parties, and the Decline of the Democrats," was delivered at the annual meeting of the American Political Science Association, Chicago, September, 1995

"The Dynamic Quality of Issue Networks," paper delivered at the annual meeting of the American Political Science Association, New York, September, 1994

"Centralizing Regulatory Control and Interest Group Access: The Quayle Council on Competitiveness" (with Kent E. Portney), paper presented at the annual meeting of the American Political Science Association, Washington, D.C., September, 1993

"Race and Strong Democracy" (with Kent E. Portney and Ken Thomson), paper presented at the Conference on Race, Ethnicity, Representation, and Governance, Harvard University, January, 1993

"An Agenda for Research on Interest Groups," paper presented at the Workshop on Representing Interests and Interest Representation, Chicago, September, 1992

"Strong Democracy and Governmental Responsiveness" (with Kent E. Portney and Ken Thomson) paper presented at the annual meeting of the American Political Science Association," Chicago, September, 1992

"Interest Groups and Systemic Bias" (with Kevin Hula) paper presented at the annual meeting of the American Political Science Association, Washington, D.C., September 1991

"The Political Behavior of Poor People" (with Kent E. Portney and Ken Thomson), paper presented at the conference on "The Truly Disadvantaged," Social Science Research Council, Evanston, Illinois, October, 1989; A revised version of this paper was presented at the annual meeting of the American Political Science Association, San Francisco, September, 1990

"Expanded Participation and Representative Democracy" (with Kent E. Portney and Ken Thomson), paper presented at the annual meeting of the American Political Science Association, San Francisco, September, 1990

"Conflict, Alienation, and Delay: Is Citizen Participation Poison?" (with Kent E. Portney and Ken Thomson), paper presented at the annual meeting of the Midwest Political Science Association, Chicago, April, 1989

"In Search of the Link Between Citizen Participation and Policy Responsiveness in Five American Cities" (with Kent E. Portney and Ken Thomson), paper presented at the annual meeting of the Southern Political Science Association, Atlanta, November, 1988

"Citizen Groups and Regulatory Reform," paper presented at the Symposium for Change in Regulatory Policy, Chicago, December, 1979

"Advocates and Bureaucrats: Food Stamp Groups and USDA Policy Making," paper presented at the Hendricks Symposium on Agriculture Politics, Lincoln, Nebraska, April, 1979

"Citizen Participation and the Future of the Public Interest Movement," paper presented at the National Conference on Citizen Participation, Washington, D.C., September, 1978

"Regulations and the Legislative Process," paper presented at the annual meeting of the American Political Science Association, New York, August, 1978

"Citizens Approach Government: The Strategies of Influence of Public Interest Groups," paper presented at the annual meeting of the Midwest Political Science Association, Chicago, April, 1974

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Leslie

First Name

Reid

Last Name

Email Address

Home Address

Brookline

City

MA

State

02445

Postal Code

What Precinct do you live in (if known)?

☒ Precinct 6

Primary Phone

Which Boards would you like to apply for?

Housing Advisory Board: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

I have over 30 years professional experience in affordable housing and community development, policy and finance. I have had the opportunity to interact professionally with the Town, Housing Authority and non-profit and for-profit developers with experience in Brookline. In addition, I lived in Brookline from 1976 - 1988 and attended Pierce School and Brookline High School, graduating in 1988. Two of my children also attend Pierce School and Brookline High School through the METCO program, graduating in 2020. I relocated my permanent residence to Brookline in September of 2025.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

I would like to see the Housing Advisory Board strategically maximize the impact of linkage funding in making affordable and accessible housing opportunities available to households and individuals with the most demonstrated need.

Are you involved in any other Town activities? If so, describe.

No

Do you have time constraints that would limit your ability to attend one to two meetings a month?

No.


Upload a Resume

Demographics

Ethnicity

☒ African American

Gender

☒ Female


Date of Birth

EXPERIENCE

Massachusetts Housing Investment Corporation - Chief of Investment Programs (2024 - Present)

▪ Direct market expansion, capital deployment strategy, and community impact initiatives for regional non-profit Low Income Housing Tax Credit syndicator and Community Development Finance Institution.

Madison Park Development Corporation – Vice President of Programs/Chief Executive Officer (2018 – 2024) Senior Project Manager/Director of Real Estate (2005 – 2007)

▪ Director of one of the most successful community development corporations nationally, responsible for organizational management, real estate development, asset management and community based programming in the areas of arts and culture, youth development, violence prevention, health equity and resident and civic engagement.

Jamaica Plain Neighborhood Development Corporation – Director of Real Estate/Associate Director (2013-2018) Project Manager/Senior Project Manager (1998 – 2005)

▪ Oversight of real estate development, asset management and organizational and financial management for a community based non-profit, including staff of six, pipeline development, predevelopment, financing and construction management, in addition to oversight of a portfolio of 300 residential units and 250,000 square feet of retail, office and industrial space.

Recap Real Estate Advisors – Principal Consultant (2012-2013)

▪ Leadership role in the due diligence and transaction advisory service of national affordable housing consulting and asset management practice. Responsible for providing advisory, underwriting and asset management services for affordable housing, mixed-use and mixed-income transactions.

Massachusetts Housing Partnership Fund – Loan Officer (2010 – 2012)

▪ Originating, underwriting and closing affordable multi-family loans, including permanent financing for LIHTC projects utilizing both taxable and tax-exempt financing.

Massachusetts Department of Housing & Community Development–Mixed Finance Program Developer (2007–2010)

▪ Responsible for creation of mixed finance program to utilize private and other affordable housing resources for capital improvements and development projects sponsored by Public Housing Authorities (PHA's). Developed an approach to securing non-traditional State Public Housing resources, oversaw mixed-finance projects and codified information to train PHA personnel, consultants and staff. Acted as liaison to other State departments and agencies.

Community Economic Development Assistance Corporation - Project Manager (1994 – 1998)

OTHER EXPERIENCE

Massachusetts Institute of Technology Center for Real Estate – Instructor (2022-2026)

Mixed-Income and Affordable Housing Policy and Finance

Board Member

Current: Children's Investment Fund, Citizen's Housing and Planning Association

Past: Boston Employment Commission, Boston Preservation Alliance, Federal Reserve Bank of Boston Community Advisory Board, Federal Home Loan Bank of Boston Advisory Council

Committees

Life Initiative Investment Committee, Massachusetts Housing Partnership Fund Loan Committee

EDUCATION

University of Massachusetts at Amherst – African American Studies (1989-1994)

Harvard University – Achieving Excellence Executive Training Program (2021-2022)

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Kailey
First Name

Bennett
Last Name

[Redacted]
Email Address

[Redacted]
Home Address

[Redacted]
Suite or Apt

Brookline
City

MA
State

02446
Postal Code

What Precinct do you live in (if known)?

☒ Precinct 8

[Redacted]
Primary Phone

Which Boards would you like to apply for?

Brookline Commission on Disability: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

1. Created the Indigenous Authors Bookclub in 2023 which highlights books in all genres from Native American authors. The book club meets bi-monthly. It would be exciting to see a similar style book club that meets to discuss fiction/non fiction about accessibility and disabilities! Can also be an opportunity to explore advocacy and invisible disability. 2. Led five different 'Community Conversations' about different Indigenous related topics including Killers of the Flower Moon and the Indian Citizenship Act. This style of programming is also something that could be transferrable to the Commission on Disability. Specifically having community conversations to discuss advocacy for persons with disabilities broadly, but also in Brookline. 3. Create all graphic design for committee events 4. I am a person with disability! I am epileptic, and work very hard to correct ongoing stigma and stereotypes about the condition. I also have previously experienced moments of severe mobility issues-- Brookline must continue to improve sidewalk and pedestrian infrastructure to support access needs for Brookline's seniors and those with mobility concerns.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

New programming as outlined above would be really exciting to see in the Town! Thinking on the idea of 'equity' and 'inclusion', I am excited to work on programming that helps champion the voices of Brookline citizens with disabilities, but also programming that helps break down barriers in understanding what disability and access needs are in the town. Advocacy on the TM level is another key approach that I am interested in supporting. (I was also just elected to TM for precinct 8!)

Are you involved in any other Town activities? If so, describe.

I am the Chair of the Brookline Indigenous Peoples Celebration Committee. I am also a TMM for Precinct 8 (newly elected!)

Do you have time constraints that would limit your ability to attend one to two meetings a month?

No.


Upload a Resume

Demographics

Ethnicity

☒ American Indian/Alaskan native Aleutian

Gender

☒ Female


Date of Birth

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Kiran

First Name

S

Middle
Initial

Bhatia
Last Name

Email Address

Home Address

Suite or Apt

Brookline

City

MA	02445
State	Postal Code

What Precinct do you live in (if known)?

☒ Precinct 4

Primary Phone

Which Boards would you like to apply for?

Brookline Commission on Disability: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

As the grandson of two stroke survivors, both immigrants from India, I witnessed firsthand how disability shapes every dimension of a person's life. My grandmother's left side was paralyzed by her stroke, confining her to a wheelchair; my grandfather faced lasting cognitive effects. Their resilience taught me that no one should ever be defined by a disability, and that conviction has driven my work ever since. I have built on that foundation through a range of advocacy and policy experiences. I volunteered with both the Stroke Recovery Foundation and the Stroke Foundation, national organizations supporting stroke survivors, where I worked directly with individuals living with physical and mental disabilities. More recently, my work has deepened significantly on the policy side. In the New Jersey Assembly Majority Office, I worked on disability voting protections, researching how to make election practices and polling sites more physically accessible to residents with disabilities. I am currently tracking disability rights legislation for House Democratic Whip Katherine Clark (which I previously did when working for Rep. Lori Trahan in 2023), monitoring federal and state developments in the space and drafting memoranda on candidates' legislative work to advance the disability rights movement around the country. I am also working with Princeton University's Accessibility Center, which advocates for disabled students and works to ensure the campus is a genuinely accessible environment. Together, these experiences have given me a strong command of both the on-the-ground realities of disability and the policy levers available to address them.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

I would push the Commission to address two issues if I were selected as a member. The first is voting accessibility. I would like to see the Commission, if there is none in existence, develop a public-facing accessibility scorecard for each of Brookline's polling sites, rating factors like ramp access, accessible parking proximity, signage, and the availability of accessible voting machines. I would also like to work with the Commission to expand its role in spotlighting disability activism in public life, expanding on the displays that it's set up at the Brookline Village library. I believe there should be greater emphasis on intersectionality in these displays, such as that between disability and pride. Given how significant the celebration of Pride Month has become in our community over the past few years and the increased emphasis the town has placed on celebrating and supporting LGBTQ+ people in Brookline, I believe that highlighting the link between disability activism and LGBTQ+ activism would celebrate the queer people with disabilities that live in our community and would reaffirm our town's commitment to honoring the cultural contributions of all groups to Brookline. Beyond public programming, I believe the Commission should invest more deliberately in youth engagement around disability rights. The Commission has already demonstrated its commitment to young people through its scholarship program for high school students with disabilities, and I would like to build on that model in two ways. First, I would propose a student essay contest modeled on those run by BAAFN and the Brookline Commission for Women inviting students to write either about their own experience living with a disability in Brookline, or about a person with a disability who inspires them. Such a competition would surface stories from within our community that often go unheard, while giving young people (disabled and non-disabled alike) a meaningful way to engage with disability rights. Second, I would propose a stipended summer internship for a Brookline high school student to work directly with the ADA Coordinator and the Commission, giving a young person substantive exposure to local disability policy and advocacy.

Are you involved in any other Town activities? If so, describe.

I have served as a member of the Brookline Community Emergency Response Team (CERT) and Medical Reserve Corps (MRC) since December 2021, volunteering at town events including Brookline Day, flu clinics, and the 2022 and 2023 Boston Marathons. I also interned for State Representative Tommy Vitolo fromz September 2022 through June 2023, reviewing and drafting legislation and policy memoranda on issues affecting Brookline residents. I served as the Student Representative to the Brookline School Committee during the 2024-2025 school year, collaborating with the Committee on educational initiatives, attending each meeting, and delivering monthly presentations representing the student body. In 2025, I subsequently was chosen for and served as a student representative on the Superintendent Search Committee. Most recently, I drafted and sponsored Warrant Article 5 at the 2024 Fall Special Town Meeting, which established the Brookline Youth Council, a new body ensuring young residents have a formal voice in town governance.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

I do not have time constraints that would preclude me from attending these meetings



Upload a Resume

Demographics

Ethnicity

☒ Other

Gender

☒ Male



Date of Birth

Kiran Bhatia

Brookline, Massachusetts 02445 • 617-780-8707 • kiransbhatia@outlook.com

EDUCATION

PRINCETON UNIVERSITY, Princeton, NJ | Aug. 2025 – May 2029 (expected)

A.B. Candidate in Politics; Minors in Journalism, History and Practice of Diplomacy, Global Health and Health Policy, African-American Studies

Activities: Undergraduate Student Government, Daily Princetonian Business Team, Mock Trial Team, Civic Leadership Council, Club Tennis

GPA: 4.0 | **Honors:** 2026 Summer Social Service Impact Scholar, 2026 Whig Clio Summer Fellowship

BROOKLINE HIGH SCHOOL, Brookline, MA | Sep. 2021 – June 2025

Activities: Brookline School Committee Student Representative, Student Council & Legislature (Director of Communications), *The Cypress* (Longform Managing Editor), Mock Trial Team (Captain), Varsity Tennis, Varsity Squash

Honors: 2024 Brookline Youth Award, 2023 Whipple Writing Fellowship

POLICY & LEGISLATIVE EXPERIENCE

NEW JERSEY ASSEMBLY MAJORITY OFFICE, Trenton, NJ | Sep. 2025 - Dec. 2025

Healthcare and Voting Accessibility Policy Intern (16 hrs/week)

- Authored weekly policy memoranda analyzing state and federal developments in Medicaid and Medicare, including fiscal projections, program eligibility, and implications for over 2 million enrolled New Jersey residents
- Drafted two pieces of legislation expanding voting accessibility for disabled residents, incorporating ADA compliance standards and technological reforms to assist voters with visual and mobility impairments
- Conducted comparative research across 15 states on voting rights and mail-in ballot systems to guide the Assembly's approach to election modernization

MASSACHUSETTS ATTORNEY GENERAL'S OFFICE, Boston, MA | Sep. 2024 – June 2025

Youth Councillor (3 hrs/week)

- Developed policy recommendations to strengthen Massachusetts' anti-idling regulations, addressing environmental justice concerns and compliance gaps in urban communities
- Collaborated with the AGO's Environmental Protection Division to research enforcement data and assess alignment with state-level carbon reduction goals
- Presented policy findings to Attorney General Andrea Campbell's Youth Advisory Council, contributing to statewide youth-led advocacy on environmental and criminal justice issues

OFFICE OF STATE REPRESENTATIVE TOMMY VITOLO, Brookline, MA | Sep. 2022 – June 2023

Legislative and Constituent Services Intern (20 hrs/week)

- Drafted original form letters in response to constituent concerns or inquiries
- Wrote news briefings containing international, national, and local developments for Representative Vitolo's newsletter
- Authored legislative memoranda to the Massachusetts State House Counsel requesting the drafting of legislation

CONSTITUENT SERVICES & COMMUNICATIONS EXPERIENCE

OFFICE OF U.S. REPRESENTATIVE JIM MCGOVERN, Worcester, MA | Sep. 2024 – Dec. 2024

OFFICE OF U.S. REPRESENTATIVE LORI TRAHAN, Lowell, MA | Sep. 2023 – Dec. 2023

Constituent Services Intern (15 hrs/week)

- Drafted more than 50 original form letters in response to constituent inquiries on a number of topics including healthcare, foreign affairs, and economic policy
- Sent weekly press clips to staff outlining media coverage of the Congressperson
- Organized constituent call database composed of 1,000+ weekly constituent concerns and requests

OFFICE OF STATE SENATE MINORITY LEADER BRUCE TARR, Boston, MA | June 2024 – September 2024

Communications and Press Intern (30 hrs/week)

- Crafted strategic press releases to effectively communicate the impact and implications of key legislation passed by the Senate
- Developed and authored comprehensive news briefings for Senator Tarr's newsletter, synthesizing international, national, and local developments
- Liaised with major media outlets including the Boston Globe, managing the dissemination of timely and accurate statements in response to media inquiries

CAMPUS LEADERSHIP

VOTE 100, Fall 2025 – Present | *Communications Director*

- Direct the organization’s comprehensive communications strategy, overseeing branding, messaging, and cross-platform outreach to encourage Princeton’s 5,000+ undergraduates to register to vote
- Manage and produce high-impact content across digital platforms, including press releases, policy explainers, email newsletters, and social media campaigns amplifying initiatives aimed to increase voter enrollment on campus

PRINCETON WHIG-CLIOSOPHIC SOCIETY, Fall 2025 – Present | *Deputy Director of Programs*

- Coordinate Whig-Clio’s 100+ student annual Washington, D.C. policy trip, scheduling meetings with congressional offices and federal agencies
- Invited and hosted over two-dozen nationally recognized judges, governors, and public officials to speak on campus

PRINCETON PEER REPRESENTATIVES, Fall 2025 – Present | *Peer Representative*

- Advise and accompany students navigating the University’s disciplinary and Honor Code processes
- Provide confidential peer support and ensure adherence to principles of fairness, equity, and due process

ADDITIONAL INFORMATION

Languages: English (fluent), Spanish (fluent), Hindi (reading/writing proficiency), Punjabi (reading/writing proficiency)

Selected Publications:

Articles

- **Medium** - “Harris’ Entry into the Presidential Race Draws Mixed Reactions from Non-White Austin Voters”

Op-eds & Letters to the Editor

- **Boston Globe** - “Term limits for Supreme Court justices are an assault on the judiciary”
- **Boston Globe** - “Vibes aren’t enough to elect Harris”
- **New York Times** - “Praise of Dr. Fauci”
- **New York Times** - “Save a Bipartisan AIDS Program”
- **Washington Post** - “Trump’s Frightening Threat About NATO”
- **Wall Street Journal** - “Where Does the GOP Stand?”



Memorandum

To: Select Board
From: Dan Murphy, Director of Engineering and Transportation
Date: August 11th, 2026
Re: Gateway East Bus Priority Lanes Pilot Update and Authorization to Execute Updated Traffic Control Agreement
Cc: Chas Carey, Town Administrator
Erin Chute, Commissioner of Public Works

The Department of Public Works is pleased to provide the Select Board with an update on the Gateway East Bus Priority Lanes Pilot. At the July 15, 2026 Transportation Board meeting, the Board voted to conclude the pilot, remove the eastbound bus priority lane on Washington Street between High Street and the Town line, restore the eastbound approach to High Street to a general-purpose lane, and retain the westbound bus priority lane and the bus priority segment on Washington Street between Station Street and Route 9.

The Gateway East Bus Priority Lanes Pilot was a collaborative effort among the Town, Massachusetts Bay Transportation Authority, and Massachusetts Department of Transportation, building on the 2021 Washington Street corridor reconstruction. The Transportation Board authorized the MBTA funded pilot in 2021. Dedicated bus lanes were installed on Washington Street and Boylston Street between Station Street and the Town line in summer 2024.

The December 2020 Gateway East Traffic Design Implications memorandum, included in the attachments, anticipated that dedicated bus lanes would benefit transit riders, but increase delay and queueing where general-purpose lanes were reduced. The memorandum specifically identified the eastbound Route 9/Boylston Street approach to High Street as a potential bottleneck. The pilot results were generally consistent with that location specific concern, although broader traffic impacts were less severe than the worst case modeled conditions.

The original pilot evaluation period was approximately one year. Transit Signal Priority was activated in June 2025. In October 2025, the Transportation Board extended the evaluation period to allow additional data collection while Transit Signal Priority was operating during the school year. At its October 14, 2025, meeting, the Select Board indicated that the pilot should be concluded rather than extended. The Select Board also asked that removal of the eastbound bus priority lane be considered.

Town and MBTA staff subsequently reviewed the operation of the Gateway East bus priority lanes. The review found that the bus lanes provide travel time benefits where they are operating effectively, although those benefits are reduced when buses re-enter mixed traffic.

The westbound bus priority lane from the Town line to Station Street is functioning well. The bus priority segment on Washington Street between Station Street and Route 9 is also functioning effectively as a queue jump for buses.

The eastbound bus priority lane on Boylston Street between High Street and the Town line has not functioned as intended. Driver noncompliance with the bus-only lane, abrupt merging, and the eastbound approach from Route 9/Boylston Street to High Street have contributed to operational and safety concerns. This area also experienced the most significant queue increases during the pilot.

Quarterly pilot reports were presented to the Transportation Board and are included in the attachments. In summary:

- Route 9 traffic volumes were generally consistent with baseline conditions.
- Traffic volumes on some side streets increased moderately.
- Vehicle speeds were generally lower than baseline conditions.
- Vehicle travel times were near baseline overall.
- The bus priority lanes provided travel time benefits where they operated effectively.
- Queue length analysis showed that the eastbound Boylston Street approach to High Street experienced



the most significant queue increases.

Public comments received during the pilot are also included in the attachments. Common concerns included bus lane noncompliance, limited enforcement, confusing pavement markings, abrupt merges, signal timing, traffic backups, blocked intersections, and merging conflicts. The most frequent location specific concerns involved the eastbound Route 9/Boylston Street approach to High Street and the Fire Station. Some commenters supported the broader goal of transit priority but stated that the eastbound configuration was not operating as intended.

At its July 15, 2026, meeting, the Transportation Board voted to conclude the Gateway East Bus Priority Lanes Pilot and approved the following final roadway configuration:

- Remove the eastbound bus priority lane on Washington Street between High Street and the Town line
- Restore the right lane of the eastbound Boylston Street approach to High Street, from the mid-block pedestrian crossing to High Street, as a general purpose through and right-turn lane.
- Retain the westbound bus priority lane from the Town line to Station Street.
- Retain the bus priority segment on Washington Street between Station Street and Route 9.

The approved configuration removes the eastbound segment that generated the greatest operational, compliance, and safety concerns while retaining the segments that are providing transit benefits and have generated fewer concerns. An aerial view of the corridor and the approved final configuration is included in the attachments.

The MBTA has committed to implementing the roadway changes, with support from the Town and coordination with MassDOT. The changes are expected to be implemented in 2027 following completion of updated construction drawings, execution of the required agreements and MassDOT permits.

Washington Street between High St and the Town Line was improved through a Transportation Improvement Program project, and MassDOT therefore maintains a Traffic Control Agreement with the Town documenting the lane configuration, pavement markings, signage, and other traffic control features that the Town is responsible for maintaining. The Traffic Control Agreement will need to be updated to reflect the approved bus lane changes.

The Department of Public Works therefore requests that the Select Board vote to authorize the Town Administrator to execute the updated agreement with the Massachusetts Department of Transportation and any other documents necessary to implement the changes.

Better Bus Project

Making transit
better together

Gateway East Bus Priority Lanes Pilot Evaluation

Quarter 4 Analysis
May 1, 2025 – July 31, 2025

Presentation to Brookline Transportation Board
October 8, 2025

Agenda

- Project Schedule & Status
- Summary of Quarter 4 Analysis & Changes from Quarter 3
 - Bus Travel Times
 - Vehicle Volumes & Speeds
 - Vehicle Travel Times & Control Delay
 - Vehicle Queuing
- Key Findings & Takeaways
- Next Steps



Project Schedule & Status



Project Status & Operations Update

Pilot Extension

- Pilot has been extended to allow time to gather data while the Traffic Signal Transit Priority is active during the school session

Transit Signal Priority

- Due to technical difficulties, the Transit Signal Priority elements of the adaptive traffic signaling system were not activated until June 2025

Route 9 Eastbound Approach to Bus Lane

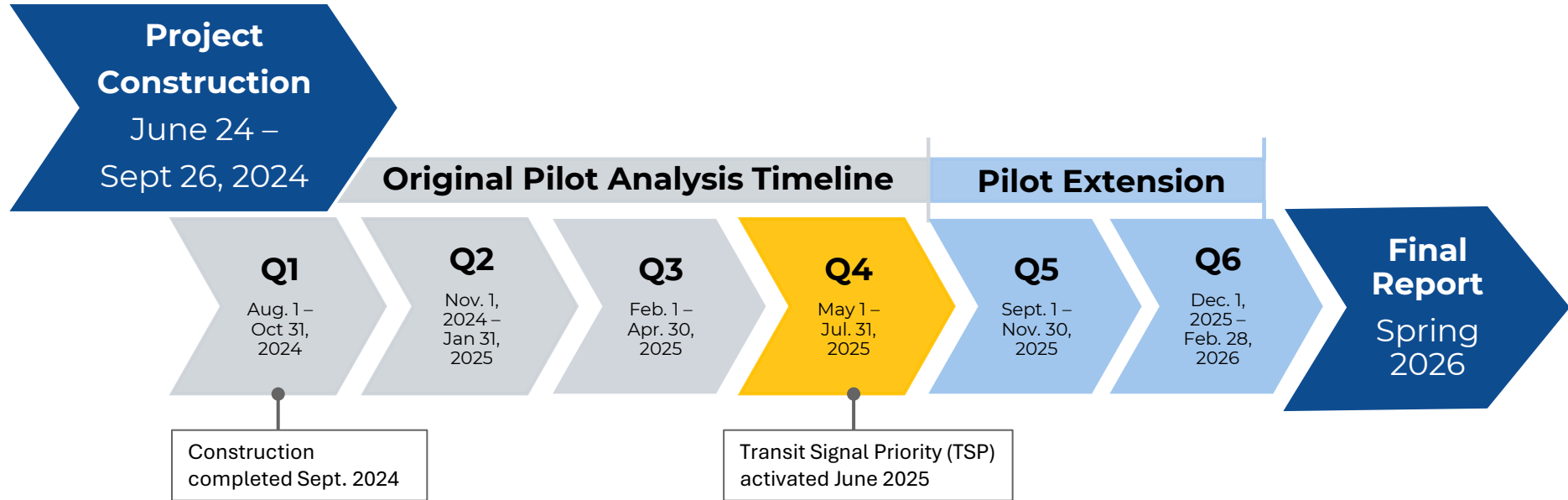
- Town reviewing opportunities for signage and pavement markings to better inform drivers of the lane change

Other Factors Affecting Local Travel Patterns

- The Pierce School construction includes periodic closures of School St., which may contribute to reduced traffic on Cypress St and increased traffic on Walnut St. and Davis Ave., as the school was relocated to the old Lincoln School between Boylston St. and Walnut St.



Pilot Analysis Schedule: We are reporting on Quarter 4 today

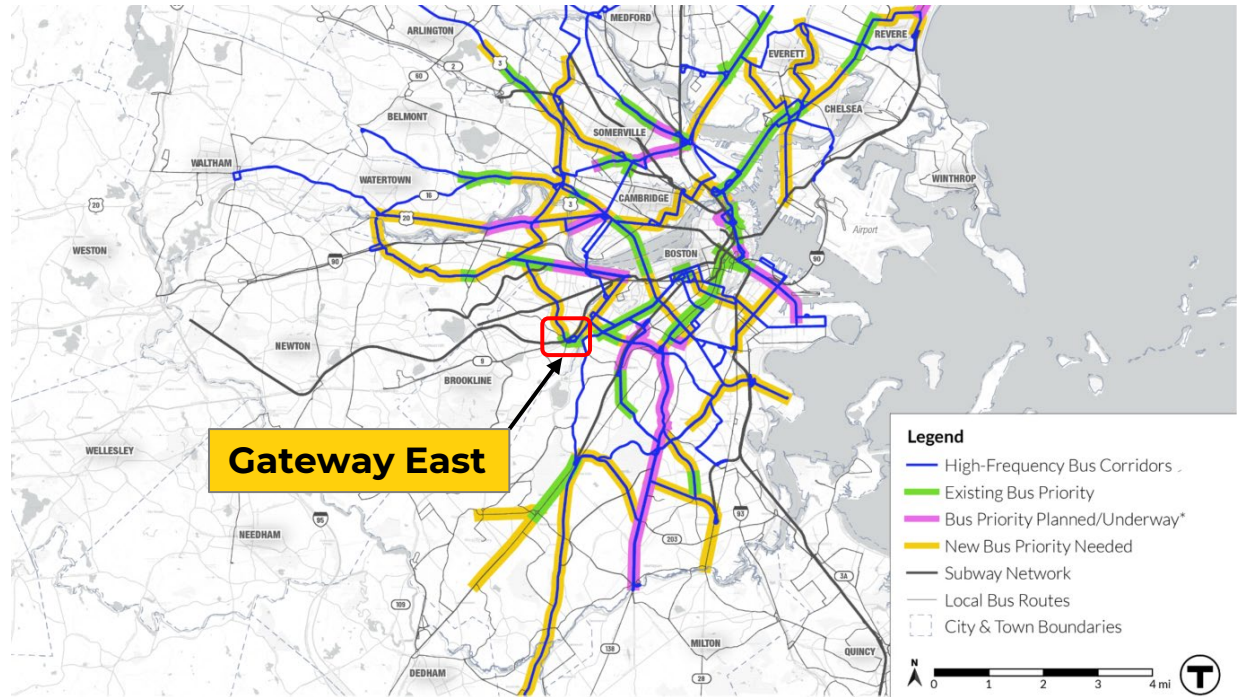


Project Motivation & Bus Priority

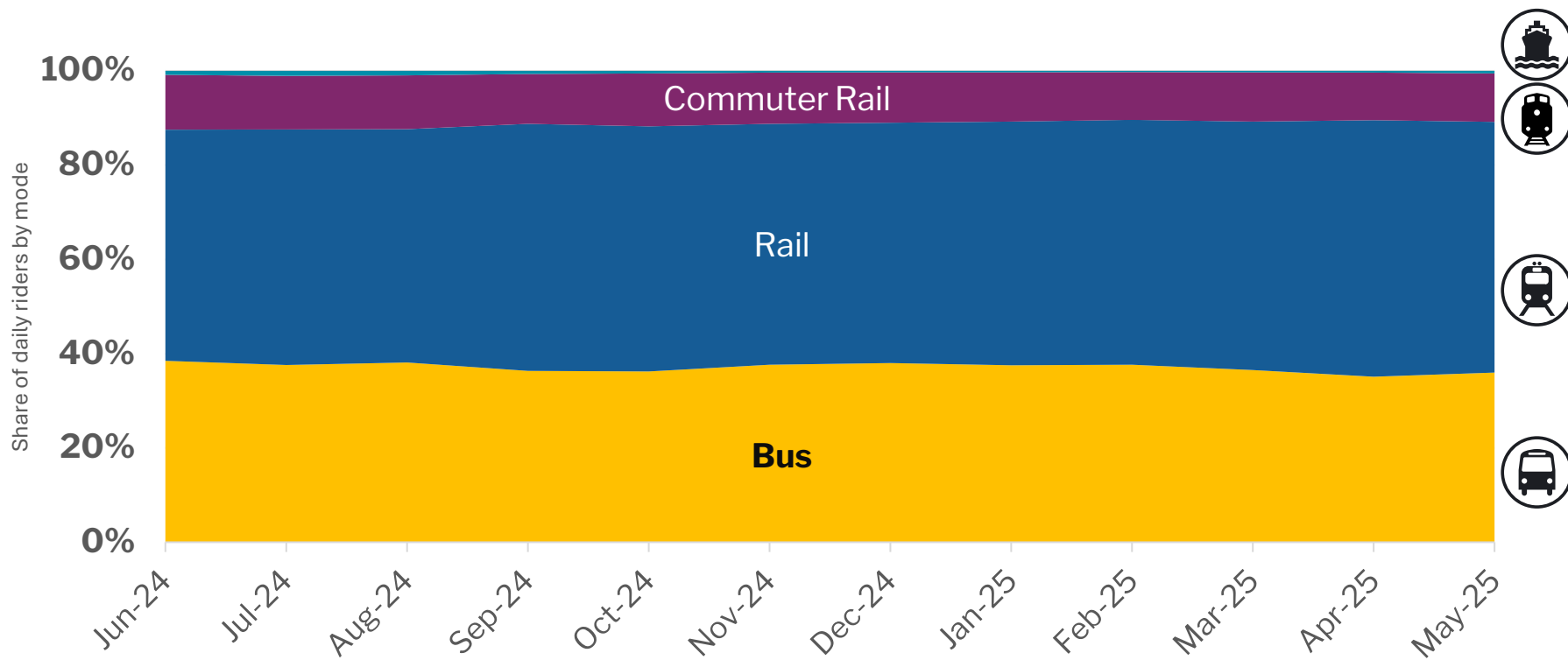


MBTA's Bus Priority Vision Plan

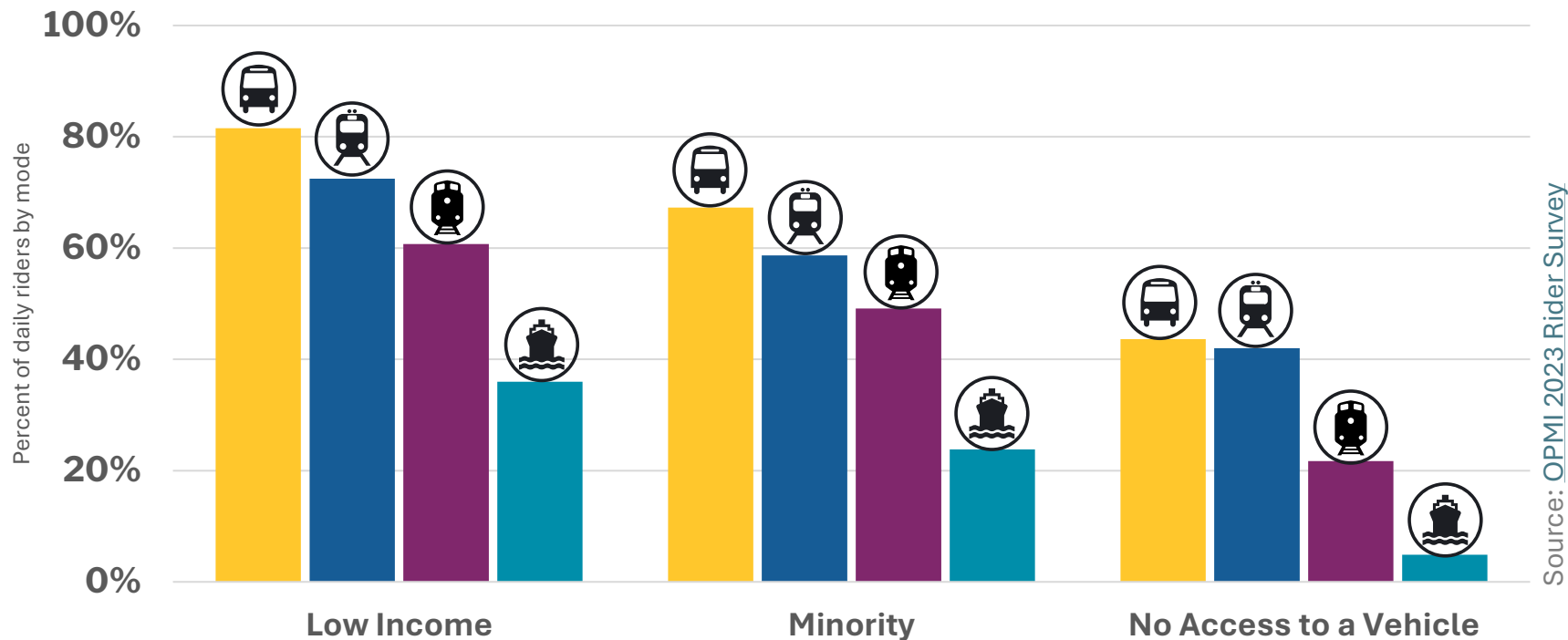
- **Targets existing delay** and service along 26 corridors
- Improves service to **220,000 daily bus riders**
- Covers 10-15% of the bus network; **impacts 80% of all bus riders**
- 5-7+ years of implementation



Bus Ridership: Nearly 40% of daily MBTA riders use the bus

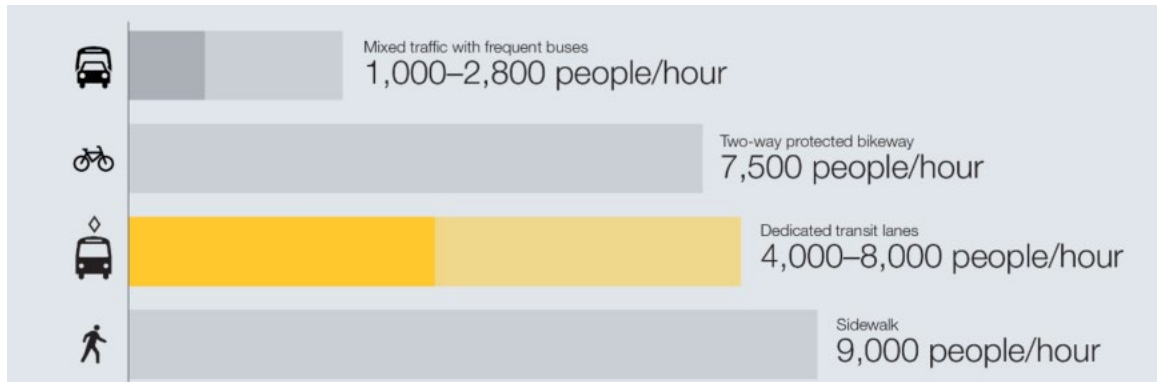


Bus Ridership & Equity: Majority of riders are low income & minority



Transit Priority Moves More People

How many people can the space of one travel lane serve?



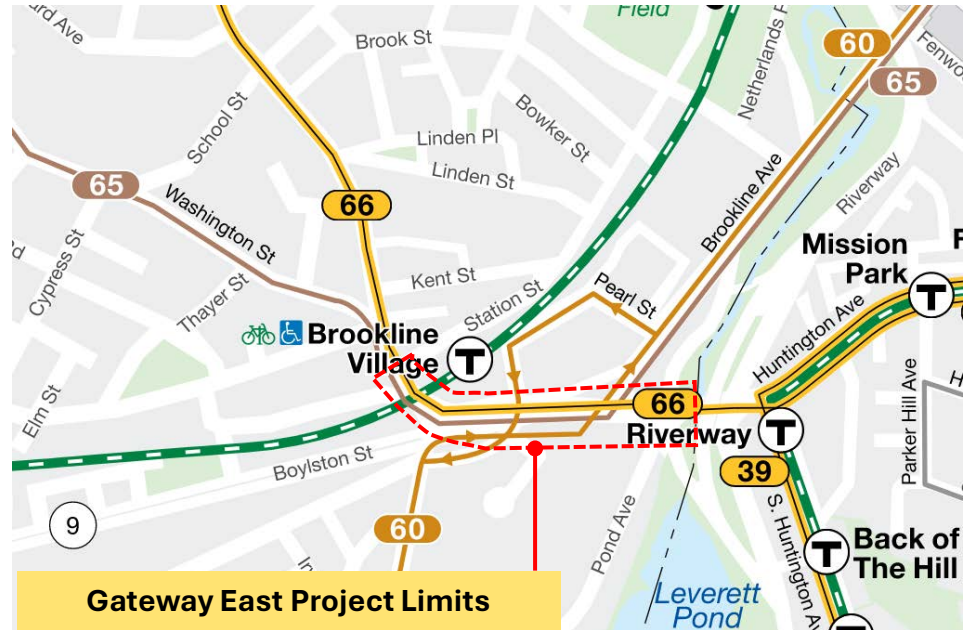
Person-Throughput Capacity (Graphic from MBTA Bus Priority Toolkit)

By repurposing space for transit, bus lanes can **increase the number of people that can travel along the corridor**, supporting future growth and mode shift to transit.



Project Motivation: Critical Transit Connection

- **Crossroads for three busiest bus routes** servicing Brookline: 60, 65, and 66 - highest bus ridership in all of Brookline
- Route 66 is **the 2nd busiest line in the entire MBTA bus system**
- Critical connections to and from the **Longwood Medical Area**, the Green Line (D and E branches), and other transit services
- Gateway East is the **busiest section of roadway** in Brookline for MBTA buses



MBTA Bus Map

Project Motivation: Bus Ridership & Equity

Typical Ridership on the Route 66 Bus

- 55% are from households without vehicles
- 40% are from households with incomes of less than \$43,500
- 40% are people of color
- 67% are women
- During peak hours, the average Route 66 bus passing through the corridor has 35-45 riders – this means multiple riders standing

Benefits nearly **15,000 daily riders** on Route 60, 65, 66 – half of which travel through the Gateway East Corridor



Gateway East: Route 66 Network Context

Route 66 is **the 2nd busiest line in the entire MBTA bus system**

Connects Red Line, Green Line, Orange Line, Silver Line, & several Frequent Bus Routes between Harvard & Nubian Stations

Gateway East project benefits nearly **15,000 daily riders** on Routes 60, 65, 66 – half of which travel through the project

For context, Route 9 carries **22,000** average daily traffic (Cypress - High)



Route 66 is a **Frequent Bus Route** (every 15 min or better)



Gateway East: Route 66 Network Context

Existing Projects

- Gateway East Bus Lanes
- Brighton Ave Bus Lanes
- Harvard Bus Tunnel Reroute
- TSP at Packard's Corner
- Huntington Ave Bus Lanes
- Tremont Street Queue Jump

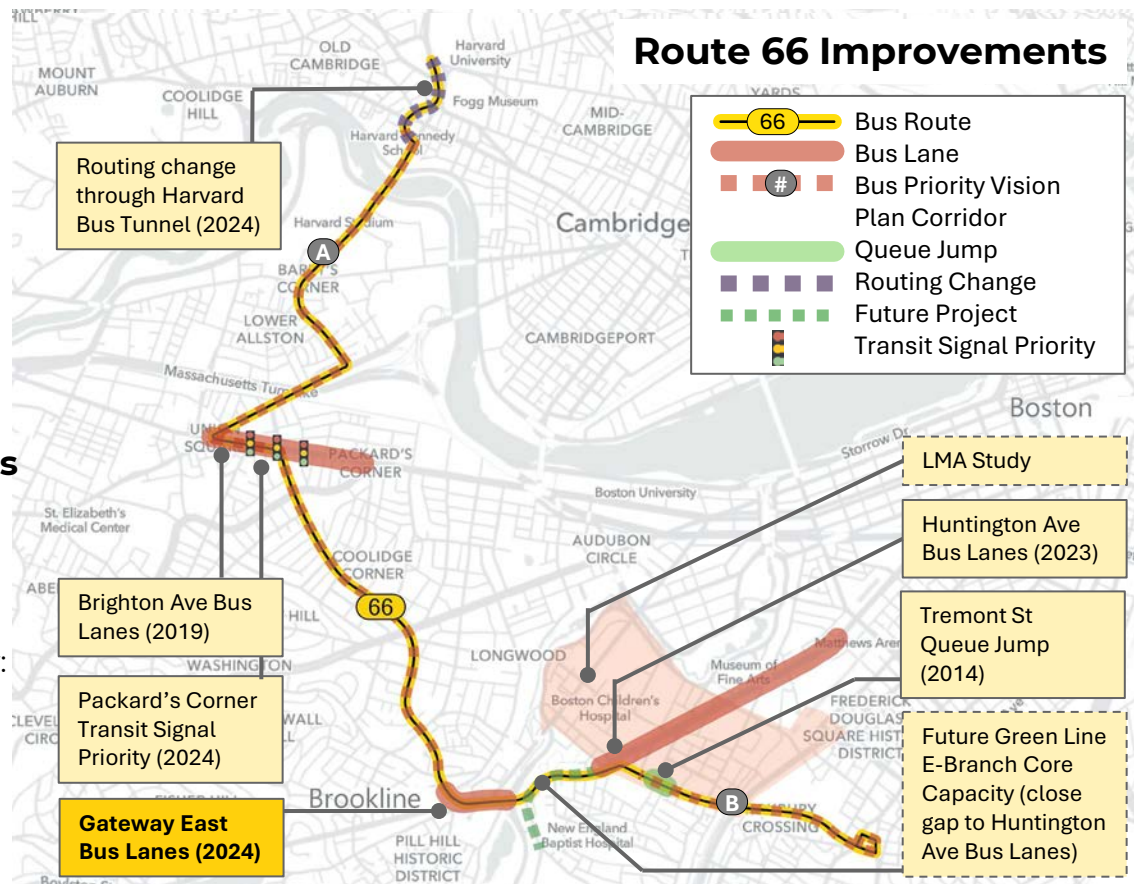
Bus Priority Vision Plan Corridors

- A** Harvard Sq - Brookline Village
- B** Nubian Sq - LMA (via Malcom X Blvd)

Projects In Development

- Green Line E-Branch Core Capacity: Transit Lanes on Huntington Ave
- Longwood Medical Area Study

Future approach will address delays along the 66 by targeting key junctions



Quarter 4 Findings

Quarter 4 Summary



Travel time has improved for bus riders (morning inbound peak)

Overall, in the *morning inbound peak*,

Compared to the same time-period in 2024, bus travel times are (see map):

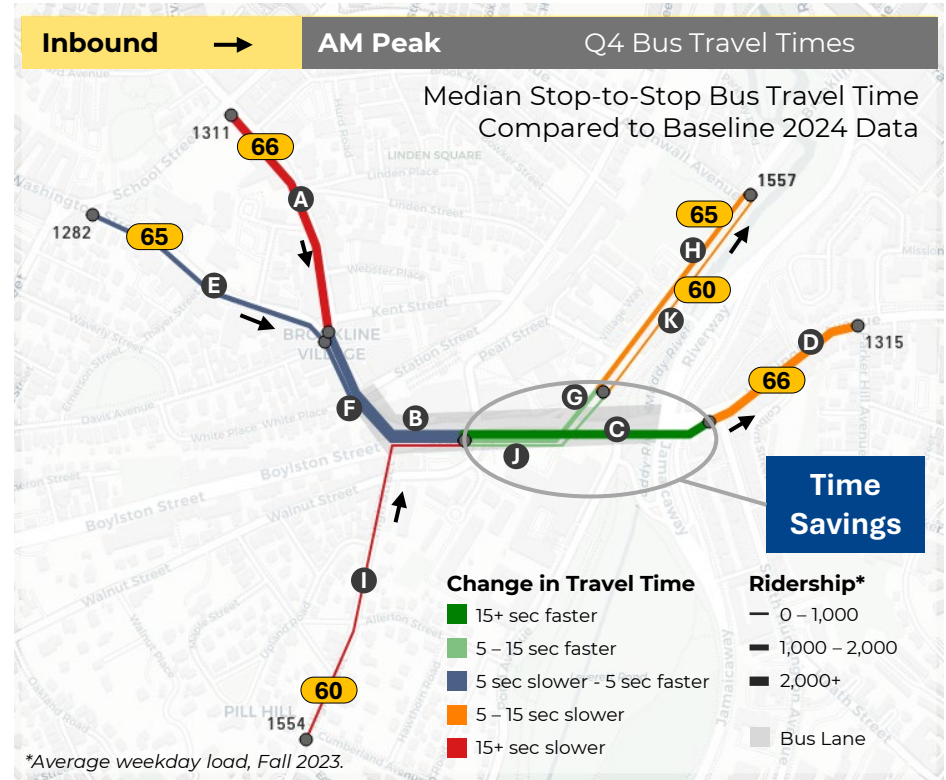
- Improving or consistent within the bus lane
- Longer travel times leading into and exiting the bus lane

Compared to Q3, bus travel times are:

- Improving within the bus lane
- Consistent or slightly faster outside the bus lane, except for segments A & I

During AM inbound trips, the bus lanes are performing well & **achieving significant time savings**

**See Appendix B for full details of Bus Service Analysis*



Travel time has improved for bus riders (evening outbound peak)

Overall, in the *evening outbound peak*,

Compared to the same time-period in 2024, bus travel times are (see map):

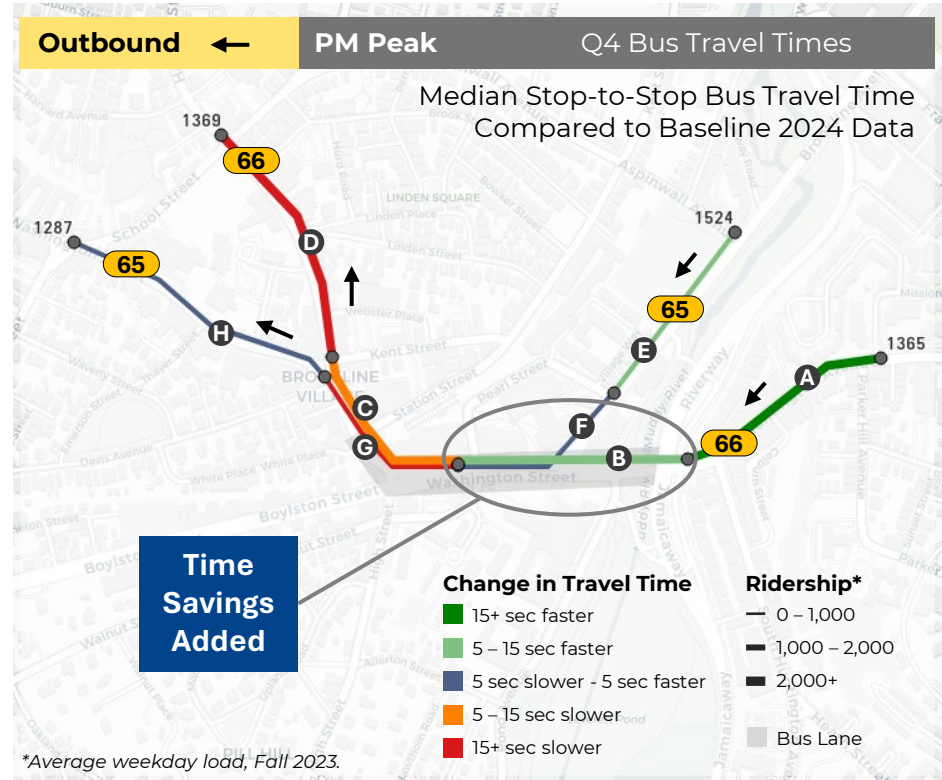
- Improved speeds approaching and traveling within the bus lane
- Increased travel times exiting the bus lane into mixed traffic

Compared to Q3, bus travel times are:

- Consistent or slightly slower throughout many study area segments, but faster in segments E & F

During PM outbound trips, the bus lanes are performing well & **achieving significant time savings**

**See Appendix B for full details of Bus Service Analysis*



Vehicle volumes & speeds have remained similar to previous quarters

VOLUMES:

- **Decreased in and around study area by approximately 1%** on average, relative to baseline
- Volumes on Route 9 **decreased slightly** with **mixed increases and decreases** on side streets

SPEEDS:

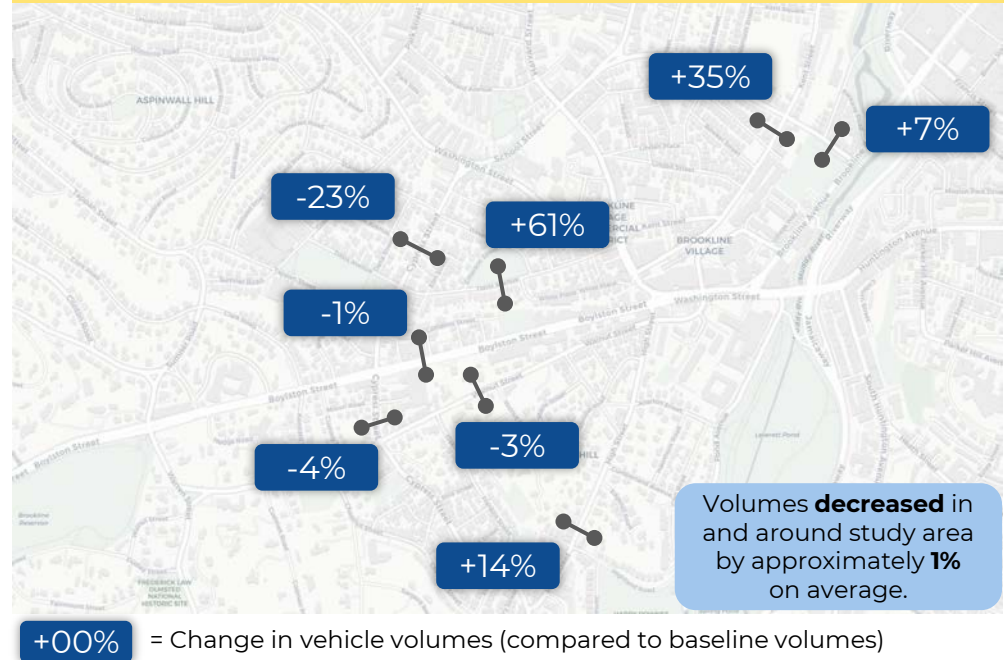
- Some fluctuation with speeds, but in general **most observed speeds decreased** (ranging from 22.4 to 34 MPH in the 85th percentile)

NEARBY TRAFFIC PATTERNS:

- **Pierce School** closed for construction and relocated to Old Lincoln School on Boylston St/Walnut St
- **Periodic closures of School St.** for the Pierce School construction may contribute to reduced traffic on Cypress St and increased traffic on Walnut St. and Davis Ave.

**See Appendix C for full details of Vehicle Volumes & Speeds*

Q4 Average Daily Traffic (ADT) Volume Change – Percentage

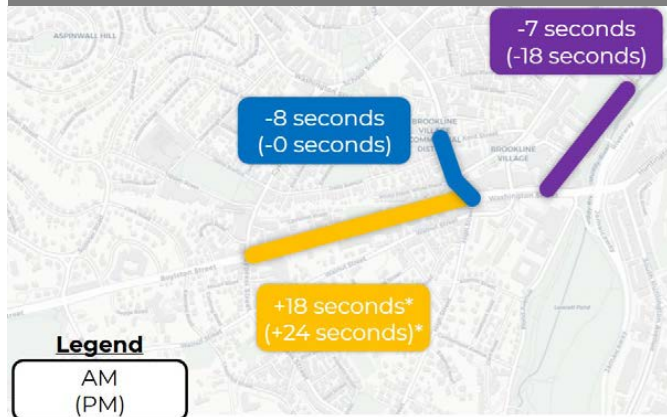


Travel times for general traffic have fluctuated slightly, and delays have remained similar

INTERSECTION DELAY:

- Either remains constant or fluctuates slightly
- Boylston St eastbound approach saw **increase** in delay, with other primary approaches seeing **decreases or no change** in delay

Intersection Approaches Analyzed for Delay

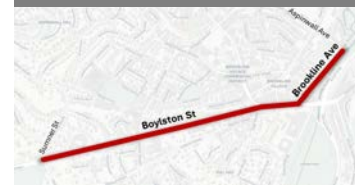


*See Appendix D for full details of Vehicle Travel Times & Control Delay

CORRIDOR TRAVEL TIMES:

- Inbound:** After some fluctuations in Q1, Q2, and Q3, the Q4 inbound corridor travel times have stabilized to **slightly above** Baseline levels
- Outbound:** The Q4 outbound corridor travel times **remain near** the Baseline levels

Corridor Analyzed for Travel Times



Inbound	Period	Baseline	Q1	Q2	Q3	Q4
	AM Peak	9.0 min	9.7 min	10.3 min	8.8 min	9.4 min
	MD Peak	5.7 min	6.6 min	6.0 min	6.5 min	7.1 min
	PM Peak	7.0 min	7.5 min	6.4 min	7.3 min	8.2 min

Outbound	Period	Baseline	Q1	Q2	Q3	Q4
	AM Peak	6.2 min	6.0 min	6.0 min	6.0 min	6.2 min
	MD Peak	5.5 min	5.9 min	5.7 min	6.0 min	6.0 min
	PM Peak	8.5 min	8.8 min	8.3 min	8.4 min	7.5 min

Vehicle queue lengths have seen minor increases at most approaches, but delays have remained similar

QUEUE LENGTHS

Minimal increases in queue lengths at most approaches, but delays (at right) are still similar to the baseline

- One exception was at the Boylston Street eastbound approach, which continues to see a **significant increase relative the baseline** (similar to Q1, Q2, and Q3)

Vehicle queue length graphics and full details can be found in Appendix E

INTERSECTION DELAYS



Intersection Approaches Analyzed for Delay

**See Appendix E for full details of Vehicle Queue Lengths*

Summary & Next Steps



Q4 Pilot Metrics Findings Summarized

- **Bus Travel Times** are continuing to improve
 - Continuing to see shorter travel times in the bus lanes and longer travel times exiting the bus lanes and entering mixed traffic
- **Vehicle Volumes** are relatively consistent with previous quarters
 - Traffic decreased slightly on Route 9 and increased moderately on side streets
- **Vehicle Speeds** mostly decreased, consistent with previous quarters
- **Vehicle Travel Times** have stabilized to baseline levels
 - Intersection delays remain constant or fluctuate slightly, broadly similar to previous quarters and baseline
- **Vehicle Queue Lengths** increased minimally, while delays remained consistent
 - One exception was at the Boylston Street eastbound approach, which saw a significant increase relative to the baseline (similar to previous quarters)
- **User Feedback Surveys** continue to remain open throughout the pilot

Key Takeaways from Q4 Findings

Pilot indicators help show impacts and help identify whether there is a trend to monitor or an outlier that didn't repeat.

- Overall, data shows consistency across first four quarters.
- Bus travel times stay consistent or improved, while general purpose traffic is mostly consistent with the baseline data.
- Data shows the bus lanes are effective where they exist, and are providing time savings. However, their efficacy is limited where buses re-enter mixed traffic.
- Continuing the pilot evaluation through Q5 – Q6 will provide insight on how the Transit Signal Priority is performing.



Washington St, before



Washington St, after

Next Steps

- **Pilot extension** for 6 months beginning September 2025 and concluding Spring 2026
- **Continue monitoring** & reporting quarterly throughout pilot duration
 - **Next report – January-Winter 2026: Quarter 5 (Sept 1, 2025 – Nov 30, 2025)**
- MBTA continue coordination on Transit Signal Priority with adaptive signal system vendor as needed
- Brookline continue coordination with BPD on education & enforcement

Appendix

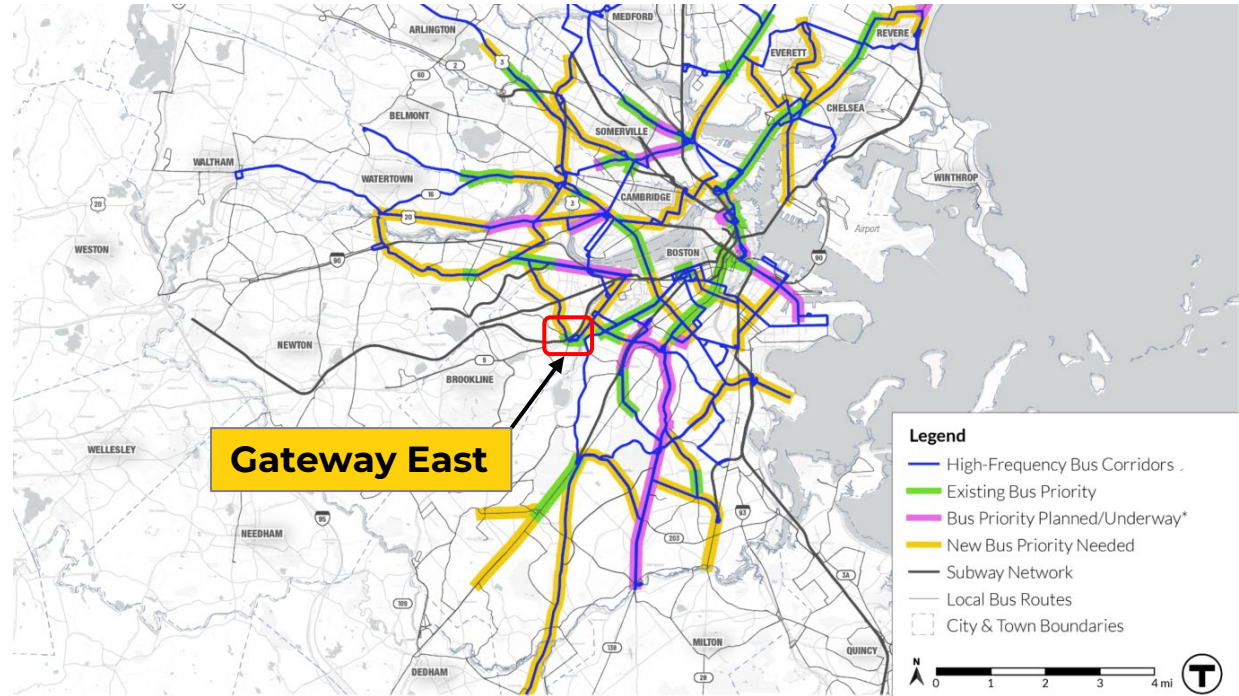
Appendix A

Project Background

MBTA Bus Priority

MBTA's Bus Priority Vision Plan

- **Targets existing delay** and service along 26 corridors
- Improves service to **220,000 daily bus riders**
- Covers 10-15% of the bus network; **impacts 80% of all bus riders**
- 5-7+ years of implementation

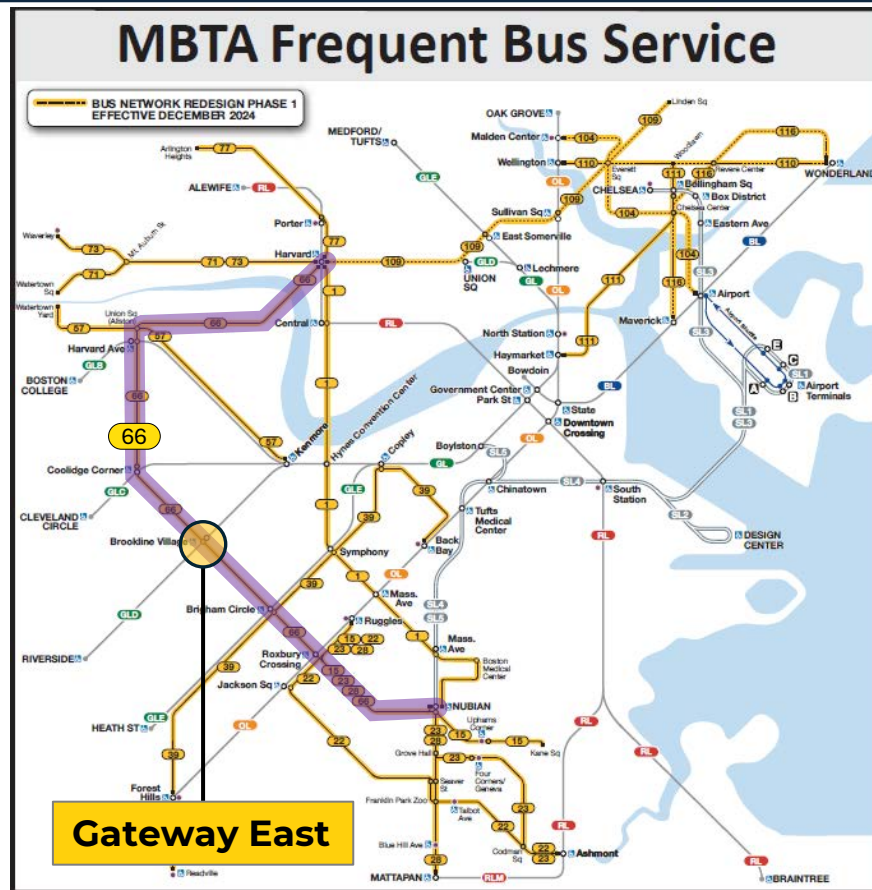


Gateway East: Route 66 Network Context

Route 66 is **the 2nd busiest line in the entire MBTA bus system**

Connects Red Line, Green Line, Orange Line, Silver Line, & several Frequent Bus Routes between Harvard & Nubian Stations

Gateway East project benefits nearly **15,000 daily riders** on Routes 60, 65, 66 – half of which travel through the project



Project Goals: Why Are Bus Lanes Needed?

- **Fastest, most affordable way** to improve transit service for riders in a short time frame
- **Improving access** to Longwood Medical Area, grocery stores, and other essential services throughout the pandemic and recovery
- **Improving transit equity** by supporting the commuting needs of essential workers, low-income people, and people of color
- **Moving more people more efficiently**



Gateway East, before the bus lanes

MBTA's Bus Priority Projects

Advance the Bus Priority Vision Plan to reduce bus rider delay through projects such as

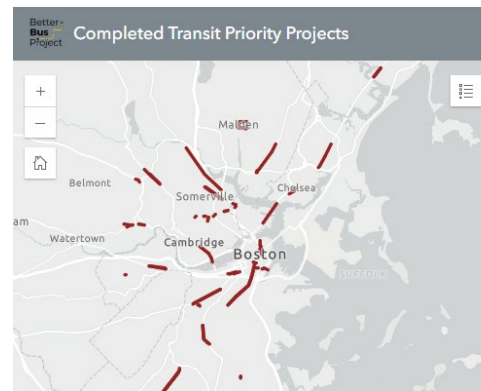
- Bus lanes
- Queue jumps
- Transit signal priority (TSP)

Growth of Bus Priority Projects in Greater Boston

- 40+ miles of bus lanes have been installed
- TSP has been activated at 85+ locations
- Collaboration is ongoing between MBTA and 12+ partner municipalities



*Bus lanes completed as of **2015***



*Bus lanes completed as of **2024***

Gateway East Bus Lane Pilot Evaluation Overview

Project Background

The **Gateway East Bus Lane Pilot** is a collaborative effort between MBTA, MassDOT, and The Town of Brookline to **build on the 2021 corridor reconstruction**.

One of principles the Brookline Transportation Board set for the Priority Bus Lane Pilot:

- **“To prioritize safe, space-efficient, and energy efficient movement of people and goods over the movement and parking of private vehicles when designing and improving our public ways** with particular focus on **high traffic routes connectivity and directness** consistent with Brookline Town meetings almost unanimously approval of Warrant Article 31 (WA31), titled as a **“resolution to respond to climate change by prioritizing health, access, and equity of Brookline’s public ways.”**”



Pilot Performance Indicators

- User Feedback Surveys
- MBTA Bus Travel Time
- MBTA Bus Travel Time Variability
- Volume and Speed tracked on Boylston St, Secondary Roads, and Residential Side Streets
- Vehicle Travel Times and Control Delay
- Queue Length Analysis



Project Timeline

2020: Collaborative planning effort began.

2021: Brookline Transportation Board authorized Gateway East Bus Priority Lane Pilot project, funded by the MBTA

2024: Dedicated bus lanes were implemented on Washington St between Station St and the Town Line in both directions. Installation occurred 6/24/2024 – 9/26/2024

2024-2025: The original pilot analysis period was planned for one year between August 2024 and July 2025

2025: Transit Signal Priority features were activated in June 2025

2025-2026: Pilot was extended for 6 months (Sept 2025 to Feb 2026) to allow time to gather data while the Traffic Signal Transit Priority is active during the school session

Quarterly evaluations of the pilot's impacts on bus travel times and car traffic are being conducted by Arcadis and Toole Design Group.



Gateway East, before



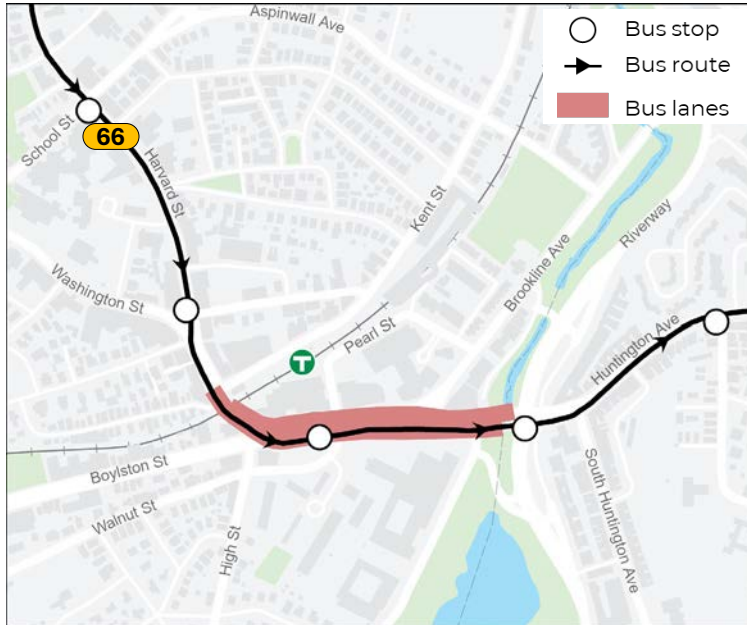
Gateway East, after



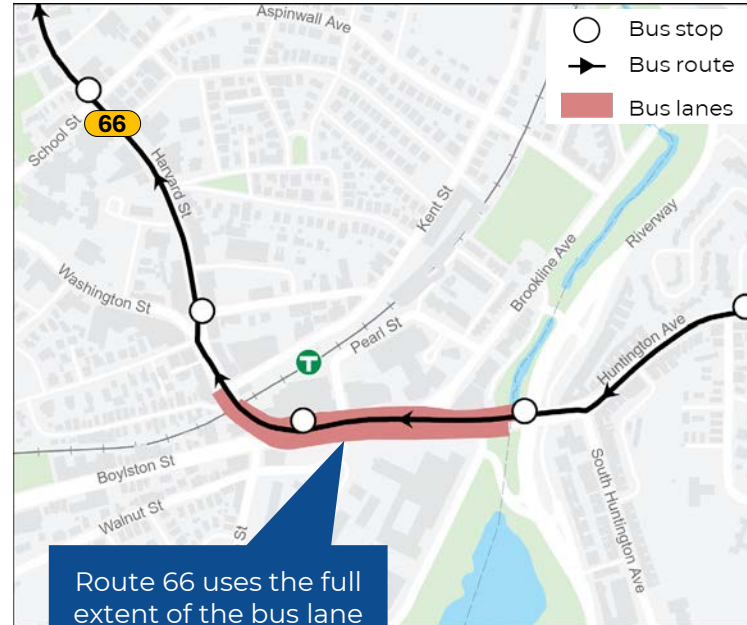
Gateway East, after
Photo Credit: Toole Design

Bus Routing Through the Project Area

66 Inbound



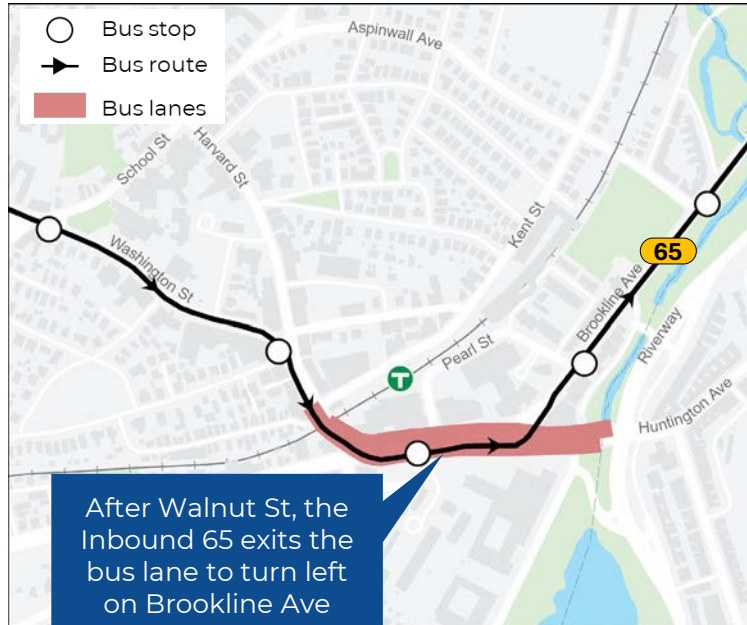
66 Outbound



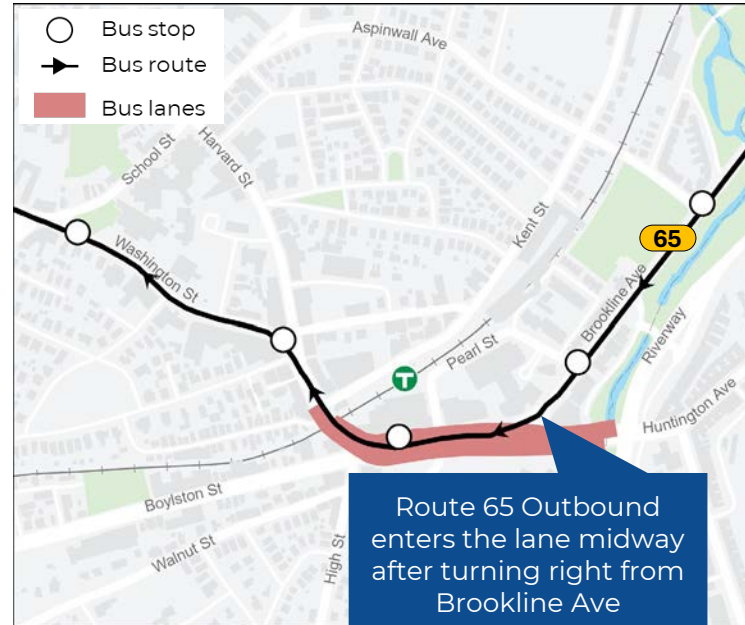
Route 66 uses the full extent of the bus lane in both directions

Bus Routing Through the Project Area

65 Inbound

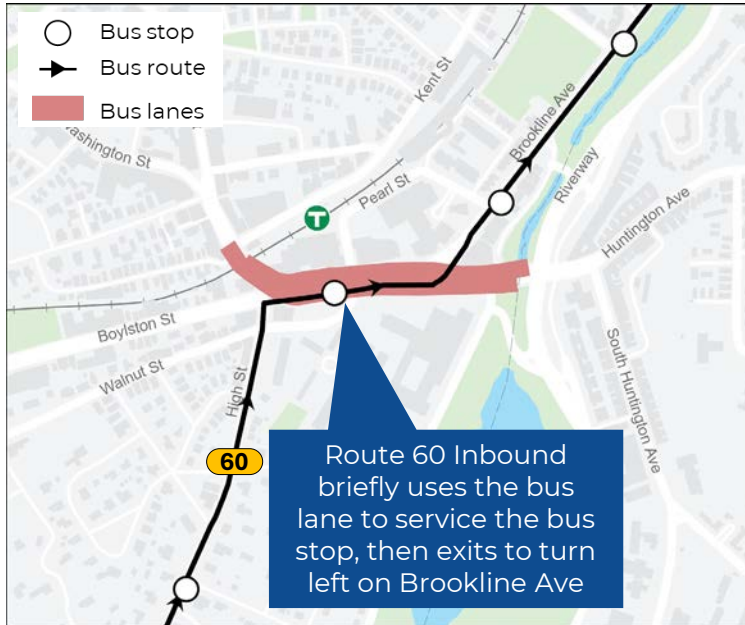


65 Outbound

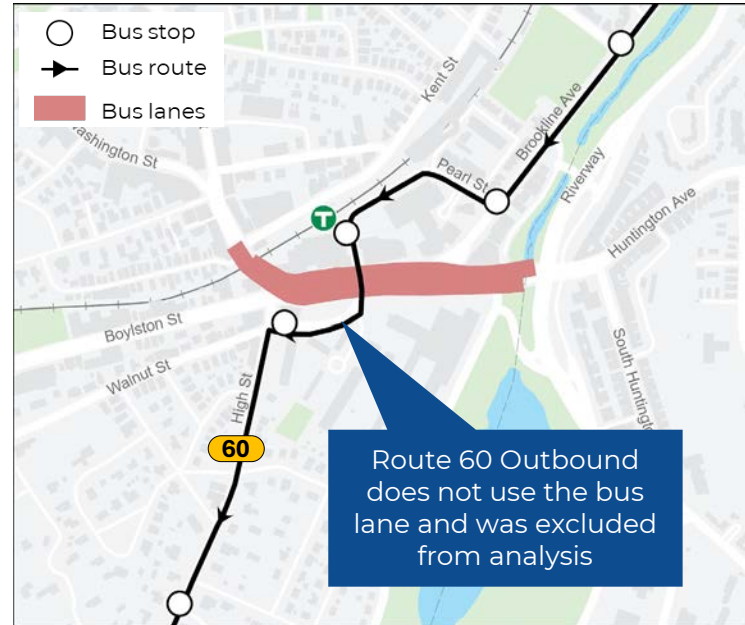


Bus Routing Through the Project Area

60 Inbound



60 Outbound



Project Status

Project Status & Operations

Construction – Markings & Signs Completed late September 2024

- Installation period extended well into the Q1 analysis period, ending 9/26/24 due to delays with signage installation

Traffic Signals – Activated in 2025

- The adaptive signal system was activated in April 2025 and the Transit Signal Priority features were activated in June 2025



T | CEX

Project Status & Operations

Enforcement

- BPD has conducted spot enforcement and have reported difficulty with logistics of enforcing the lane without blocking the bus lane

Other Factors Affecting Local Travel Patterns

- The **Pierce School closure** may explain reduced traffic on Cypress St and increased traffic on Walnut St, as the school was relocated to the old Lincoln School between Boylston St and Walnut St
- Pierce School Construction has required intermittent road closure of School St.



Gateway East, after
Photo Credit: Toole Design

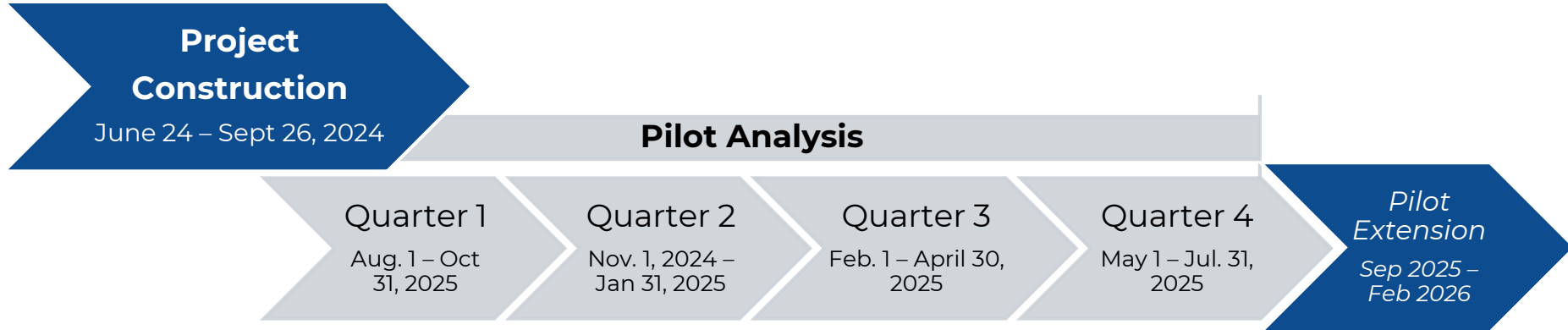
Public Feedback - Gateway East Bus Lane Pilot Survey

The survey was launched in mid-November and promoted through various channels, including:

- DPW and Town social media
- The Town Administrators' Newsletter
- The Longwood Collective Newsletter
- Eye-catching yard signs along the corridor
- The survey remains open for the duration of the pilot and we'd love to hear from you! Haven't taken the survey? Go to: <https://www.surveymonkey.com/r/CN3S9WZ>
- Survey results are included in the final Appendix.



Pilot Analysis Schedule



Data Collection Schedule

Period	Period Dates*	Traffic Count Dates	INRIX Dates	Queuing Dates
Baseline	Aug 1 – Oct 31, 2023	Sep 26-28, 2023	Jun 2024**	May 18, 2021***
Quarter 1	Aug 1 – Oct 31, 2024	Oct 8-10, 2024	Oct 2024	Dec 3, 2024
Quarter 2	Nov 1, 2024 – Jan 31, 2025	Feb 25-27, 2025	Jan 2025	Feb 26, 2025
Quarter 3	Feb 1 – Apr 30, 2025	Apr 8-10, 2025	Apr 8-10, 2025	Apr 8, 2025
Quarter 4	May 1 – Jul 30, 2025	Jul 15-17, 2025	Jul 2025	Jul 15, 2025

**APC data for travel time analysis collected over entire period.*

***INRIX Blackout from 6/2023 – 2/2024*

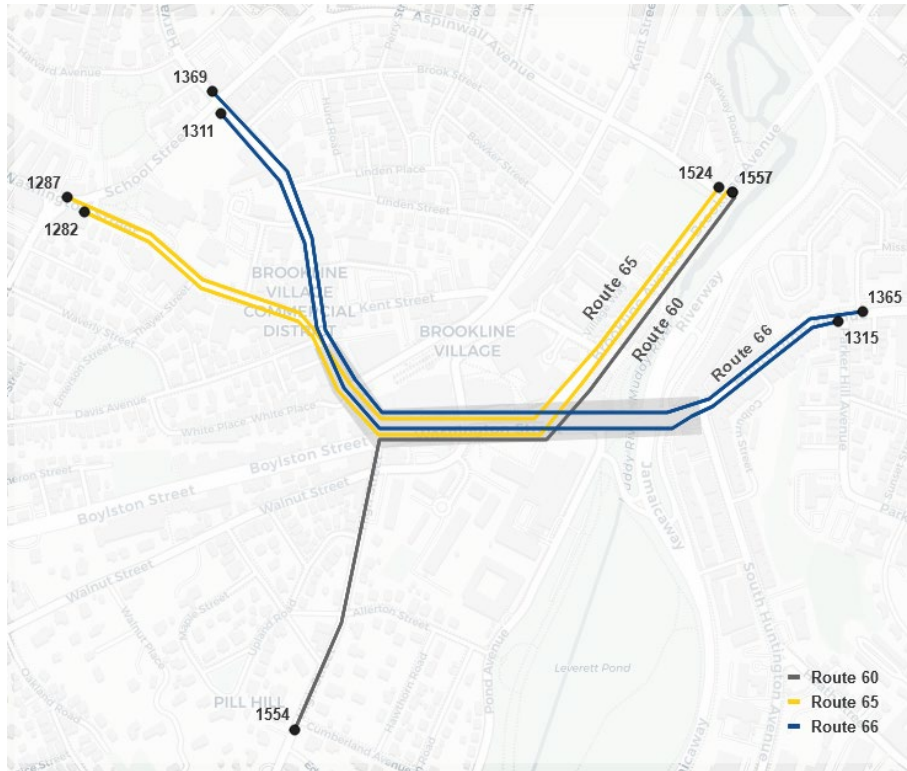
****Baseline queue data may be affected by decreased traffic in wake of COVID-19 pandemic*

Appendix B

Bus Travel Times

Bus Service Analysis Methodology

Analysis Area



Route 60 inbound between High St at Cumberland Ave (1554) and Brookline Ave opposite Aspinwall Ave (1557)

Route 65 inbound between Washington St at Cypress St (1282) and Brookline Ave at Aspinwall Ave (1557)

Route 65 outbound between Brookline Ave at Aspinwall Ave (1524) and Washington St at School St (1287)

Route 66 inbound between Harvard St at School St (1311) and Huntington Ave at Parker Hill Ave (1315)

Route 66 outbound between Huntington Ave opposite Parker Hill Ave (1365) and Harvard St at Aspinwall Ave (1369)

Data

- All analysis was completed using stop arrival and departure times in **automatic passenger counter (APC)** data.
- Data was collected for **weekdays** from February 2025 through April 2025.
 - The baseline period was weekdays from February 2024 through April 2024.
- MBTA-defined **time periods**:
 - AM Peak: 7:00 AM to 9:00 AM
 - Afternoon: 2:00 PM to 4:00 PM (*corresponds with the end of school*)
 - PM Peak: 4:00 PM to 7:00 PM

Metrics

Travel Time	Variability (MBTA Metric)	Travel Time Quality of Service (TTQOS)	Travel Time Variability Quality of Service (TTVQOS)
Median travel time of a vehicle over a segment at a given time.	Relative difference between the median and 90 th percentile of travel times.	Letter grade (A to E) for how much delay vehicles experience on average over a segment at a given time.	Letter grade (A to E) for how consistent vehicle travel time is over a segment at a given time.

Metrics

TTQOS =
$$\frac{\text{average travel time (observed)}}{\text{reference travel time}^*}$$

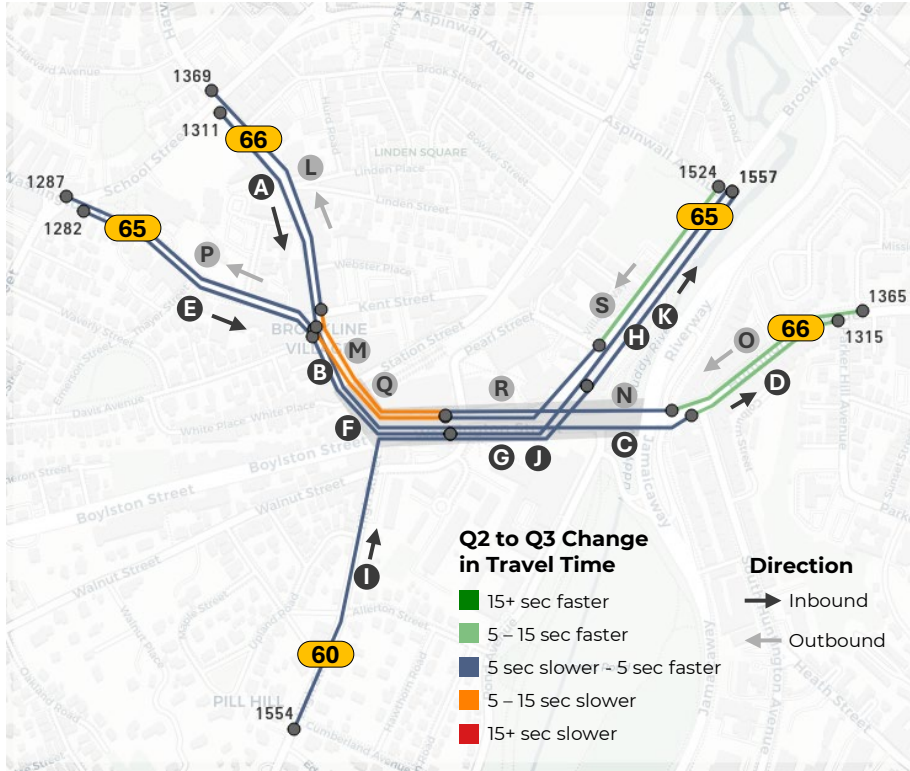
TTVQOS =
$$\frac{\text{standard deviation travel time (observed)}}{\text{average travel time (observed)}}$$

Grade	Metric Upper Threshold		Representative Bus Service
	TTQOS	TTVQOS	
A	1.4	1.4	Fully grade-separated
B	1.8	2.7	Reserved right-of-way, subject to traffic signal control
C	2.4	3.8	Mixed traffic, little to no traffic congestion
D	3.0	5.1	Mixed traffic, modest traffic congestion
E	4.0	8.0	Mixed traffic, moderate traffic congestion
F	N/A	N/A	<i>Perceived as too slow to be a good travel choice</i>

*Based on segment length.

Quarter 4 Bus Service Analysis Findings

What has changed in bus travel times between Q3 and Q4?



Change in Median Stop-to-Stop Bus Travel Time* (seconds)

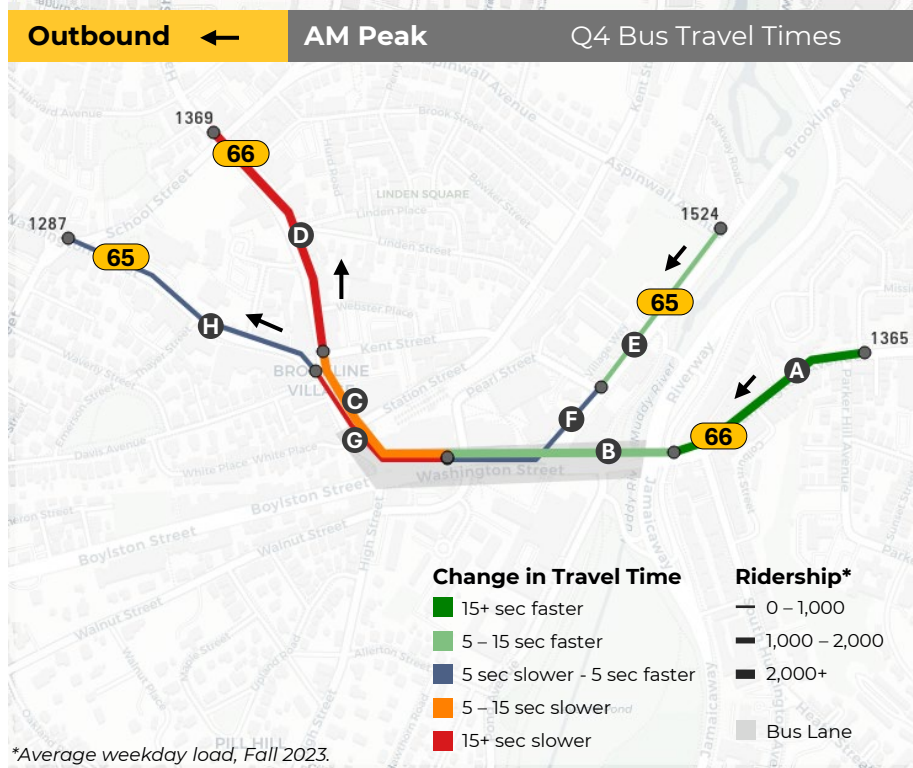
Represents a combination of AM, PM, and afternoon peak periods

	Inbound				Outbound		
	Q3 to Q4 Diff*	Baseline Diff**			Q3 to Q4 Diff*	Baseline Diff**	
		Q3 (sec)	Q4 (sec)			Q3 (sec)	Q4 (sec)
Route 66				Route 66			
A	5	36	35	L	-5	-8	-12
B	-0.5	-2.5	-16	M	-2	-24	-9
C	-1	-7	-13	N	11	-7	14
D	-5	6	1	O	-1	26	31
Route 65				Route 65			
E	2	2	4.5	P	-7	3	-6
F	-4.5	6	-1.5	Q	-3	15	2
G	-1	2	-4	R	10	2	16
H	-3	13	9	S	-2	-1	0
Route 60							
I	-2.5	-1	9				
J	0	-17.5	-1				
K	-3	19	10				

*Difference in travel time (s) between Q3 and Q4 (in seconds).

**Difference in travel time (s) between each quarter and its baseline (in seconds).

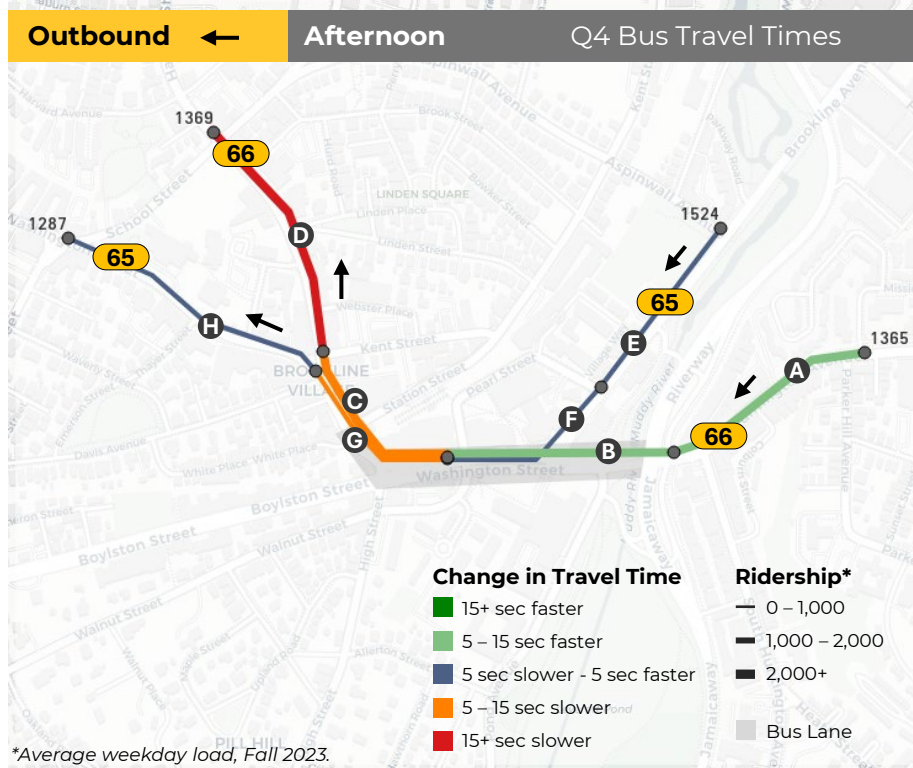
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline (min)	Q4 (min)	Change (sec)
Route 66			
Full corridor	7:54	8:25	32
A	2:04	1:40	-25
B	2:07	2:00	-7
C	1:31	1:45	14
D	1:51	2:37	46
Route 65			
Full corridor	6:03	6:11	8
E	1:13	1:06	-8
F	1:57	1:55	-2
G	1:34	1:51	16
H	1:04	1:03	-2

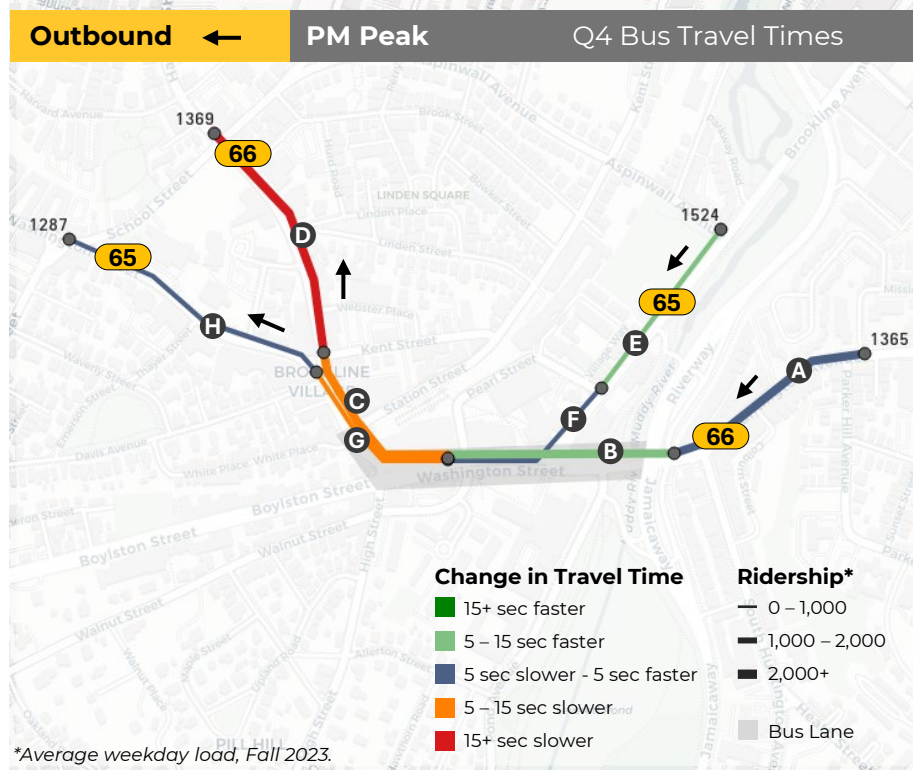
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline (min)	Q4 (min)	Change (sec)
Route 66			
Full corridor	8:03	8:36	32
A	2:04	1:55	-9
B	2:12	2:01	-11
C	1:34	1:49	15
D	1:58	2:31	34
Route 65			
Full corridor	6:34	6:45	10
E	1:22	1:19	-3
F	2:05	2:07	2
G	1:46	2:01	15
H	1:04	1:06	1

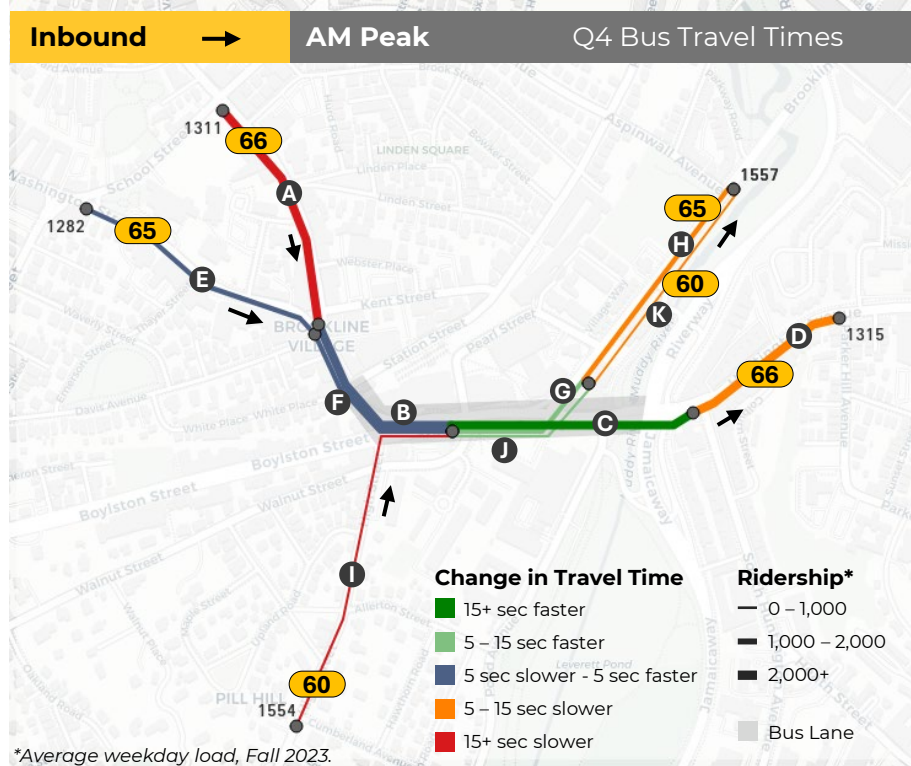
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline (min)	Q4 (min)	Change (sec)
Route 66			
Full corridor	8:21	8:45	24
A	2:06	2:03	-3
B	2:22	2:13	-10
C	1:39	1:54	14
D	2:04	2:22	18
Route 65			
Full corridor	6:37	6:46	10
E	1:24	1:16	-8
F	2:10	2:13	3
G	1:46	2:01	15
H	1:04	1:03	-1

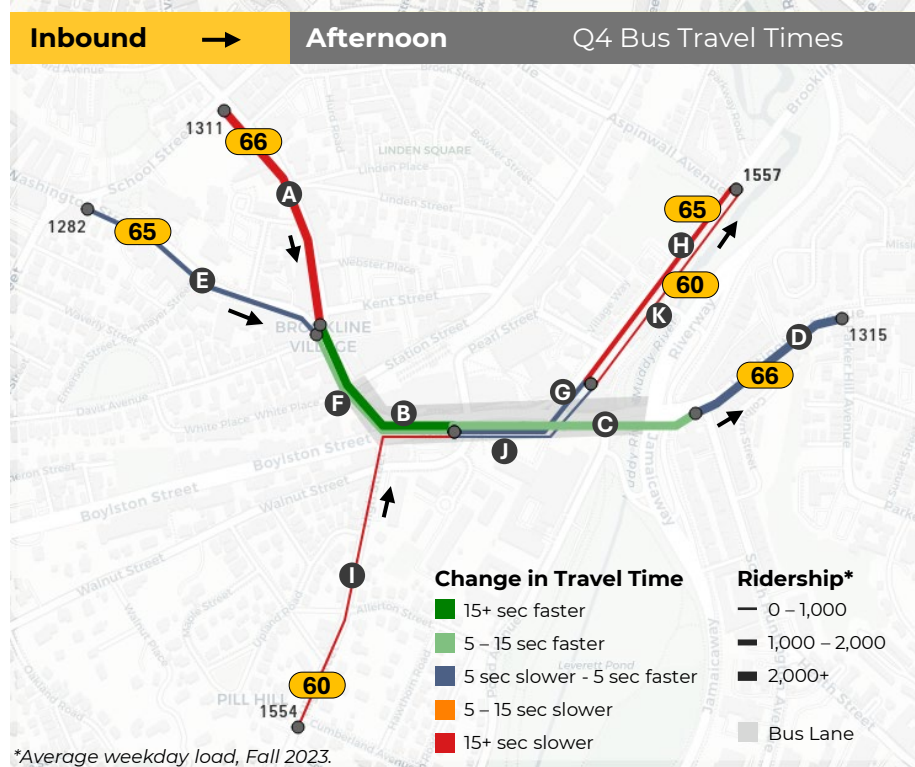
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline (min)	Q4 (min)	Change (sec)
Route 66			
Full corridor	8:22	8:39	17
A	1:15	2:00	44
B	2:45	2:40	-4
C	1:50	1:34	-16
D	2:15	2:22	7
Route 65			
Full corridor	7:04	7:13	8
E	1:18	1:22	4
F	2:24	2:28	5
G	2:04	1:58	-6
H	0:55	1:01	6
Route 60			
Full corridor	6:24	6:40	16
I	2:49	3:13	24
J	2:09	1:58	-10
K	1:00	1:07	7

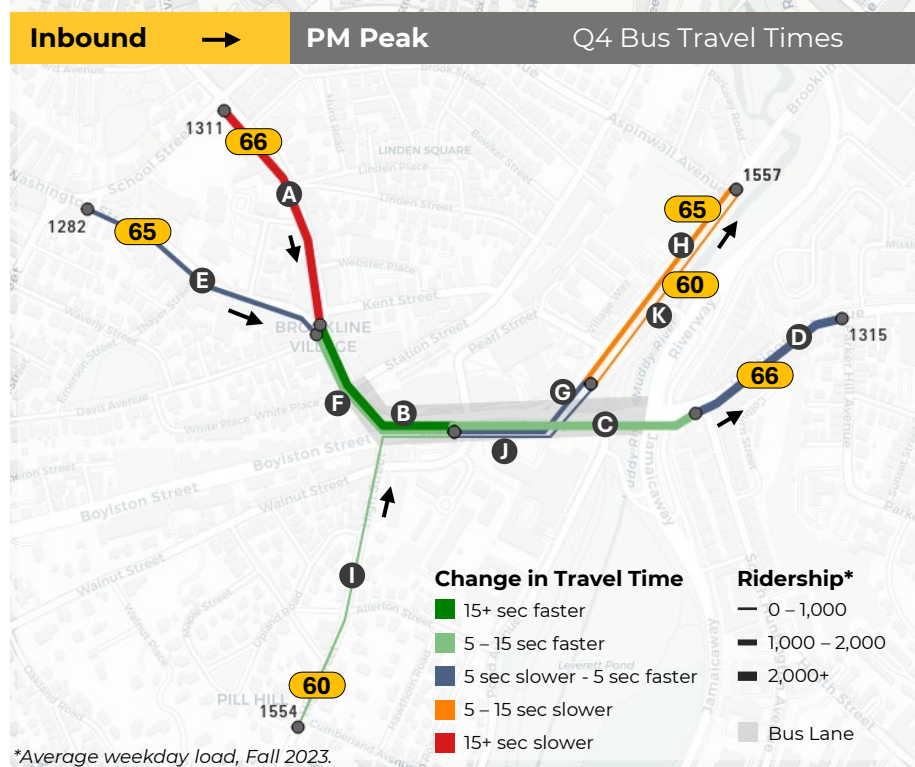
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline (min)	Q4 (min)	Change (sec)
Route 66			
Full corridor	8:45	8:37	-7
A	1:45	2:12	27
B	3:03	2:42	-21
C	1:40	1:34	-7
D	1:55	1:57	1
Route 65			
Full corridor	6:59	7:04	4
E	1:25	1:28	3
F	2:34	2:25	-9
G	1:49	1:49	0
H	0:45	1:01	16
Route 60			
Full corridor	5:16	5:49	34
I	2:16	2:34	19
J	1:44	1:49	4
K	0:49	1:04	16

Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline (min)	Q4 (min)	Change (sec)
Route 66			
Full corridor	8:58	8:46	-11
A	1:43	2:16	32
B	3:16	2:55	-21
C	1:49	1:36	-14
D	1:55	1:55	0
Route 65			
Full corridor	7:10	7:13	4
E	1:24	1:27	3
F	2:30	2:25	-5
G	1:55	1:55	1
H	0:51	1:01	10
Route 60			
Full corridor	5:45	5:43	-1
I	2:31	2:27	-5
J	1:55	1:52	-3
K	0:59	1:07	8

Quarter 4 Bus Service Analysis Results

Travel Times, Dwell, and QOS Ratios | Time Period: AM Peak

Q4 Baseline (May 2024 – Jul 2024)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	Inbound	1554	1557	384	591.8	10	19	31%	0.54	3.59	E	4.83	D
		1554	1555	169.5	367.3	12	20	91%	1.17	4.54	F	7.04	E
		1555	1556	129	212.7	10	23	43%	0.65	4.41	F	4.19	D
		1556	1557	60	104.9	10	19	31%	0.75	1.81	C	3.87	D
65	Inbound	1282	1557	425	575	9	14	23%	0.35	3.11	E	3.26	C
		1282	1283	78	125	11	21	72%	0.6	2.15	C	3.06	C
		1283	1555	144	231	12	22	90%	0.6	4.6	F	4.34	D
		1555	1556	125	211.6	9	15	55%	0.69	4.42	F	3.91	D
		1556	1557	56	108.6	9	14	23%	0.94	1.74	B	3.73	C
65	outbound	1524	1287	363	471	8.5	13.7	22%	0.3	2.71	D	2.85	C
		1524	1525	74	107	9	14.9	46%	0.45	2.18	C	2.76	C
		1525	1526	117	179	10	18	76%	0.53	3.53	E	3.84	D
		1526	1286	95	161	9	13	56%	0.69	3.23	E	4.03	D
		1286	1287	65	112	8.5	13.7	22%	0.72	1.98	C	3.34	C
66	inbound	1311	1315	502	669.6	16.5	54.6	89%	0.33	3.64	E	3.67	C
		1311	1313	75.5	136	13.5	28	88%	0.8	2.31	C	4.07	D
		1313	1555	165	247	14	30.9	85%	0.5	5.07	F	4.12	D
		1555	1314	110.5	158.6	14	29	94%	0.44	3.19	E	3.31	C
		1314	1315	135	225.3	16.5	54.6	89%	0.67	4.16	F	4.71	D
66	outbound	1365	1369	474	631	11	17	72%	0.33	3.39	E	3.22	C
		1365	1366	125	183.4	14	30	89%	0.47	3.53	E	2.74	C
		1366	1526	127	192	13	23	92%	0.51	3.72	E	3.48	C
		1526	1367	91	153.4	11	20	81%	0.69	2.99	D	3.78	C
		1367	1369	111	202.4	11	17	72%	0.82	3.27	E	4.71	D

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: Afternoon

Q4 Baseline (May 2024 – Jul 2024)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	316	427.3	7.5	11	7%	0.35	2.83	D	3.25	C
		1554	1555	136	227.1	13	24	92%	0.67	3.25	E	4.38	D
		1555	1556	104.5	174.4	9	16.8	41%	0.67	3.79	E	4.01	D
		1556	1557	49	104.1	7.5	11	7%	1.12	1.57	B	3.69	C
65	inbound	1282	1557	419.5	567.6	9	16.2	9%	0.35	3.07	E	3.24	C
		1282	1283	85	138	11	27.3	71%	0.62	2.36	C	3.47	C
		1283	1555	155	257	10	19	83%	0.66	5.04	F	5.04	D
		1555	1556	109.5	175.4	9	16	56%	0.6	3.8	E	3.57	C
		1556	1557	45.5	100.4	9	16.2	9%	1.21	1.47	B	3.91	D
65	outbound	1524	1287	394.5	512.6	9	19	43%	0.3	2.95	D	2.75	C
		1524	1525	83	123.3	11	26	68%	0.49	2.56	D	3.16	C
		1525	1526	125.5	195.3	12	26.7	79%	0.56	3.86	E	3.35	C
		1526	1286	106	171.6	11	22	72%	0.62	3.48	E	3.78	C
		1286	1287	65	110	9	19	43%	0.69	2.01	C	3.41	C
66	inbound	1311	1315	525	683	14	35.7	81%	0.3	3.86	E	4.79	D
		1311	1313	105	187	15	46.7	82%	0.78	3.12	E	4.35	D
		1313	1555	183	282	18	46	84%	0.54	5.82	F	4.25	D
		1555	1314	101	158	13	26.7	85%	0.56	3.25	E	11.58	F
		1314	1315	116	169	14	35.7	81%	0.46	3.4	E	12.46	F
66	outbound	1365	1369	483.5	654	13	29	70%	0.35	3.49	E	4.01	D
		1365	1366	125	176	16	38	81%	0.41	3.45	E	3.32	C
		1366	1526	132	212	15	33.1	92%	0.61	4.03	F	7	E
		1526	1367	94	153	14	35	79%	0.63	3.05	E	4.23	D
		1367	1369	118	205.3	13	29	70%	0.74	3.41	E	4.51	D

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: PM Peak

Q4 Baseline (May 2024 – Jul 2024)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	345	481.2	8.5	13.4	12%	0.39	3.13	E	3.62	C
		1554	1555	152	268.6	13	21.8	95%	0.77	3.61	E	4.7	D
		1555	1556	116	198	9	12	39%	0.71	4.16	F	4.11	D
		1556	1557	59.5	109	8.5	13.4	12%	0.83	1.75	B	3.83	D
65	inbound	1282	1557	430	575.4	9	14	9%	0.34	3.14	E	3.51	C
		1282	1283	84	142	10	27.9	52%	0.69	2.36	C	3.69	C
		1283	1555	150	261.2	11	22	74%	0.74	4.87	F	4.75	D
		1555	1556	115	197.4	8	13	41%	0.72	4.07	F	4.4	D
		1556	1557	51	116.8	9	14	9%	1.29	1.67	B	4.1	D
65	outbound	1524	1287	397	536.8	11	25.4	57%	0.35	3	D	3.33	C
		1524	1525	84	138.8	12	28	67%	0.65	2.63	D	3.73	C
		1525	1526	131	212.8	13	28.7	81%	0.62	4.05	F	4.02	D
		1526	1286	106	172.8	11	23	68%	0.63	3.49	E	3.78	C
		1286	1287	64	105	11	25.4	57%	0.64	1.94	C	3.13	C
66	inbound	1311	1315	538	755.6	13	27	80%	0.4	3.96	E	3.71	C
		1311	1313	104	179	15	56.5	86%	0.72	3.06	E	4.29	D
		1313	1555	196	318	20	53.3	90%	0.62	6.21	F	4.44	D
		1555	1314	110	166	14	31	92%	0.51	3.31	E	3.32	C
		1314	1315	116	168	13	27	80%	0.45	3.45	E	3.98	D
66	outbound	1365	1369	501.5	682	13	30	79%	0.36	3.63	E	4.59	D
		1365	1366	126	194.9	17	40	87%	0.55	3.57	E	4.72	D
		1366	1526	143	216.9	15	32	89%	0.52	4.31	F	7.68	E
		1526	1367	99.5	160	15	32	80%	0.61	3.09	E	8.98	F
		1367	1369	125	195.8	13	30	79%	0.57	3.54	E	8.6	F

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: AM Peak

Q4 (May 2025 – Jul 2025)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	400.5	612.9	8	9	17%	0.53	3.7	E	4.79	D
		1554	1555	193.5	380.5	13	22	92%	0.97	4.9	F	6.83	E
		1555	1556	118.5	183.4	9	16	32%	0.55	4.09	F	3.18	C
		1556	1557	67	112.4	8	9	17%	0.68	1.95	C	3.45	C
65	inbound	1282	1557	433	572	8	11.5	29%	0.32	3.15	E	3.22	C
		1282	1283	82	135.2	12	27	78%	0.65	2.3	C	3.27	C
		1283	1555	149	243	12	20	92%	0.63	4.73	F	4.41	D
		1555	1556	119	196.8	9	15	44%	0.65	4.14	F	4.03	D
		1556	1557	62	105	8	11.5	29%	0.69	1.84	C	3.2	C
65	outbound	1524	1287	371.5	492	8	10.2	19%	0.32	2.76	D	3.09	C
		1524	1525	66.5	103	9	13	37%	0.55	2.05	C	2.98	C
		1525	1526	115	188	11	20	77%	0.63	3.5	E	4.32	D
		1526	1286	111.5	180	9	14.6	49%	0.61	3.72	E	3.76	C
		1286	1287	63	102	8	10.2	19%	0.62	1.91	C	3.21	C
66	inbound	1311	1315	519	698	18	44.8	90%	0.34	3.86	E	3.95	D
		1311	1313	120	190	13	24.4	84%	0.58	3.3	E	3.87	D
		1313	1555	161	245	15	25	95%	0.52	5.07	F	3.96	D
		1555	1314	95	153	13	20	93%	0.61	2.86	D	3.56	C
		1314	1315	142	226	18	44.8	90%	0.59	4.32	F	5.94	E
66	outbound	1365	1369	506	715	11	18	71%	0.41	3.66	E	4.06	D
		1365	1366	100	150.2	12	24	83%	0.5	2.85	D	3.46	C
		1366	1526	120	197.2	15	30.5	92%	0.64	3.64	E	3.89	D
		1526	1367	105	173.6	12	23.7	78%	0.65	3.44	E	3.7	C
		1367	1369	157	307.8	11	18	71%	0.96	4.7	F	5.72	E

*Calculated for buses that stop
(excludes stops with no boardings,
alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: Afternoon

Q4 (May 2025 – Jul 2025)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	350	452.4	8	11.9	12%	0.29	3.07	E	3.48	C
		1554	1555	155	228	14	26	98%	0.47	3.45	E	4.34	D
		1555	1556	109	178.4	8	18.2	33%	0.64	3.93	E	4.51	D
		1556	1557	65	119.4	8	11.9	12%	0.84	1.94	C	3.78	C
65	inbound	1282	1557	424	546.8	8	10.4	12%	0.29	3.06	E	2.99	C
		1282	1283	88	140.6	12	31.5	68%	0.6	2.43	D	3.36	C
		1283	1555	146	230.6	11	19	86%	0.58	4.58	F	4.05	D
		1555	1556	109	180.2	9	16	43%	0.65	3.75	E	3.64	C
		1556	1557	61	115.6	8	10.4	12%	0.9	1.82	C	3.87	D
65	outbound	1524	1287	405	544	10	19	49%	0.34	3.01	E	3.13	C
		1524	1525	80	121.8	10	21.2	66%	0.52	2.44	D	3.58	C
		1525	1526	128	204.8	12	25	83%	0.6	3.97	E	4.24	D
		1526	1286	121	184.9	11	21.5	73%	0.53	3.89	E	3.79	C
		1286	1287	66	98	10	19	49%	0.48	1.88	C	2.54	B
66	inbound	1311	1315	518	672	13	28	83%	0.3	3.75	E	3.04	C
		1311	1313	132	200	14	39	76%	0.52	3.67	E	3.53	C
		1313	1555	162	265	16	40	81%	0.64	5.17	F	4.08	D
		1555	1314	94	143	12	27	84%	0.52	2.79	D	3.36	C
		1314	1315	117	167	13	28	83%	0.43	3.45	E	3.75	C
66	outbound	1365	1369	516	686.8	12.5	25.8	68%	0.33	3.7	E	3.38	C
		1365	1366	116	167.2	15	31.7	86%	0.44	3.23	E	3.86	D
		1366	1526	121	189	16	36	92%	0.56	3.67	E	3.53	C
		1526	1367	109	187.6	14	34	82%	0.72	3.6	E	4.14	D
		1367	1369	152	261.2	12.5	25.8	68%	0.72	4.28	F	5.14	E

*Calculated for buses that stop
(excludes stops with no boardings,
alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: PM Peak

Q4 (May 2025 – Jul 2025)

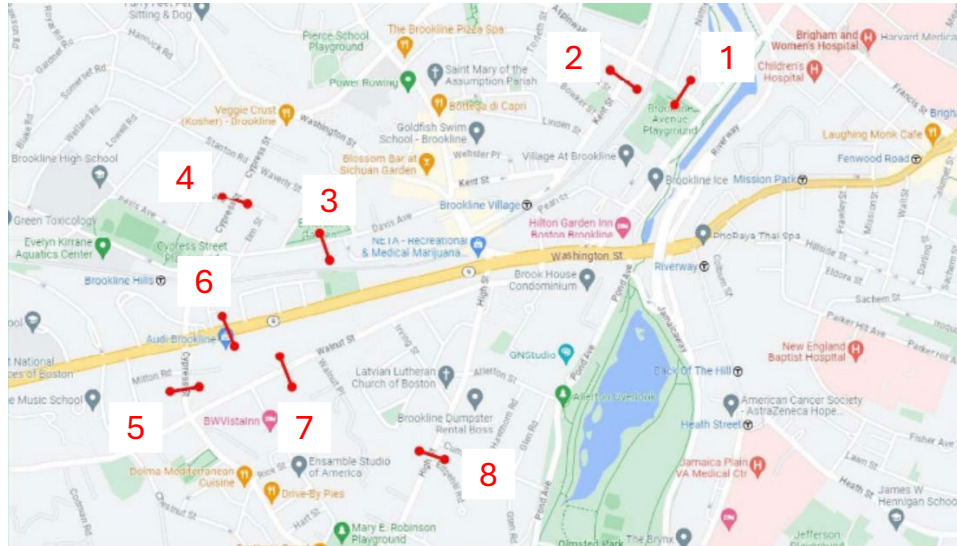
Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	344	460.8	8	12.5	12%	0.34	3.1	E	3.17	C
		1554	1555	147	240.6	14	21.5	97%	0.64	3.49	E	4.21	D
		1555	1556	113	189.6	9	16	35%	0.68	3.99	E	3.85	D
		1556	1557	67	111.6	8	12.5	12%	0.67	1.93	C	3.52	C
65	inbound	1282	1557	433.5	580.3	8	16.2	9%	0.34	3.16	E	3.35	C
		1282	1283	87	143	10	25.8	54%	0.64	2.46	D	4.34	D
		1283	1555	145	240	11	19	78%	0.66	4.69	F	4.21	D
		1555	1556	116	188	9	16	40%	0.62	4	E	3.94	D
		1556	1557	61	120	8	16.2	9%	0.97	1.88	C	3.98	D
65	outbound	1524	1287	407	551.2	11	23	58%	0.35	3.1	E	3.69	C
		1524	1525	76	123	11	24	66%	0.62	2.42	D	4.47	D
		1525	1526	134	231.4	13	26	86%	0.73	4.29	F	4.89	D
		1526	1286	121	195.4	12	22	72%	0.61	3.96	E	3.85	D
		1286	1287	63	102	11	23	58%	0.62	1.89	C	2.79	C
66	inbound	1311	1315	527	695	12	28	81%	0.32	3.83	E	3.12	C
		1311	1313	136	208	15	47	88%	0.53	3.67	E	3.89	D
		1313	1555	175	284	19	44.7	91%	0.62	5.44	F	4.26	D
		1555	1314	96	158	14	27.4	92%	0.65	2.92	D	3.35	C
		1314	1315	116	169	12	28	81%	0.46	3.4	E	3.47	C
66	outbound	1365	1369	525	792.6	14	28	81%	0.51	3.96	E	4.36	D
		1365	1366	123	281.4	17	35	91%	1.29	4.2	F	7.59	E
		1366	1526	133	211.2	18	36	95%	0.59	3.97	E	3.87	D
		1526	1367	114	173.2	15	34.2	83%	0.52	3.6	E	3.58	C
		1367	1369	143	239.2	14	28	81%	0.67	4.04	F	4.67	D

*Calculated for buses that stop
(excludes stops with no boardings,
alightings, or dwell).

Appendix C

Highway Volumes

Data Collection Locations

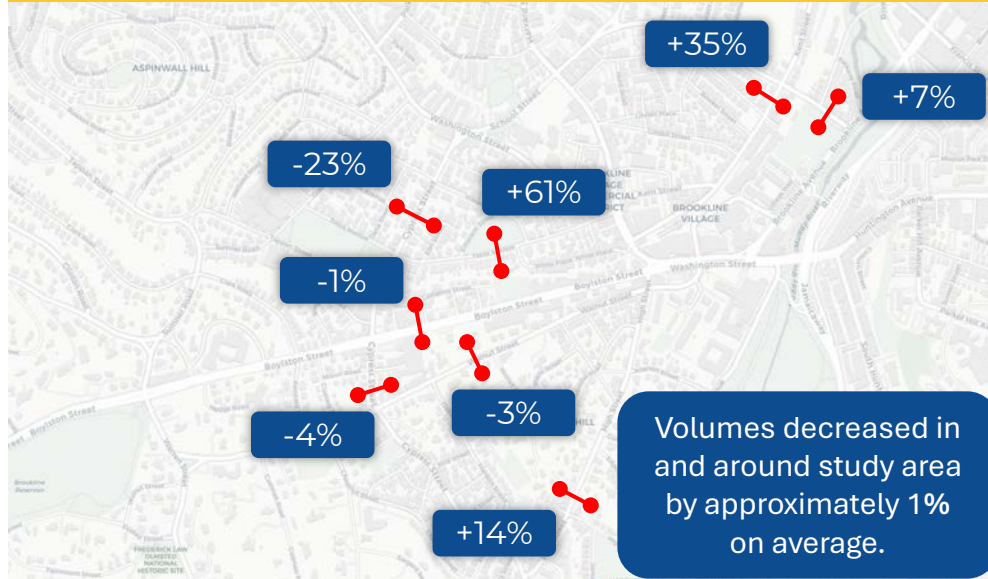


1. Aspinwall Ave, between Brookline Ave & Kent St
2. Kent St, between Aspinwall Ave & Brook St
3. Davis Ave, between Cypress St & Washington St
4. Cypress St, between Tappan St & Davis Ave
5. Cypress St, between Boylston St & Walnut St
6. Boylston St (Route 9), between Cypress St & High St
7. Walnut St, between Cypress St & High St
8. High St, between Cumberland Ave & Edgehill Rd

Quarter 4 Highway Volumes Findings

Has the project impacted traffic on secondary streets and residential side streets?

Q4 Average Daily Traffic (ADT) Volume Change – Percentage



VOLUMES:

- **Decreased in and around study area by approximately 1% on average**, relative to baseline
- Volumes on Route 9 **decreased slightly** with **mixed increases and decreases** on side streets

SPEEDS:

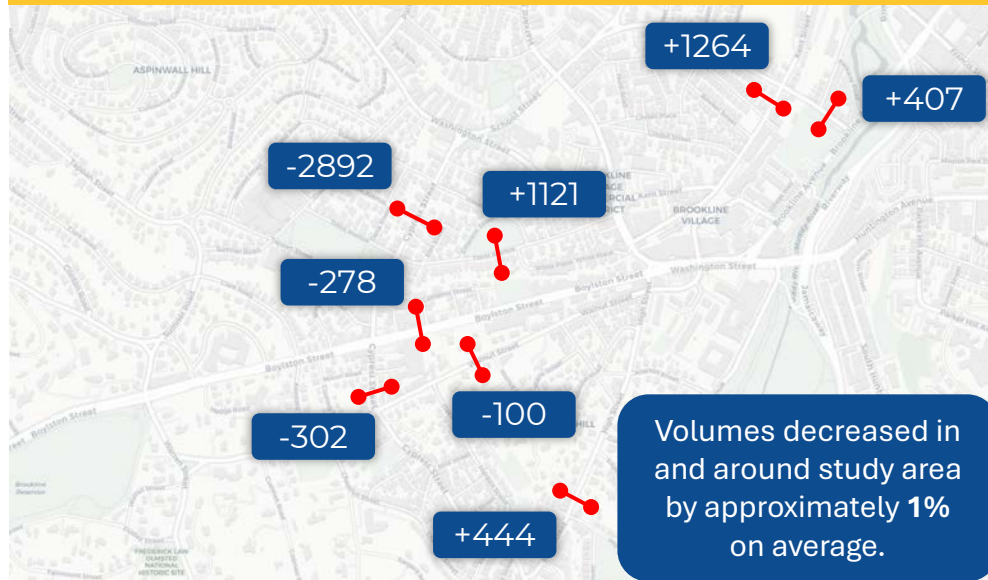
- Some fluctuation with speeds, but in general **most observed speeds decreased**

NEARBY TRAFFIC PATTERNS:

- **Pierce School** closed for construction and relocated to Old Lincoln School on Boylston St/Walnut St
- **Periodic closures of School St.** for the Pierce School construction may contribute to reduced traffic on Cypress St and increased traffic on Walnut St. and Davis Ave.

Has the project impacted traffic on secondary streets and residential side streets?

Q4 Average Daily Traffic (ADT) Volume Change - Volumes



VOLUMES:

- **Decreased in and around study area by approximately 1% on average**, relative to baseline
- Volumes on Route 9 **decreased slightly** with **mixed increases and decreases** on side streets

SPEEDS:

- Some fluctuation with speeds, but in general **most observed speeds decreased**

NEARBY TRAFFIC PATTERNS:

- **Pierce School** closed for construction and relocated to Old Lincoln School on Boylston St/Walnut St
- **Periodic closures of School St.** for the Pierce School construction may contribute to reduced traffic on Cypress St and increased traffic on Walnut St. and Davis Ave.

Has the project impacted speed on side streets?

Northbound/Eastbound

Location	NB/EB 50th Percentile Speeds (MPH)			NB/EB 85th Percentile speeds (MPH)		
	Baseline Sept 2023	Q4 Speeds Jul 2025	Change	Baseline Sept 2023	Q4 Speeds Jul 2025	Change
Aspinwall Ave, between Brookline Ave & Kent St	20.2	17.1	-15.5%	24.7	22.4	-9.3%
Kent St, between Aspinwall Ave & Brook St	18.0	17.8	-1.2%	24.1	23.9	-0.9%
Davis Ave, between Cypress St & Washington St	22.7	19.5	-13.7%	27.7	24.0	-13.2%
Cypress St, between Davis Ave & Gorham Ave	21.4	21.3	-0.4%	26.4	25.0	-5.2%
Cypress St, between Boylston St & Walnut St	19.5	20.3	+4.3%	24.1	24.3	+0.8%
Boylston St (Rt 9), between Cypress St & High St	28.8	27.2	-5.6%	34.6	32.8	-5.1%
Walnut St, between Cypress St & High St	23.5	23.0	-2.4%	28.4	27.6	-2.9%
High St, between Cumberland Ave & Edgehill Rd	22.6	23.4	+3.4%	27.4	28.0	+2.3%

Speed % Change Key:



Some fluctuation with speeds, but in general most observed speeds have decreased

Has the project impacted speed on side streets?

Southbound/Westbound

Location	SB/WB 50 th Percentile Speeds (MPH)			SB/WB 85 th Percentile speeds (MPH)		
	Baseline Sept 2023	Q4 Speeds Jul 2025	Change	Baseline Sept 2023	Q4 Speeds Jul 2025	Change
Aspinwall Ave, between Brookline Ave & Kent St	20.5	19.0	-7.4%	24.9	23.5	-5.8%
Kent St, between Aspinwall Ave & Brook St	21.8	21.0	-3.5%	26.1	24.7	-5.4%
Davis Ave, between Cypress St & Washington St	21.3	17.8	-16.7%	26.1	22.6	-13.4%
Cypress St, between Davis Ave & Gorham Ave	19.3	20.3	+5.2%	24.8	24.9	+0.4%
Cypress St, between Boylston St & Walnut St	18.1	18.3	+1.3%	23.7	23.7	+0.1%
Boylston St (Rt 9), between Cypress St & High St	29.2	28.6	-1.9%	35.8	34.0	-5.0%
Walnut St, between Cypress St & High St	22.6	23.4	+3.4%	27.3	28.2	+3.3%
High St, between Cumberland Ave & Edgehill Rd	23.6	23.2	-2.0%	28.4	27.9	-1.6%

Speed % Change Key:



Some fluctuation with speeds, but in general most observed speeds have decreased

Quarter 4 Highway Volumes Results

Baseline Volumes – Sept 2023

Location	ADT	Peak AM	Peak PM
Aspinwall Ave, between Brookline Ave & Kent St	5,484	465	501
Kent St, between Aspinwall Ave & Brook St	3,605	364	292
Davis Ave, between Cypress St & Washington St	1,840	264	177
Cypress St, between Davis Ave & Gorham Ave	12,553	1113	932
Cypress St, between Boylston St & Walnut St	7,730	879	585
Boylston St (Rt 9), between Cypress St & High St	22,520	1777	1765
Walnut St, between Cypress St & High St	3,193	472	435
High St, between Cumberland Ave & Edgehill Rd	3,224	321	310
Total Volumes	60,149	5,655	4,997

Q4 Volumes – Jul 2025

Location	ADT	Change	Peak AM	Change	Peak PM	Change
Aspinwall Ave, between Brookline Ave & Kent St	5,891	+7.4%	594	+27.7%	644	+28.5%
Kent St, between Aspinwall Ave & Brook St	4,869	+35.1%	637	+75.0%	415	+42.1%
Davis Ave, between Cypress St & Washington St	2,961	+60.9%	362	+37.1%	272	+53.7%
Cypress St, between Davis Ave & Gorham Ave	9,661	-23.0%	700	-37.1%	962	+3.2%
Cypress St, between Boylston St & Walnut St	7,428	-3.9%	753	-14.3%	679	+16.1%
Boylston St (Rt 9), between Cypress St & High St	22,242	-1.2%	1,733	-2.5%	1785	+1.1%
Walnut St, between Cypress St & High St	3,093	-3.1%	438	-7.2%	421	-3.2%
High St, between Cumberland Ave & Edgehill Rd	3,668	+13.8%	392	+22.1%	378	+21.9%
Total Volumes / Average % Change	59,813	-0.6%	5,609	-0.8%	5,556	+11.2%

Appendix D

Highway Travel Times and Control Delays

Study Locations

Intersections

1. Washington St at Station St
2. Boylston St (Route 9) at High St and Washington St
3. Washington St (Route 9) at Pearl St and Walnut St
4. Washington St (Route 9) at Brookline Ave

Corridors

1. Boylston St eastbound between Cypress St and High St
2. Washington St southbound between Boylston St and Harvard St
3. Brookline Ave northbound between Aspinwall Ave and Washington St.

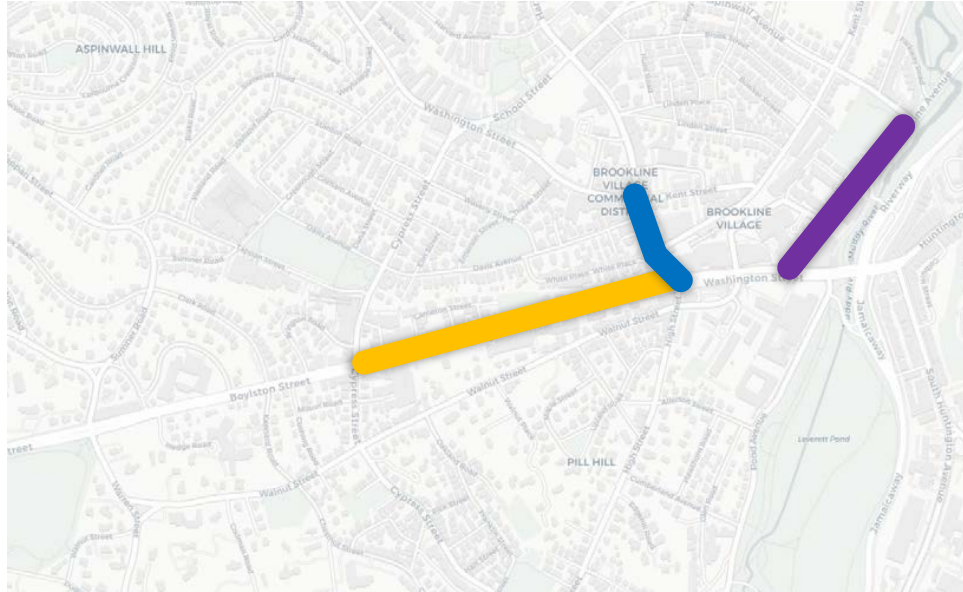
Intersections

1. Washington St at Station St
2. Boylston St (Route 9) at High St and Washington St
3. Washington St (Route 9) at Pearl St and Walnut St
4. Washington St (Route 9) at Brookline Ave



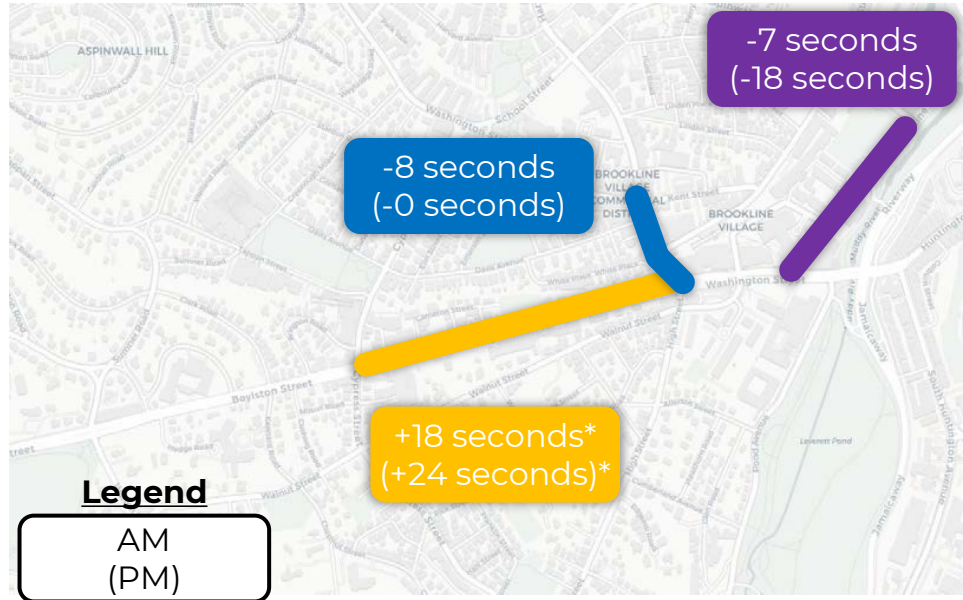
Quarter 4 Highway Travel Times & Control Delays Findings

Has the project created impacts to general purpose traffic?



1. Boylston St eastbound between Cypress St and High St (**orange**)
2. Washington St southbound between Boylston St and Harvard St (**blue**)
3. Brookline Ave northbound between Aspinwall Ave and Washington St (**purple**)

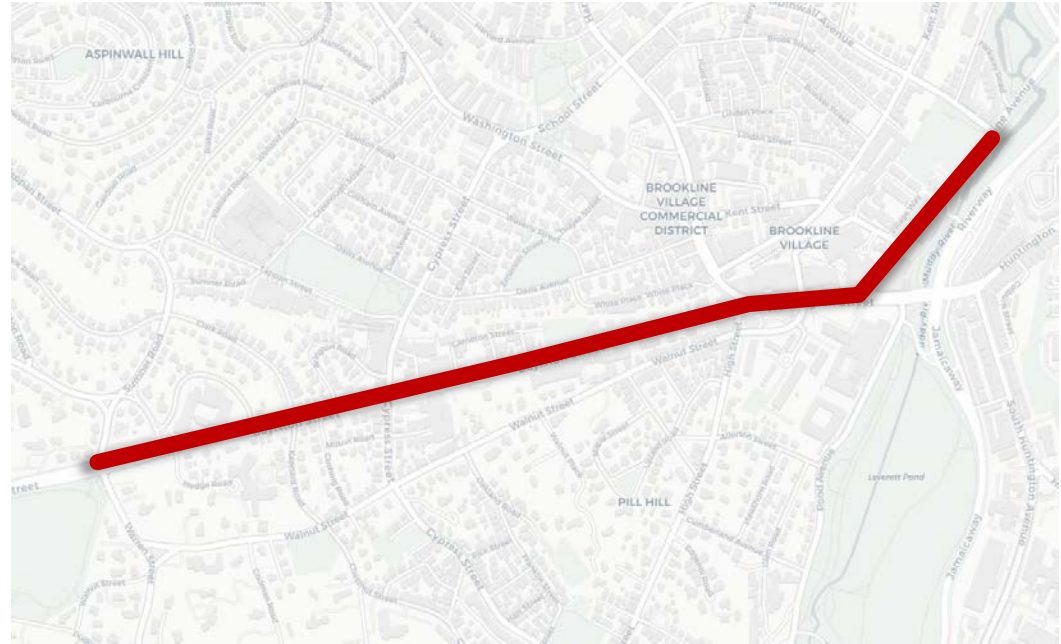
Has the project created impacts to general purpose traffic? Comparing Q4 to Baseline



- Intersection delay increases significantly for Boylston St eastbound through movement
- Intersection delay either remains constant or decreases for other movements
- *Data may be affected by INRIX platform limitations, but does not indicate significant increases in vehicle delay

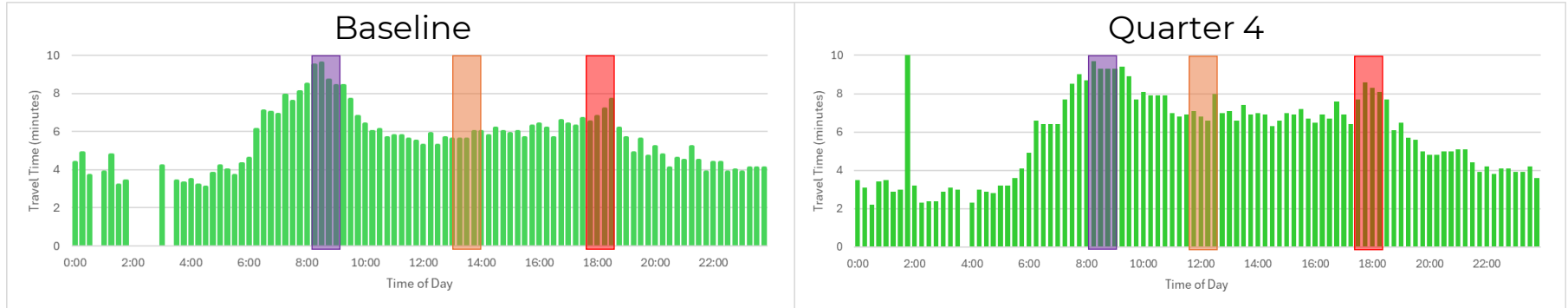
Corridor Travel Time

- Boylston Street & Brookline Avenue between Sumner Street and Aspinwall Avenue
- Approximately 1.2 miles
- Includes all three intersections in project area



Q4 Travel Time - Boylston Street and Brookline Avenue inbound between Sumner Road and Aspinwall Avenue

Average Travel Time over Time of Day

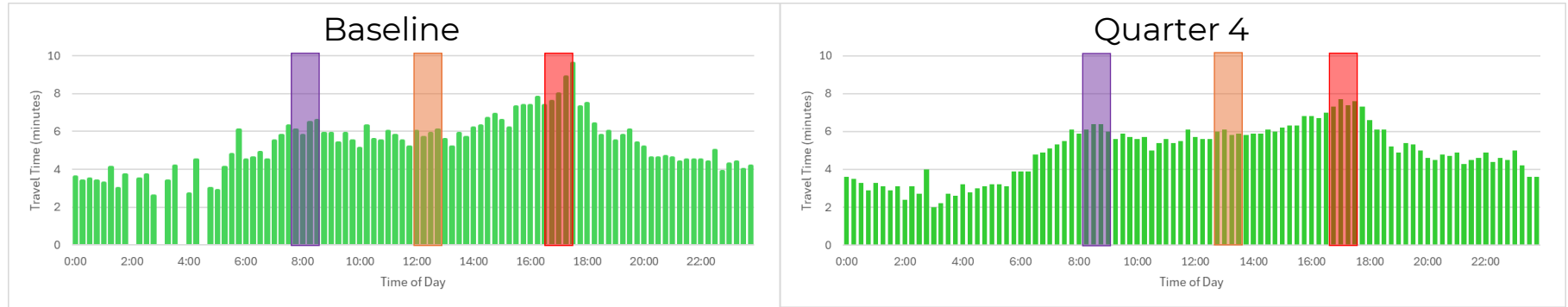


Period	Baseline Travel Time	Quarter 4 Travel Time
AM Peak Hour	9.0 minutes	9.4 minutes
MD Peak Hour	5.7 minutes	7.1 minutes
PM Peak Hour	7.0 minutes	8.2 minutes

Approximately 84 second increase in MD Peak travel time and 72 second increase in PM Peak Travel time for vehicles traveling through all project area intersections, with AM travel time remaining fairly constant

Q4 Travel Time - Boylston Street and Brookline Avenue outbound between Sumner Road and Aspinwall Avenue

Average Travel Time over Time of Day



Period	Baseline Travel Time	Quarter 4 Travel Time
AM Peak Hour	6.2 minutes	6.2 minutes
MD Peak Hour	5.5 minutes	6.0 minutes
PM Peak Hour	8.5 minutes	7.5 minutes

Approximately 30 second increase in MD Peak travel time for vehicles traveling through all project area intersections, with AM travel time remaining constant and PM travel time decreasing by 60 seconds

Quarter 4 Highway Travel Times and Control Delays Results

#1 Washington St at Station St – Baseline

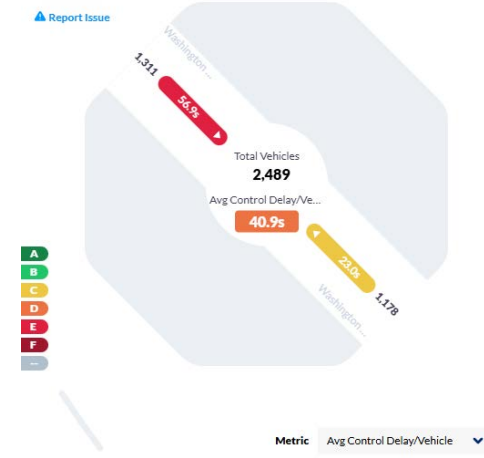
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily

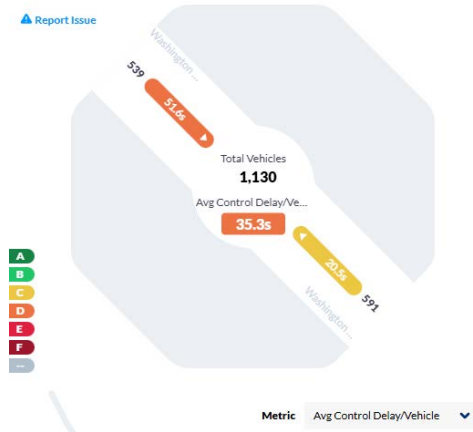


- Average intersection delay of about 40 seconds
- Average intersection delay varies from ~30-60 seconds during peak periods
- Most significant delay is Washington St southbound, in the PM peak (about 1.2 minutes)

All data is from June 2024 weekdays.

#1 Washington St at Station St – Quarter 4

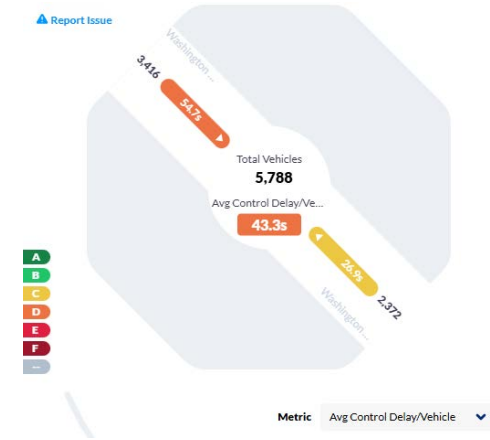
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



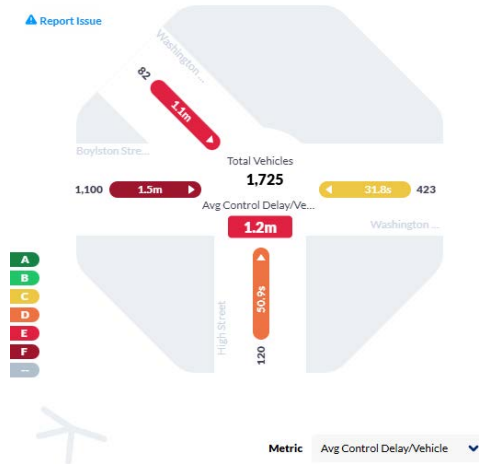
- **~5 second increase in average intersection delay compared to Baseline**
- All movements see slight fluctuations in delay

All data is from July 2025 weekdays.

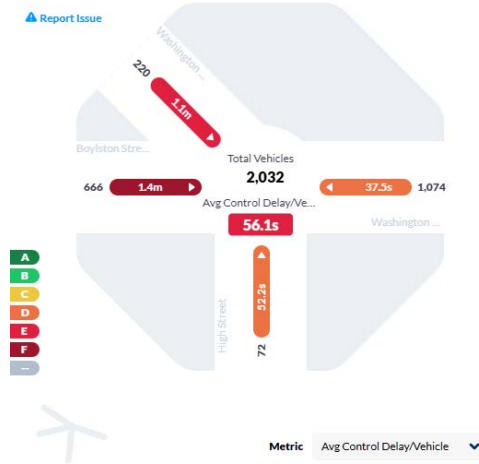
**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

#2 Boylston St (Route 9) at High St and Washington St – Baseline

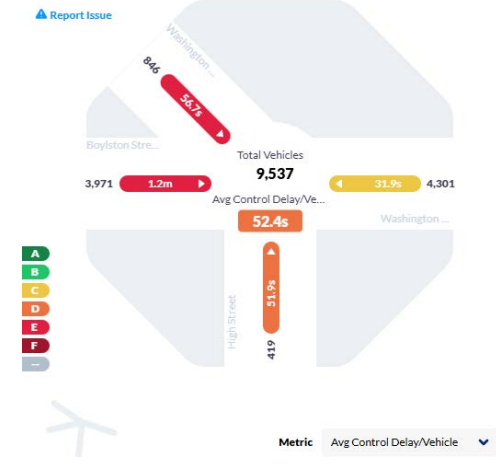
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily

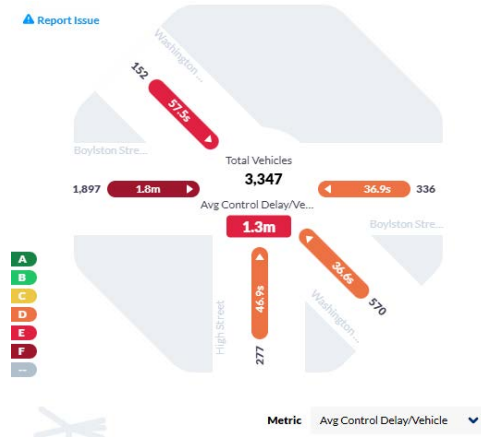


All data is from June 2024 weekdays.

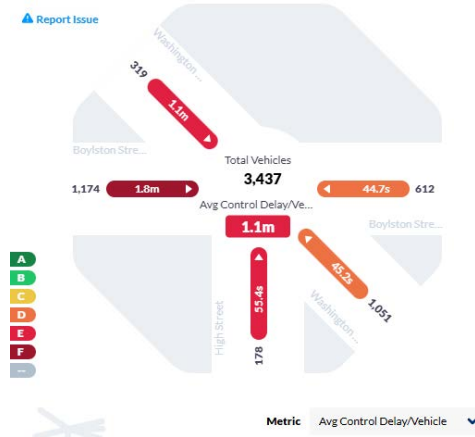
- Average intersection delay of about 1 minute throughout day
- Highest delay on Boylston St (Route 9), approximately 1.5 minutes during peak periods

#2 Boylston St (Route 9) at High St and Washington St – Quarter 4

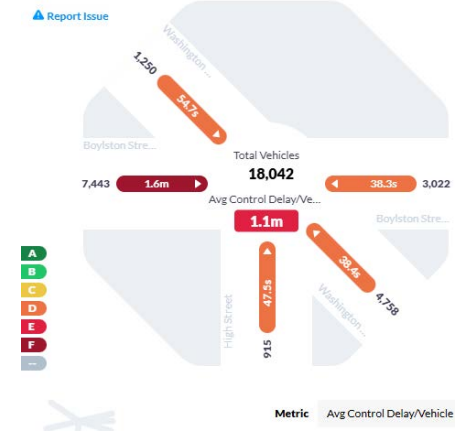
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



All data is from July 2025 weekdays.

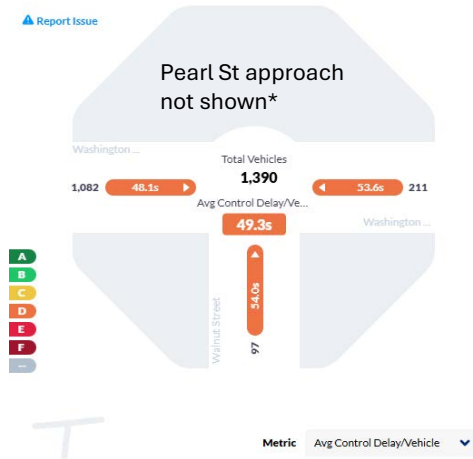
**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

**Note Washington St northwest-bound approach represents westbound right turning movements. INRIX has changed how the approaches are displayed*

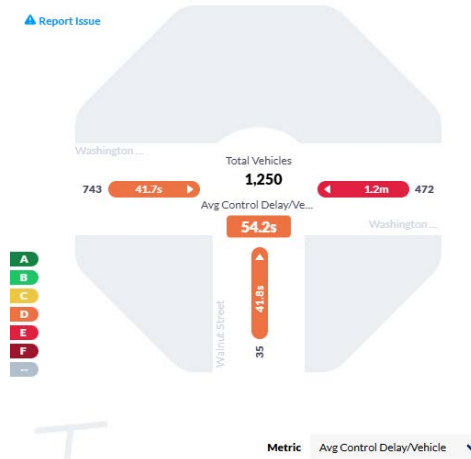
- **~5 second increase in average intersection delay compared to Baseline**
- Long queue lengths extend past the 500' approach distance INRIX uses to collect data, so actual intersection delay is likely higher

#3 Washington St (Route 9) at Pearl St and Walnut St – Baseline

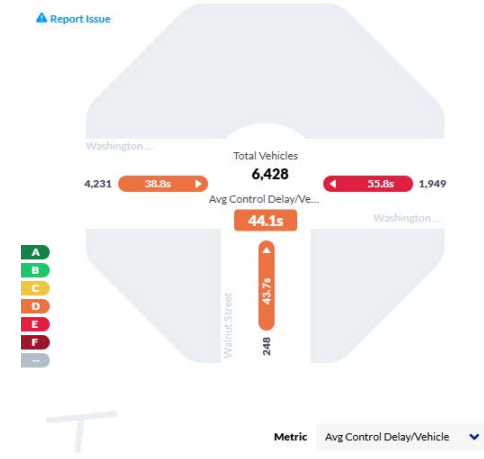
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



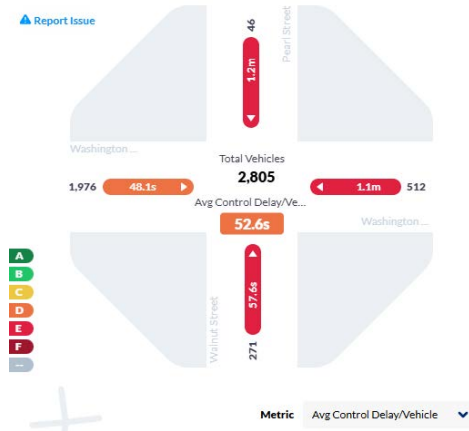
- Average intersection delay of 45-55 seconds throughout day
- Washington St (Route 9) through movements typically see highest delay

All data is from June 2024 weekdays.

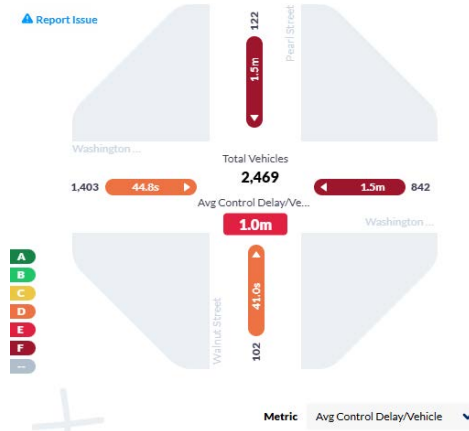
**Intersection diagram is missing the Pearl St approach because no volumes were recorded by INRIX at this approach during June 2024*

#3 Washington St (Route 9) at Pearl St and Walnut St – Quarter 4

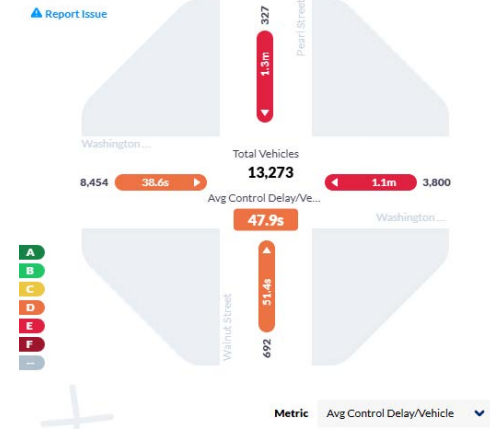
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



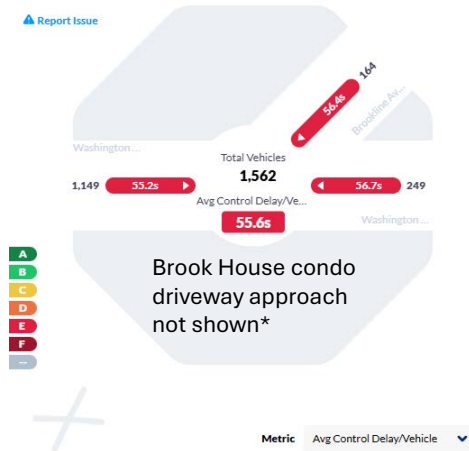
- **Generally, no change in total intersection delay**
- All movements see slight fluctuations in delay

All data is from July 2025 weekdays.

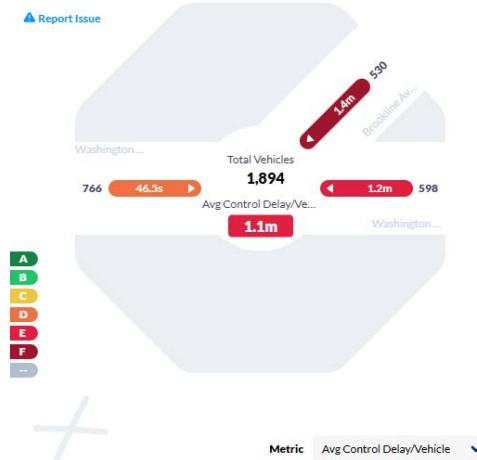
**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

#4 Washington St (Route 9) at Brookline Ave - Baseline

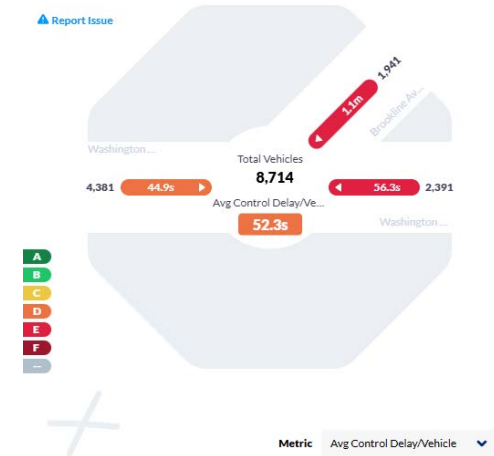
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



- Average intersection delay of ~50-70 seconds throughout day
- Highest delays are approaching project area
- Generally lesser delays leaving project area

All data is from June 2024 weekdays.

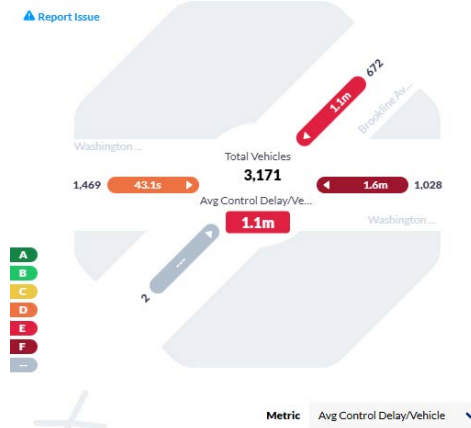
*Intersection diagram is missing the northbound approach because no volumes were recorded by INRIX at this approach during June 2024

#4 Washington St (Route 9) at Brookline Ave – Quarter 4

Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



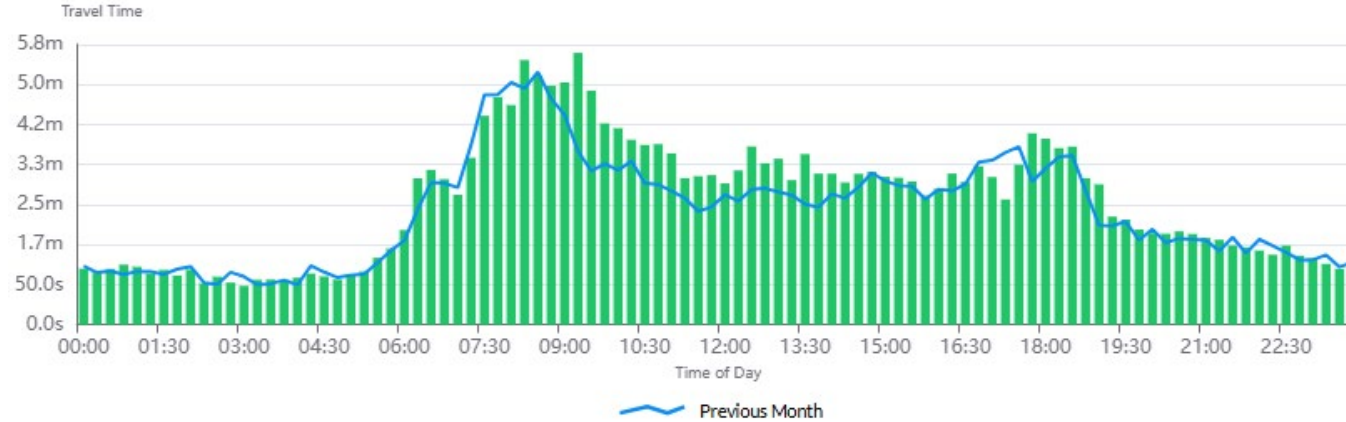
- **Generally, no change in total intersection delay**
- All movements see slight fluctuations in delay

All data is from July 2025 weekdays.

**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

Q4 Travel Time - Boylston St eastbound from Cypress St to High St

Average Travel Time over Time of Day*



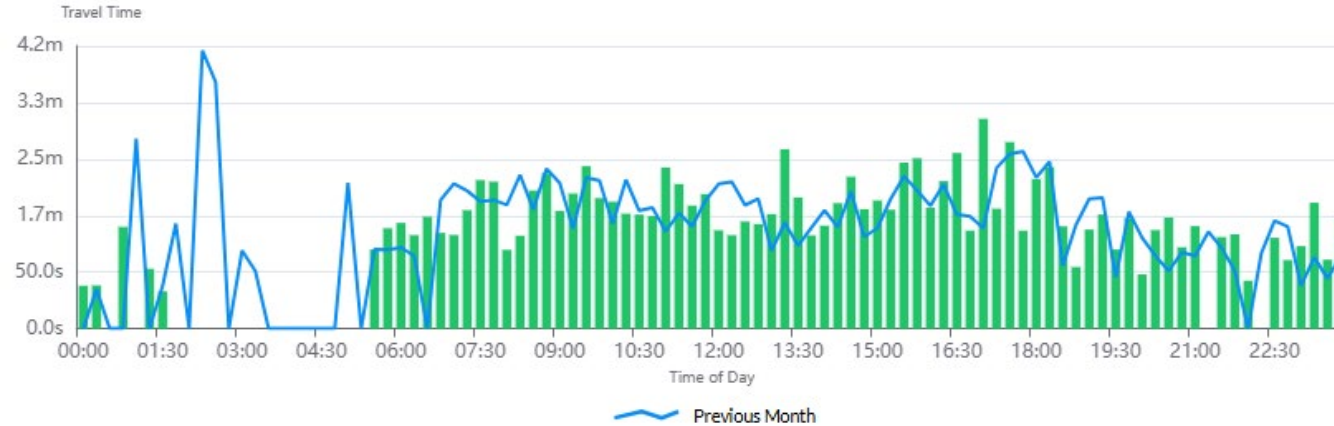
All data is from
July 2025
weekdays.

Period	Travel Time	Time of Day
AM Peak Hour	5.2 minutes	8:30am-9:30am
MD Peak Hour	3.5 minutes	12:15pm-1:15pm
PM Peak Hour	3.8 minutes	5:45pm-6:45pm

*Baseline data not available from INRIX.

Q4 Travel Time - Washington St southbound from Harvard St to Boylston St

Average Travel Time over Time of Day*



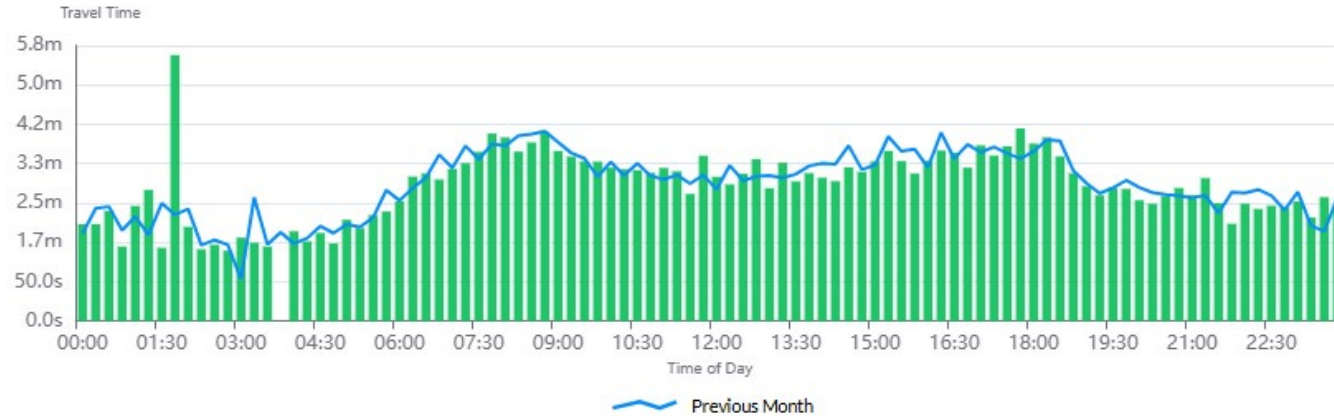
All data is from
July 2025
weekdays.

Period	Travel Time	Time of Day
AM Peak Hour	2.1 minutes	9:15am-10:15am
MD Peak Hour	2.1 minutes	11:00pm-12:00pm
PM Peak Hour	2.3 minutes	4:15pm-5:15pm

*Baseline data not available from INRIX.

Q4 Travel Time - Brookline Ave northbound from Washington St to Aspinwall Ave

Average Travel Time over Time of Day*



All data is from
July 2025
weekdays.

Period	Travel Time**	Time of Day
AM Peak Hour	3.8 minutes	8:00am-9:00am
MD Peak Hour	3.2 minutes	12:30pm-1:30pm
PM Peak Hour	3.9 minutes	5:30pm-6:30pm

*Baseline data not available from INRIX.

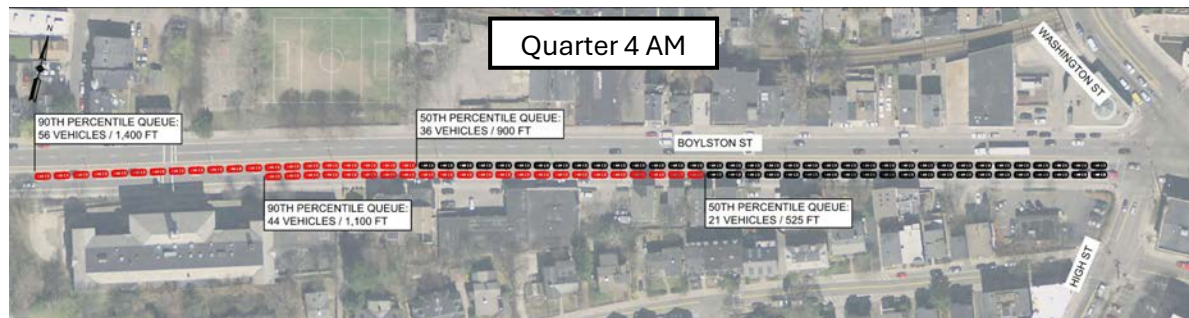
**Note this includes delay at the Washington St & Brookline intersection approach.

Appendix E

Queueing Data

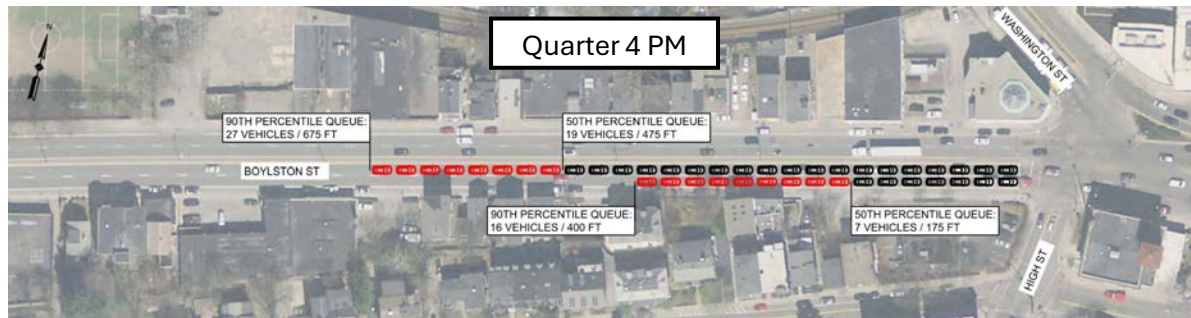
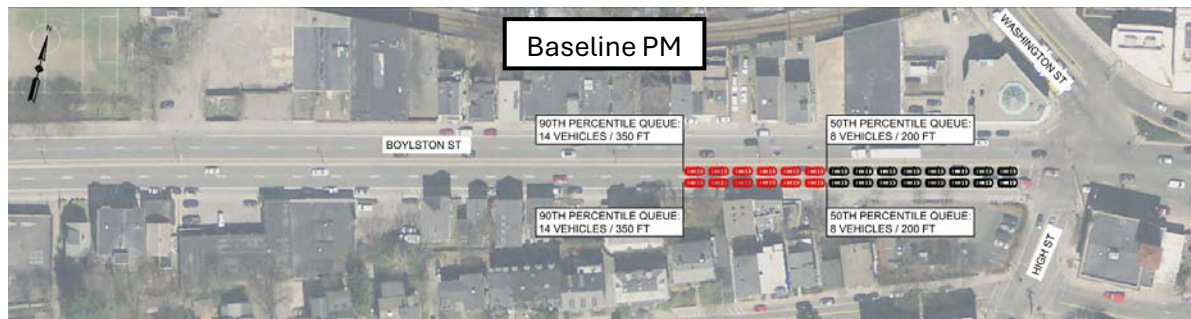
Q4 Queueing Data - Findings

Boylston Street (Rt 9), approaching Washington Street, AM



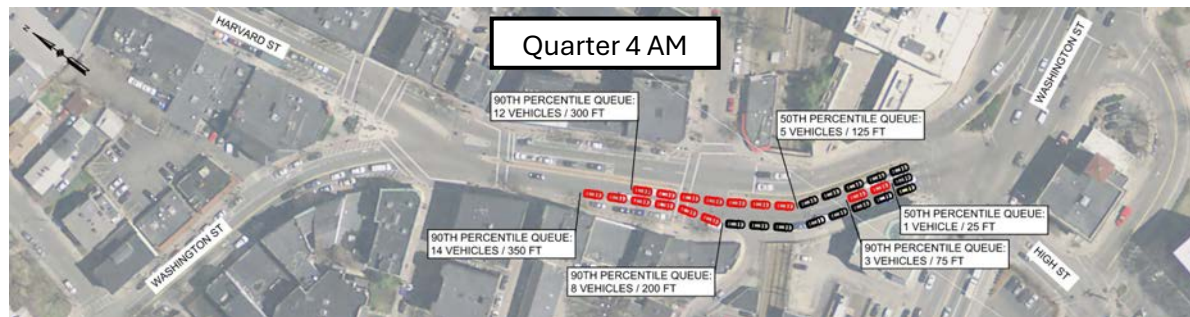
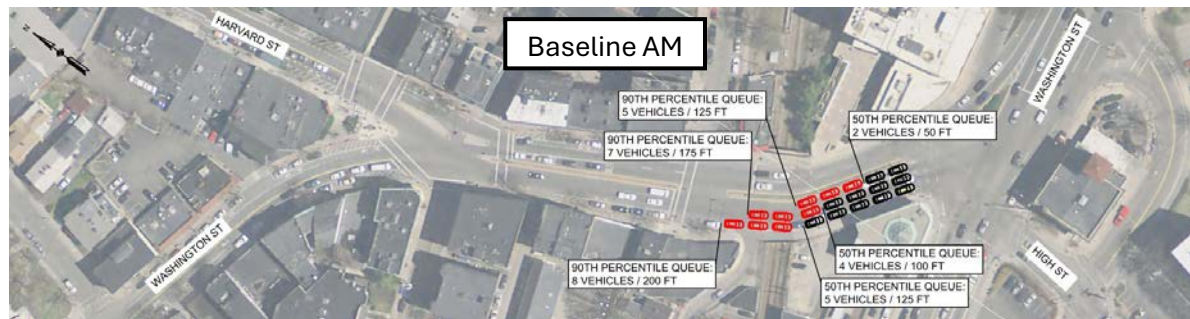
- Significant increase in AM vehicle queues

Boylston Street (Rt 9), approaching Washington Street, PM



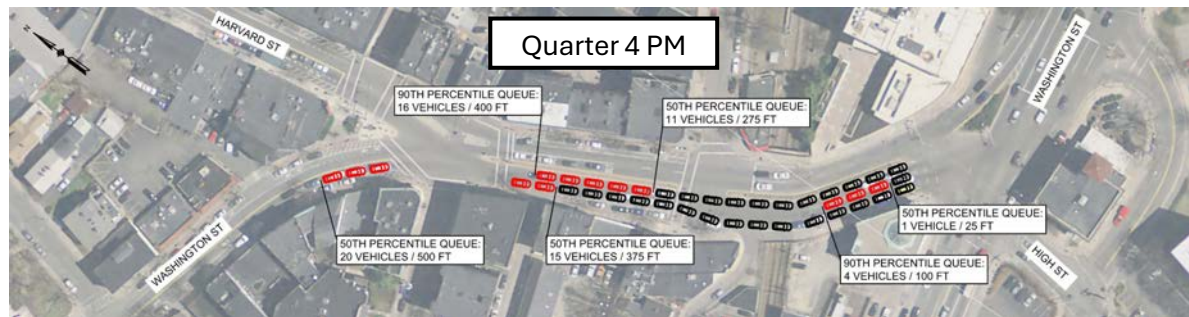
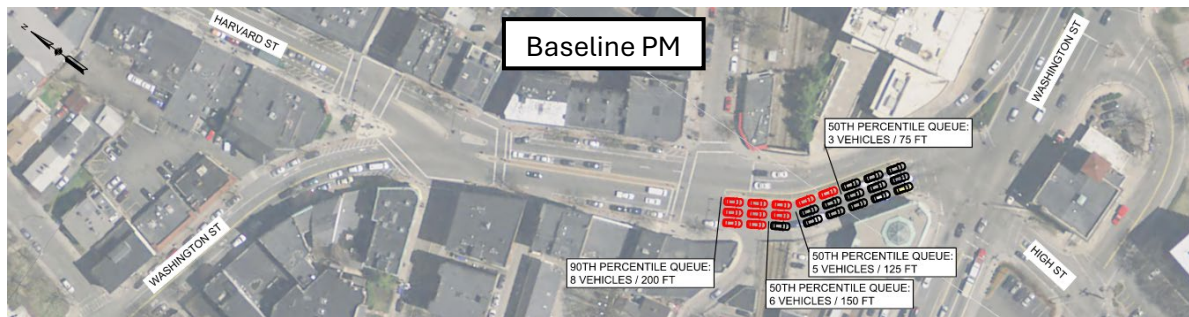
- Increase in PM vehicle queues

Washington Street, approaching Boylston Street (Rt 9), AM



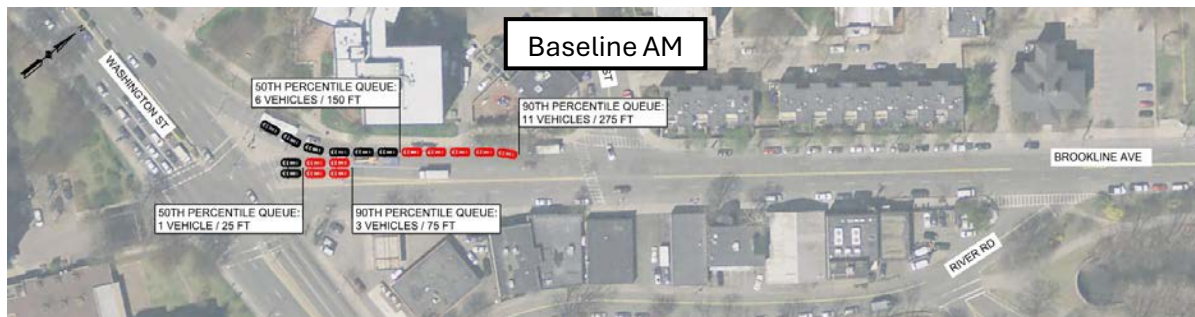
- Increase in AM vehicle queues

Washington Street, approaching Boylston Street (Rt 9), PM



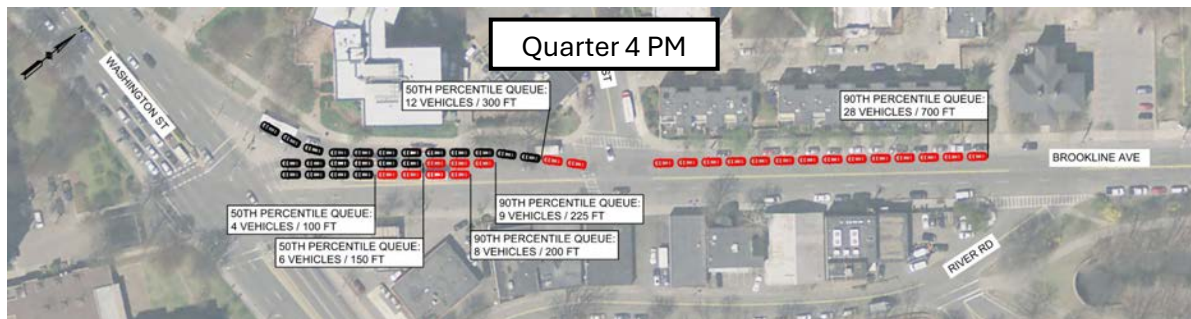
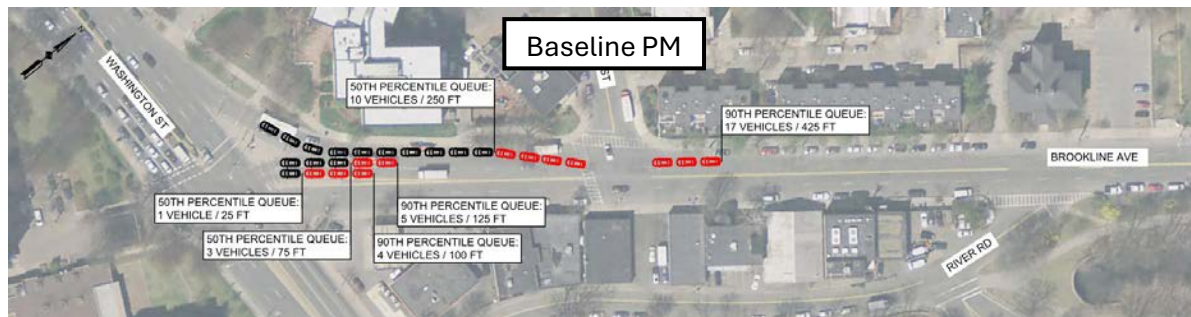
- Increase in PM vehicle queues

Brookline Avenue, approaching Washington Street (Rt 9), AM



- Number of AM vehicles queued remains relatively constant

Brookline Avenue, approaching Washington Street (Rt 9), PM



- Increase in PM vehicle queues

Quarter 4 Queueing Data Results

Queue Length of Boylston St EB, west of Washington St

		Left Lane		Right Lane		Total		
		Baseline	Q4	Baseline	Q4	Baseline	Q4	Change
	10th %ile	2	24	1	9	3	33	+1,181%
AM	50th %ile	9	36	8	21	17	57	+235%
	90th %ile	18	56	18	44	36	100	+177%
	Longest	25	68	25	55	50	123	+146%
	10th %ile	1	9	1	2	2	11	+424%
PM	50th %ile	8	19	8	7	16	26	+63%
	90th %ile	14	27	14	16	28	43	+53%
	Longest	21	36	22	19	43	55	+28%

Queue Length of Washington St SB, north of Boylston St

		Left Lane		Center Lane		Right Lane		Total		
		Baseline	Q4	Baseline	Q4	Baseline	Q4	Baseline	Q4	Change
	10th %ile	0	1	2	0	2	2	4	3	-25%
AM	50th %ile	2	5	4	1	5	8	11	14	+23%
	90th %ile	5	12	7	3	8	14	20	29	+44%
	Longest	8	19	13	4	9	22	30	45	+50%
	10th %ile	1	6	1	0	4	7	6	13	+117%
PM	50th %ile	3	11	5	1	6	15	14	27	+93%
	90th %ile	8	16	8	4	8	20	24	40	+65%
	Longest	28	23	10	5	11	23	49	51	+4%

↑
Bus only lane

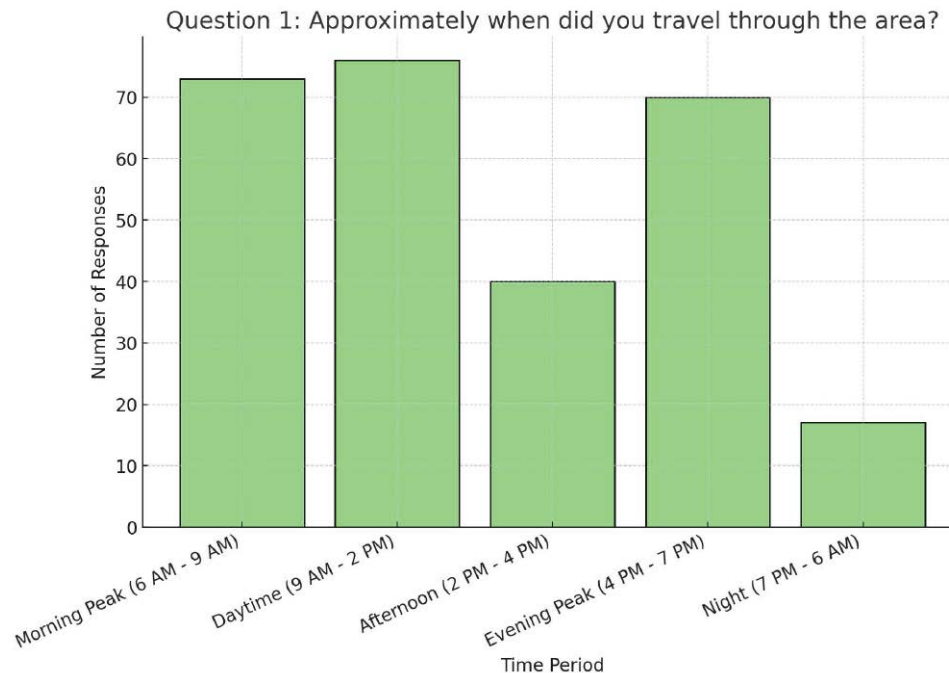
Queue Length of Brookline Ave SB, north of Boylston St

		Left Lane		Center Lane		Right Lane		Total		
		Baseline	Q4	Baseline	Q4	Baseline	Q4	Baseline	Q4	Change
	10th %ile	0	0	0	0	1	2	1	2	+100%
AM	50th %ile	1	2	1	2	6	7	8	11	+38%
	90th %ile	3	4	3	4	11	13	17	21	+24%
	Longest	4	7	4	6	16	16	24	29	+21%
	10th %ile	0	2	1	3	4	4	5	9	+84%
PM	50th %ile	1	4	3	6	10	12	14	22	+54%
	90th %ile	4	8	5	9	17	28	26	45	+73%
	Longest	6	13	8	12	21	29	35	54	+54%

Appendix F

Survey Results as of September 30, 2025

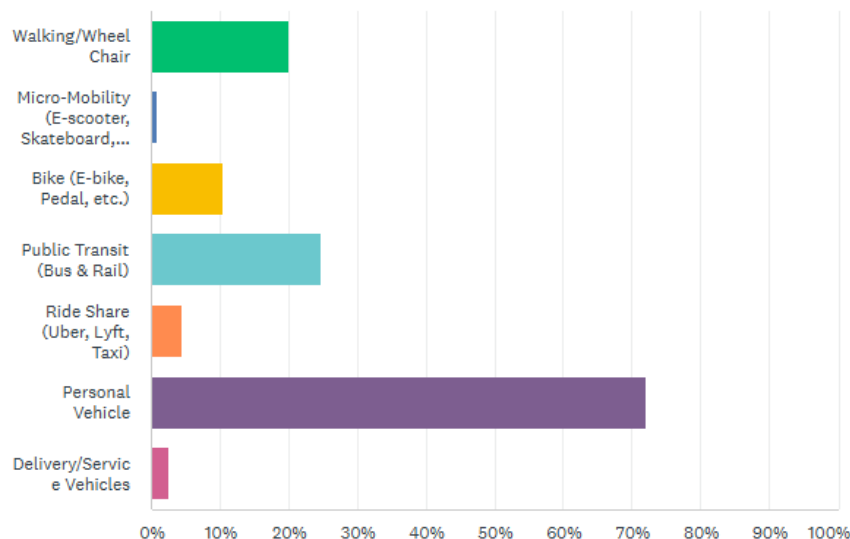
Gateway East Bus Lanes Pilot Survey: Question 1



Gateway East Bus Lanes Pilot Survey – Question 2

What modes did you use when traveling through this area?

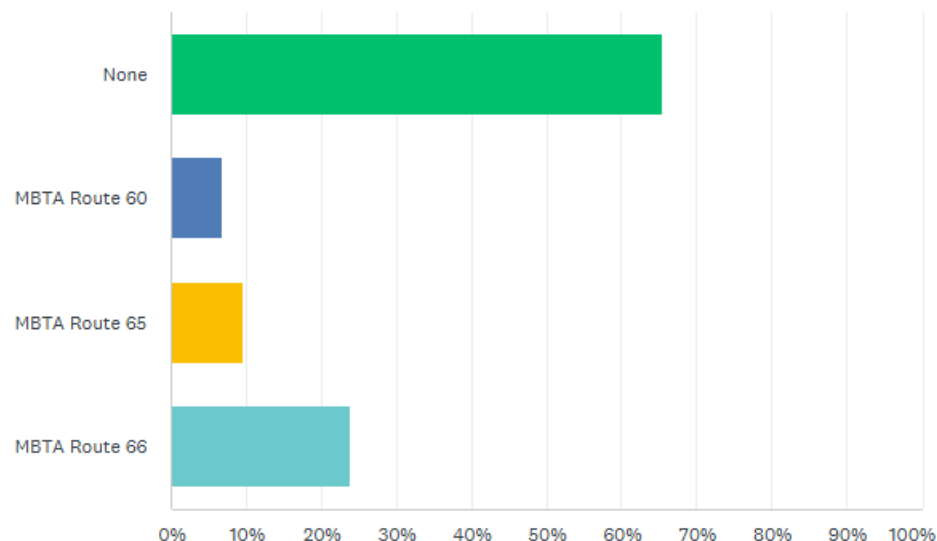
Answered: 319 Skipped: 10



Gateway East Bus Lanes Pilot Survey – Question 3

If you used MBTA bus service, which route?

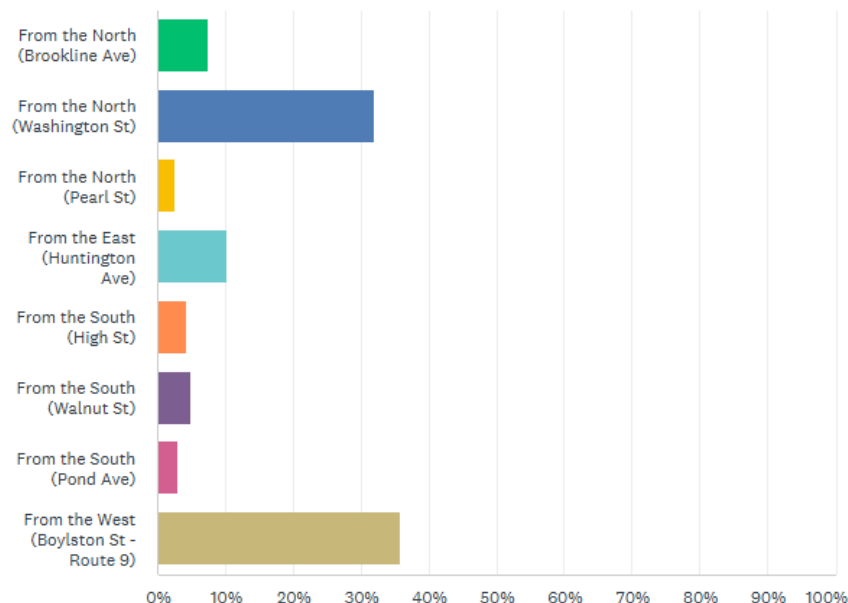
Answered: 238 Skipped: 91



Gateway East Bus Lanes Pilot Survey – Question 4

On this trip where did you come from?

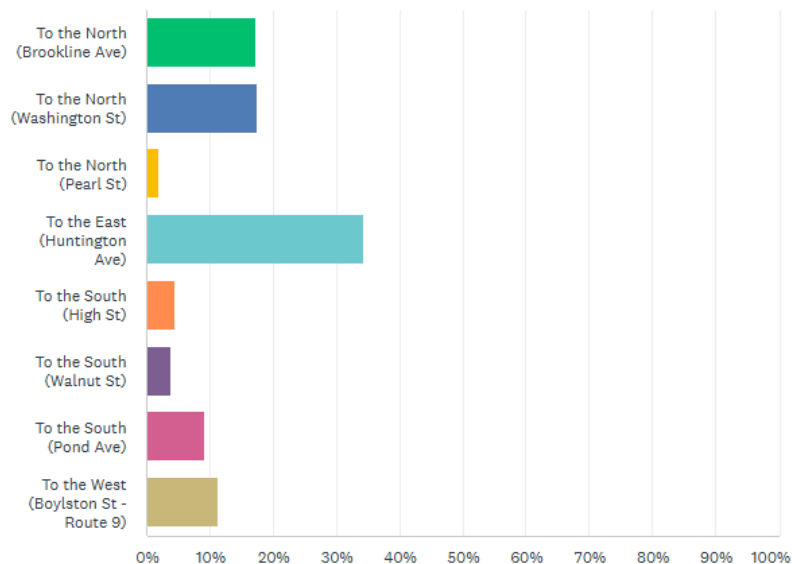
Answered: 310 Skipped: 19



Gateway East Bus Lanes Pilot Survey – Question 5

On this trip where were you going?

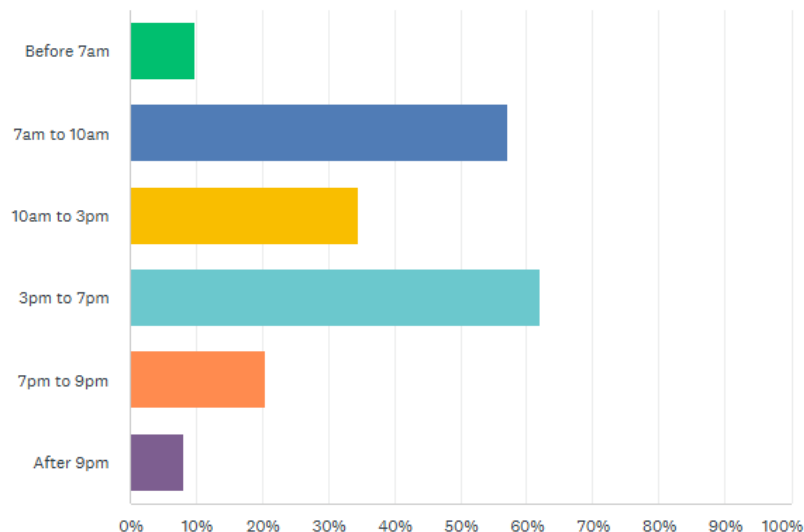
Answered: 308 Skipped: 21



Gateway East Bus Lanes Pilot Survey – Question 6

What time do you typically travel through this area?

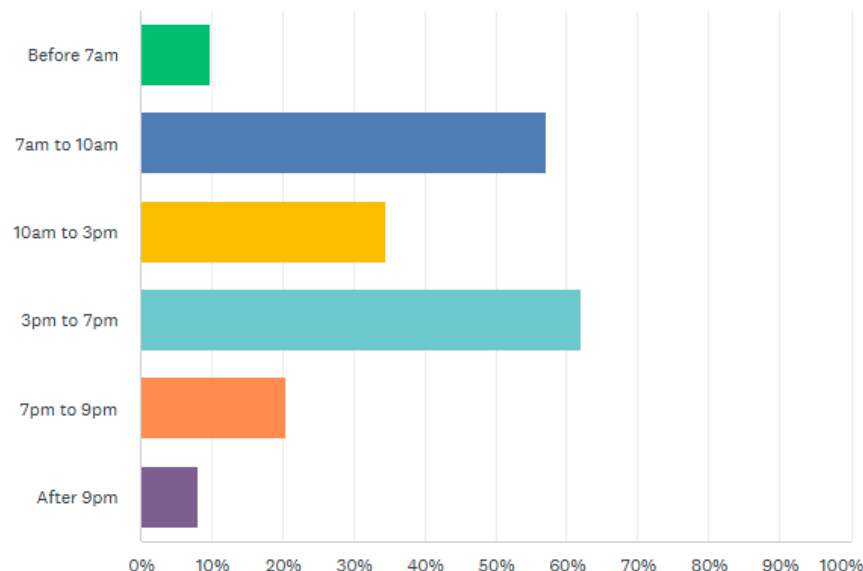
Answered: 324 Skipped: 5



Gateway East Bus Lanes Pilot Survey – Question 7

What time do you typically travel through this area?

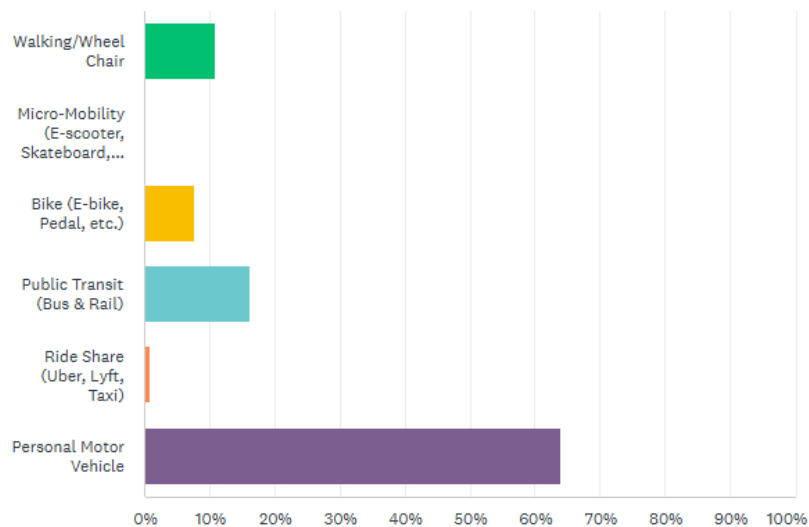
Answered: 324 Skipped: 5



Gateway East Bus Lanes Pilot Survey – Question 8

What is your primary mode of transportation when traveling through this area? (Select one)

Answered: 325 Skipped: 4



Gateway East Bus Lanes Pilot Survey – Question 9

The dedicated bus lane has improved safety for:

Answered: 325 Skipped: 4

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL
▼ those walking through this area	37.85% 120	14.51% 46	25.87% 82	11.04% 35	10.73% 34	317
▼ those biking or using micro-mobility devices through this area	37.26% 117	16.24% 51	23.57% 74	11.78% 37	11.15% 35	314
▼ those taking public transit through this area.	25.24% 79	8.63% 27	28.75% 90	20.45% 64	16.93% 53	313
▼ those driving through this area.	55.59% 179	11.80% 38	16.46% 53	9.63% 31	6.52% 21	322

Gateway East Bus Lanes Pilot Survey – Question 10

The dedicated bus lane has improved access for:

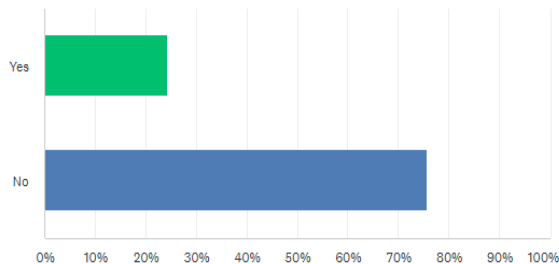
Answered: 324 Skipped: 5

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL
▼ those walking through this area	36.16% 115	14.15% 45	29.56% 94	9.75% 31	10.38% 33	318
▼ those biking or using micro-mobility devices through this area	34.08% 107	15.61% 49	26.43% 83	13.06% 41	10.83% 34	314
▼ those taking public transit through this area.	24.36% 76	8.97% 28	21.79% 68	22.76% 71	22.12% 69	312
▼ for those driving through this area.	60.00% 192	12.50% 40	18.75% 60	4.38% 14	4.38% 14	320

Gateway East Bus Lanes Pilot Survey – Question 11 & 12

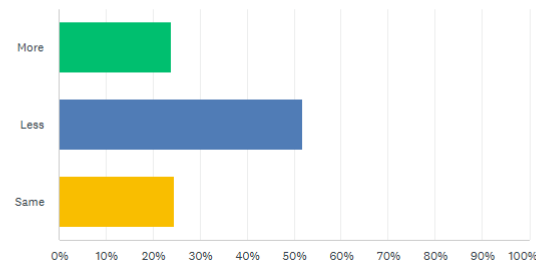
Do you feel your trip is faster with the bus lanes?

Answered: 316 Skipped: 13



Do you feel that your trip time is more or less consistent from day to day with the bus lanes?

Answered: 311 Skipped: 18



Gateway East Bus Lanes Pilot Survey – Question 13

- Q13 Has the dedicated bus lanes caused you to change how you travel through the area? (Open ended)
 - 264 responses Key Themes from the Open ended Comments:
 - Negative Feedback (~75%):
 - Increased Traffic congestion and delays.
 - Drivers feel confused and forced into last-minute lane changes.
 - Insufficient bus frequency to justify the dedicated lane.
 - Gridlock caused by poorly timed traffic signal and misuse of the lane.
 - Attempts to avoid area.
 - Positive Feedback (~10%):
 - Improved reliability and speed for buses.
 - Some responder are more likely to use buses.
 - Neutral or Unclear Feedback (~15%):
 - Observations without a clear stance (e.g., “no noticeable change”)
 - Mixed sentiments that acknowledge both pros and cons.

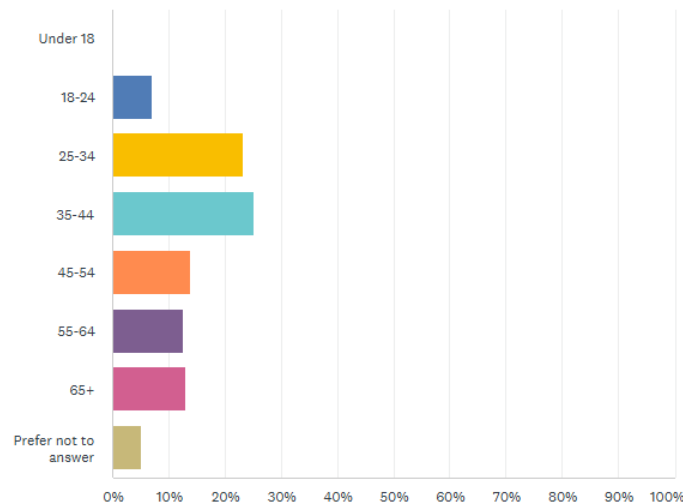
Gateway East Bus Lanes Pilot Survey – Question 14

- Q14 Should the Town and MBTA make changes to the dedicated bus lanes? (Open-ended)
 - 283 responses Key Themes from the Open ended Comments:
 - Negative Feedback (~60%):
 - Strong calls to remove the bus lanes or restrict their hours of operation.
 - Frustration over increased congestion and poor implementation while the bus lane is empty.
 - Concerns about drivers not respecting the bus lanes and safety issues with merging and turning.
 - Concerns about unsafe merging, turning conflicts, and widespread driver disregard for bus lane restrictions.
 - Positive Feedback (~20%):
 - Suggestions to adjust signal timings and improve enforcement.
 - Recognition of the potential for better transit efficiency if changes are made.
 - Neutral or Unclear Feedback (~20%)
 - Observations without a clear stance (e.g., “no noticeable change”, “lack of enforcement”)
 - Mixed sentiments that acknowledge both pros and cons.

Gateway East Bus Lanes Pilot Survey – Question 15

What is your age? (Select one)

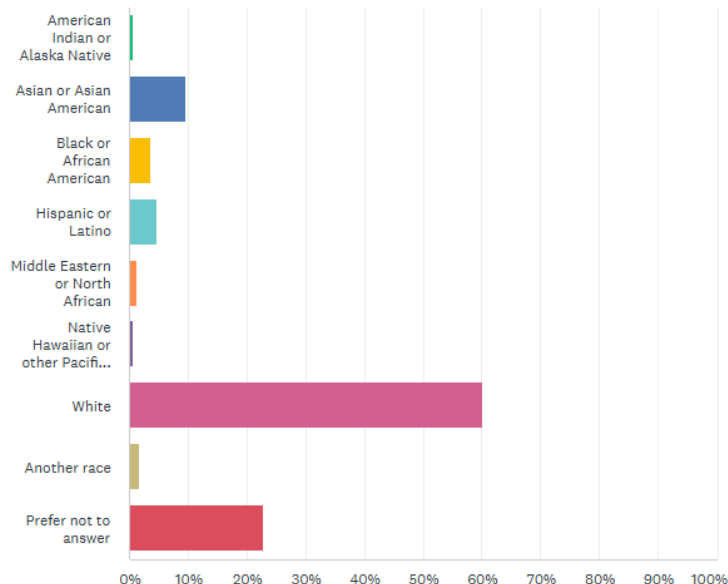
Answered: 317 Skipped: 12



Gateway East Bus Lanes Pilot Survey – Question 16

What is your ethnicity?

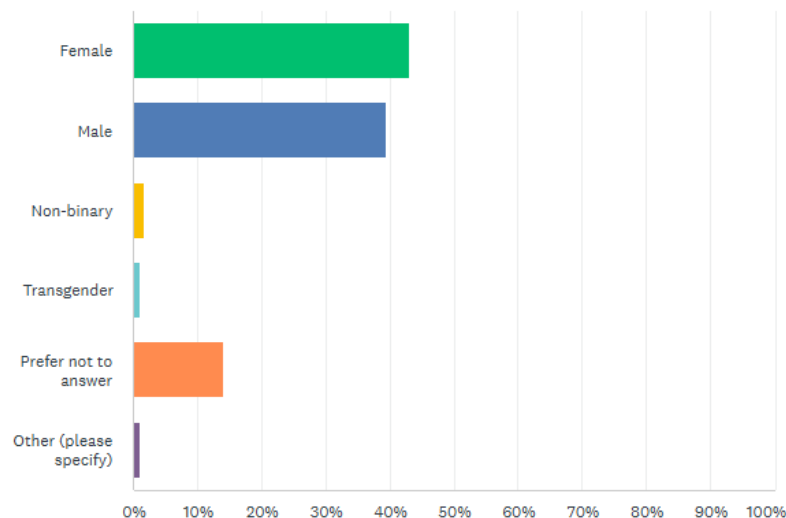
Answered: 299 Skipped: 30



Gateway East Bus Lanes Pilot Survey – Question 17

What is your gender identity? (Select one)

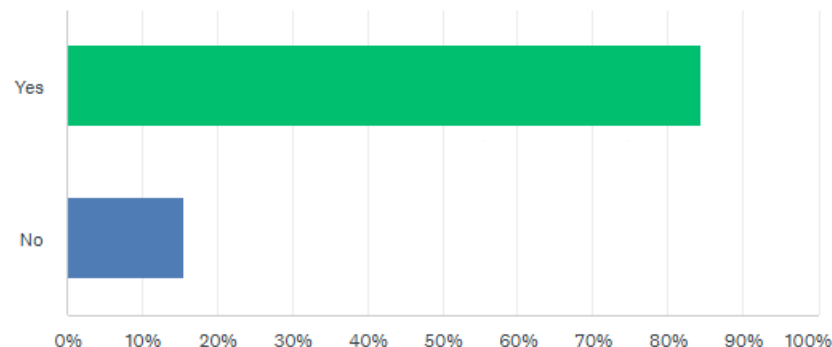
Answered: 307 Skipped: 22



Gateway East Bus Lanes Pilot Survey – Question 18

Do you live or work in Brookline? (Select one)

Answered: 327 Skipped: 2





To: Andrew McFarland, MBTA
Todd Kirrane, Brookline

Date: December 11, 2020

Memorandum

From: Adam Prichard
Laura Castelli

Project #: 15050.00
Re: Gateway East – Transit Improvements
Traffic Design Implications

Introduction

In support of the potential to provide dedicated bus lanes along a key bus route corridor, VHB has reviewed three concepts developed by the MBTA that attempt to improve transit operations along the Route 9 corridor (known as Gateway East) in Brookline, Massachusetts. This memo details the methodology and analysis of the associated traffic review and provides suggestions for the MBTA and the Town's consideration. Physical implications to the ongoing construction project (MassDOT's Tip Project 605110) in the area are covered in a separate memorandum. The MBTA has identified this corridor as a critical transit area and has an opportunity to improve transit ridership by making lane configuration modifications. These modifications are illustrated in concepts provided by the MBTA and are included in the attachments.

The study area consists of three signalized intersections: Boylston Street/ Washington Street (Route 9) at Washington Street/ High Street; Washington Street (Route 9) at Pearl Street/ Walnut Street; and Washington Street (Route 9) at Brookline Avenue.

Methodology

The analysis prepared for this evaluation focuses on impacts to traffic operations with and without the proposed dedicated transit lanes, as measured against the benefits/impacts to transit users within the system. With the goal to improve transit schedules/headways and encourage ridership, it was determined that person-trip comparisons along this busy transit corridor would be a preferred comparison to evaluating benefits versus impacts. This is accomplished by using the MassDOT Project 605110 Synchro model and MBTA ridership data for the Route 65 and 66 buses. With the synchro model as a baseline condition, each concept was compared to determine overall vehicle impacts.

Ridership Data

MBTA ridership data was evaluated to understand the peak hour impacts to total persons along the corridor. The ridership data consisted of a composite day during 2019 of the number of buses and riders, which highlights peak hour buses and riders for both inbound and outbound routes. Use of the composite day allows the analysis to consider seasonal factors that may affect ridership or schedule adherence and also eliminates any impact COVID 19 is currently having on ridership. Table 1 shows the ridership statistics for the 65 and 66 Routes during the typical weekday peak hours at the study area.

Table 1 Ridership Data

Route	Direction	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
		Buses	Riders	Buses	Riders
65	Inbound	6	322	3	30
	Outbound	3	19	5	223
66	Inbound	7	283	6	214
	Outbound	8	212	6	233

Table 1 shows that during a typical peak hour, there are 605 morning peak hour riders on 13 buses and 456 evening peak hour riders on 11 buses. Route 65 provides service up Washington Street to the west and Brookline Avenue to the east of the study area. Route 66 provides service up Harvard Street to the west and continues along Huntington Avenue to the east of the study area. While Route 60 does travel through the study area, the bus would not utilize the proposed dedicated bus lanes, so Route 60 ridership data was not analyzed. Route composite data is included in the Attachments to this memorandum. The MBTA has anecdotal data that suggest ridership on the Route 65 and 66 buses may increase by as much as five percent during peak hours if dedicated bus lanes were in place. This would increase ridership to 635 morning and 478 evening riders on the two services and potentially eliminate 20 to 30 vehicle that currently transport these riders. The MBTA also has anecdotal data that dedicated bus lanes decrease traffic volumes along the route by 10 to 20 percent. This is discussed further below (see reduced/diverted demand).

Traffic Operations Analysis

The first step in understanding the benefits and impacts of the dedicated bus lane concepts is to assess the impacts to roadway capacity that would be realized for each option. Under each concept being evaluated, Route 9 eastbound would essentially be reduced to one through lane and Route 9 westbound would be reduced to two through lanes, with only a single turn lane to/from Washington Street and the Brookline Village area. Intersection capacity analyses were conducted with respect to full build traffic volume conditions expected once the MassDOT construction is complete. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them. Roadway operating conditions are classified by calculated levels-of-service. The build traffic volumes do not take into account reduction in traffic due to the COVID-19 pandemic, however, it is estimated that traffic volumes in the area are currently about 40 percent lower than pre-pandemic conditions. The volumes also do not reflect a reduction in corridor traffic due to the provision of dedicated bus lanes. This is discussed further in the section below on reduced/diverted demand.

Level of Service Criteria

Level-of-service (LOS) is the term used to denote the different operating conditions that occur on a given roadway segment under various traffic volume loads. It is a qualitative measure that considers a number of factors including roadway geometry, speed, travel delay, freedom to maneuver, and safety. Level-of-service provides an index to operational qualities of a roadway segment or an intersection. Level-of-service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

For this study, capacity analyses were completed for the signalized intersections within the study area using Synchro traffic analysis software. The evaluation criteria used to analyze the signalized study area intersections is based on the *2010 Highway Capacity Manual* (HCM)¹.

Intersection Capacity Analysis

Table 2 summarizes the capacity analyses for the three signalized intersections under each concept. Operationally, Concepts 2 and 3 would provide the same traffic delays and levels of service. Therefore, these results are combined in the tables below. It is noted that moving the bus stop to the far side (Concept 3) will have some improved effect in traffic flow through the intersection, as there would be no need for vehicles to move around waiting buses. However, these effects cannot be reasonably modeled in Synchro. The capacity analyses worksheets are included in the Attachments to this memorandum.

In addition to the intersection capacity analysis summary tables, queue diagrams illustrating the 95th-percentile queue for each movement were developed for each intersection. Queue diagrams were developed for the weekday morning peak hour of operations at the intersections of Route 9 at Washington Street / High Street and Route 9 at Walnut Street / Pearl Street and for the weekday evening peak hour of operations at the intersection of Route 9 at Brookline Avenue, representing the peak hours with the largest queues at each intersection. The queue diagrams are included in the Attachments to this memorandum.

1 [Highway Capacity Manual](#), Transportation Research Board, Washington D.C., 2010.

Table 2 Signalized Intersection Capacity Analysis

Location /		2020 Design Conditions					2020 Concept 1 Conditions					2020 Concept 2 Conditions				
Movement	Storage	v/c ^a	Del ^b	LOS ^c	50 Q ^d	95 Q ^e	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
1: Route 9 at Washington Street/ High Street																
Weekday Morning																
EB T*/R	2,200	1.14	113	F	~774	#914	1.18	>120	F	~1610	#1875	1.12	106	F	~1432	#1698
EB R*	2,200	-	-	-	-	-	0.04	31	C	14	35	0.04	27	C	12	33
WB T	250	0.85	20	B	108	144	0.89	41	D	300	#517	0.85	19	B	137	m124
WB R	250	1.10	106	F	~286	m#405	>1.20	>120	F	~592	#817	>1.20	>120	F	~686	m#603
NB L/T/R	75	>1.20	>120	F	~453	#581	>1.20	>120	F	~489	#619	>1.20	>120	F	~453	#580
SB L	200	0.85	66	E	209	#294	1.06	107	F	~489	#710	>1.20	>120	F	~600	#817
SB T/R	200	1.08	>120	F	~281	#465	0.69	49	D	245	355	1.08	>120	F	~281	#465
Total		1.11	99	F			>1.20	118	F			>1.20	>120	F		
Weekday Evening																
EB T*/R	2,200	0.83	39	D	412	504	0.78	44	D	969	1149	0.80	37	D	774	951
EB R*	2,200	-	-	-	-	-	0.08	29	C	28	57	0.08	24	C	23	49
WB T	250	0.97	21	C	133	m138	1.01	49	D	~641	#857	1.03	33	C	~152	m101
WB R	250	0.85	44	D	237	m240	1.01	88	F	~531	m#665	>1.20	>120	F	~578	m#362
NB L/T/R	75	0.98	98	F	186	#272	>1.20	>120	F	~271	#361	0.98	98	F	185	#272
SB L	200	0.76	52	D	208	261	0.99	83	F	537	#741	>1.20	>120	F	~606	#788
SB T/R	200	>1.20	>120	F	~461	#637	0.90	65	E	437	#606	>1.20	>120	F	~491	#667
Total		1.02	58	E			1.07	72	E			1.14	>120	F		

BOLD – Movement altered by bus lane.

* 2020 Design Conditions – EB T and EB T/R; Concepts 1 and 2/3 – EB T and EB R

Table 2 Signalized Intersection Capacity Analysis (continued)

Location / Movement	Storage	2020 Design Conditions					2020 Concept 1 Conditions					2020 Concept 2 Conditions				
		v/c ^a	Del ^b	LOS ^c	50 Q ^d	95 Q ^e	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
2: Route 9 at Walnut Street/ Pearl Street																
Weekday Morning																
EB L	150	0.75	72	E	128	m121	0.53	70	E	137	m118	0.75	72	E	128	m104
EB T*/R	250	>1.20	>120	F	~971	m#398	>1.20	>120	F	~2475	m#2077	>1.20	>120	F	~2161	m#1648
EB R*	250	-	-	-	-	-	-	-	-	-	-	0.16	19	B	20	m10
WB L	150	0.81	67	E	63	m70	0.43	73	E	66	m72	0.81	67	E	63	m55
WB T/R	325	0.82	57	E	406	m366	0.80	20	C	716	m685	1.18	>120	F	~733	m404
NB L/T		0.10	39	D	15	m28	0.12	51	D	25	56	0.10	39	D	15	m28
NB R		0.19	>120	F	77	#127	0.19	59	E	0	89	0.19	>120	F	77	#127
SB L/T/R		0.19	45	D	30	87	0.25	53	D	39	100	0.19	45	D	30	87
Total		0.77	96	F			>1.20	>120	F			>1.20	>120	F		
Weekday Evening																
EB L	150	0.62	78	E	50	m63	0.43	60	E	57	m66	0.62	65	E	50	m53
EB T*/R	250	1.19	119	F	~358	#523	>1.20	>120	F	~2103	m#2333	>1.20	>120	F	~1669	m#1543
EB R*	250	-	-	-	-	-	-	-	-	-	-	0.09	28	C	11	m13
WB L	150	>1.20	>120	F	~169	m#159	0.50	59	E	157	m146	>1.20	>120	F	~169	m104
WB T/R	325	1.02	27	C	~605	m146	0.90	8	A	317	m229	>1.20	>120	F	~1126	m155
NB L/T		0.07	32	C	11	m29	0.13	55	E	18	46	0.07	32	C	11	m29
NB R		0.07	76	E	5	50	0.07	48	D	0	55	0.07	76	E	5	50
SB L/T/R		0.27	42	D	25	105	0.53	62	E	85	187	0.27	42	D	25	105
Total		0.74	71	E			>1.20	>120	F			1.12	>120	F		

BOLD – Movement altered by bus lane.

* Concept 1 – EB T/R; Concept 2/3 – EB T and EB R

Table 2 Signalized Intersection Capacity Analysis (continued)

Location /		2020 Design Conditions					2020 Concept 1 Conditions					2020 Concept 2 Conditions				
Movement	Storage	v/c ^a	Del ^b	LOS ^c	50 Q ^d	95 Q ^e	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
3: Route 9 at Brookline Avenue																
Weekday Morning																
EB L	200	>1.20	>120	F	~526	m#406	1.17	>120	F	~598	m318	>1.20	>120	F	~526	m179
EB T/R	275	0.58	3	A	46	m36	0.89	26	C	499	m330	1.10	55	D	~934	m46
WB L/T/R	600	>1.20	>120	F	~411	#508	1.16	>120	F	~605	#744	>1.20	>120	F	~781	#920
NB L/T/R		0.74	94	F	70	#116	0.47	62	E	73	105	0.74	94	F	70	#116
SB L	300	0.58	66	E	96	153	0.43	54	D	96	155	0.58	66	E	96	153
SB T	300	0.61	68	E	102	158	0.45	54	D	101	161	0.61	68	E	102	158
SB R	300	0.45	30	C	59	127	0.57	28	C	225	318	0.45	30	C	59	127
Total		0.87	103	F			1.02	88	F			1.15	>120	F		
Weekday Evening																
EB L	200	0.92	75	E	173	m156	1.15	>120	F	~248	m151	0.92	75	E	174	m102
EB T/R	275	0.78	35	C	277	m235	1.14	80	E	~1256	m206	>1.20	>120	F	~1159	m298
WB L/T/R	600	>1.20	>120	F	~520	#586	>1.20	>120	F	~947	#1054	>1.20	>120	F	~963	#1054
NB L/T/R		0.50	68	E	46	80	0.44	68	E	58	93	0.50	68	E	46	80
SB L	300	>1.20	>120	F	~365	#561	0.85	71	E	332	#554	>1.20	>120	F	~365	#561
SB T	300	>1.20	>120	F	~388	#585	0.89	76	E	350	#585	>1.20	>120	F	~388	#585
SB R	300	0.58	37	D	106	261	0.78	46	D	406	#659	0.58	37	D	106	261
Total		0.92	>120	F			1.19	>120	F			>1.20	>120	F		

BOLD – Movement altered by bus lane.

a Volume to capacity ratio.

b Average total delay, in seconds per vehicle.

c Level-of-service.

d 50th percentile queue, in feet.

e 95th percentile queue, in feet.

~ Volume exceeds capacity, queue is theoretically infinite.

95th percentile volume exceeds capacity; queue may be longer.

m Volume for 95th percentile queue is metered by upstream signal.

As shown in Table 2, all intersections experience a LOS F during the morning peak hour in the Build condition, while in the evening peak hour the Route 9 at Washington Street/ High Street intersection and the Route 9 at Walnut Street/ Pearl Street intersection experience a LOS E. The Gateway East project was developed to manage congestion and queuing through the traffic signal system. The operations along the corridor at all study area intersections degrade from the Build conditions with the dedicated bus lane in place. Specifically, the movements where bus lanes are incorporated in lieu of a vehicle travel lane experience the most impacts where many of the movements double their queues. This is reflective of the elimination of a through lane in each direction. Additionally, the level of service results reflects the need to reduce eastbound Route 9 (Boylston Street) outside of the project limits from two to one through lane. This is necessary to maintain traffic safety and allow traffic to merge to one lane prior to reaching the firehouse.

Person-Delay

As mentioned previously, the concepts along this corridor were also analyzed using person-delay in lieu of vehicle-delay to properly assess the incentives of the implementation of bus-only lanes in the study area. Person delay was calculated for the total amount of time in seconds it takes an individual person to travel the corridor as well as for the cumulative delay in hours experienced by all users at each individual movement over the course of the weekday morning and weekday evening peak hours.

Individual Person-Delay to Travel the Corridor

To better understand how delay will affect users by mode, the total cumulative average delay to travel the corridor experienced by each individual person was calculated and compared for people in vehicles versus people on buses. Table 3 summarizes the results of the total corridor-wide person-delay by mode expected to be experienced by the average person.

Table 3 Individual Person-Delay to Travel the Corridor

Mode	Direction	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
		2020 Build	Concept	Change	2020 Build	Concept	Change
Transit Person-Delay (seconds) ^a	Inbound (EB)	205	55	-150	211	53	-158
	Outbound (WB)	368	77	-291	316	67	-249
Vehicle Person-Delay (seconds) ^b	Inbound (EB)	248	540	+292	198	423	+225
	Outbound (WB)	285	281	-4	312	360	+48

a Transit Person-Delay for movements along the proposed bus lanes (Washington Street and Route 9).

b Vehicle Person-Delay for through movements along Route 9.

As shown in Table 3, the average amount of delay expected to be experienced by a person on a bus traveling through the corridor will decrease by up to 291 seconds per directional trip with the installation of the bus lanes, while the average amount of delay expected to be experienced by a person in a vehicle traveling through the corridor will increase by up to 292 seconds. The greatest time saving for passengers on buses will be in the outbound (westbound)

direction while the greatest increase in delay for people in vehicles will be in the inbound (eastbound) direction. It's important to note that the time savings for bus passengers are also likely to translate to time savings along other sections of the route. So, while these calculations are specific to riders on the Route 66 or Route 65 bus along this segment of the route, there are also passengers along other segments of the routes that would benefit with travel time savings.

Cumulative Person-Delay for Each Individual Movement

In addition to calculating the total person-delay for each individual person to travel the corridor, the cumulative person-delay at each movement was summed over the entire course of the weekday morning and weekday evening peak hours. Tables 4 and 5 show the total peak hour movement delay for people on transit (Table 4) versus in vehicles (Table 5) at each movement in the corridor with and without dedicated bus lanes. To calculate the comparative delays, the average delay experienced by all people (by mode) was summed.

Table 4 Cumulative Transit Person-Delay (Hours)

Intersection	Movement	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
		2020 Build	Concept	2020 Build	Concept
1	Washington St SB L	11	6	4	2
	Washington St WB R	7	2	6	4
2	Washington St EB T	22	2	8	1
	Washington St WB T	6	1	8	2
3	Washington St EB L ^a	15	12	1	0
	Washington St EB T	0	1	2	1
	Washington St WB T	10	2	14	2
	Brookline Ave SB R ^a	0	0	1	1

a Movement does not include bus lane.

Table 5 Cumulative Vehicle Person-Delay (Hours)

Intersection	Movement	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
		2020 Build	Concept	2020 Build	Concept
1	Washington St SB L	9	18	8	16
	Washington St WB R	14	29	6	18
2	Washington St EB T	61	176	46	127
	Washington St WB T	37	14	29	39
3	Washington St EB L ^a	47	39	9	6
	Washington St EB T	2	20	13	27
	Washington St WB T	48	29	74	109
	Brookline Ave SB R ^a	10	2	3	4

a Movement does not include bus lane.

Table 4 shows that bus ridership delay decreased, in some cases substantially, for most movements. In comparison, Table 5 shows that most of the delays for people in vehicles are increased for a majority of movements. This is reflective of the number of vehicle lanes being cut in half while serving similar demands.

The analyses presented in Tables 4 and 5 both assume that the volumes on the corridor will be the same under the 2020 Design Condition as under the three alternatives. In reality, a portion of the volumes are likely to divert or change modes due to the increased delays caused by the reduced vehicle capacity on the corridor. A discussion of the potential reduced and diverted demand is provided later in this memorandum.

Intersection Processing Analyses

Additional analyses have been conducted to understand the processing capacity of the corridor under the 2020 Design plan and under the three bus-lane alternatives. Specifically, analyses have been conducted to understand the number of cycles that will be needed to clear the 95th percentile queue and the overall recovery time needed after the peak periods to recover back to non-peak levels of operations and delay.

Time Needed to Clear Queue

An analysis has been conducted to determine how long it will take a vehicle on Route 9 to clear the first traffic signal on the corridor when approaching the corridor when the queue is almost at its peak. This analysis is based on the 95th percentile queues presented in Table 2. The analyses have been completed for the Route 9 eastbound approach at the intersection of Washington Street / High Street and the Route 9 westbound approach at the intersection of Brookline Avenue, as these are the first traffic signals a driver will encounter in each direction. A summary of the number of cycles and maximum time needed to process the 95th percentile queues is presented in Table 6.

Table 6 Number of Cycles and Time Needed to Clear Max Queue

Condition	Time Period	Route 9 EB Approach (at Washington Street/High Street)			Route 9 WB Approach (at Brookline Avenue)		
		95 th Percentile Queue	# of Cycles Needed to Clear Queue	Time Needed to Clear Queue	95 th Percentile Queue	# of Cycles Needed to Clear Queue	Time Needed to Clear Queue
2020 Design	AM Peak Hour	914 ft	2 cycles	260 seconds	508 ft	1 cycle	130 seconds
	PM Peak Hour	504 ft	1 cycle	120 seconds	586 ft	2 cycles	240 seconds
Alt. 1	AM Peak Hour	1,875 ft	4 cycles	560 seconds	744 ft	2 cycles	280 seconds
	PM Peak Hour	1,149 ft	2 cycles	300 seconds	1,054 ft	2 cycles	300 seconds
Alt. 2/3	AM Peak Hour	1,698 ft	3 cycles	390 seconds	920 ft	3 cycles	390 seconds
	PM Peak Hour	951 ft	2 cycles	240 seconds	1,054 ft	3 cycles	360 seconds

Note: Alternative 1 includes modified signal timings and phasing over 2020 Design Conditions and Alternative 2/3.

As shown in Table 6, under the 2020 Design Condition the 95th percentile queue is expected to be processed in one or two traffic cycles for the first intersections approached on Route 9. Under the three Alternatives, the number of cycles needed at each intersection to process the queue increases to three or four cycles at some locations resulting in a total time needed to clear the queue of up to 560 seconds. It should be noted that these analyses are based on the green and yellow time for each approach and assumes that when the light turns green on the Route 9 approaches the queue will begin to be processed. The analyses do not take into account downstream queues and delays (for example in Boston at Huntington/South Huntington Avenue) which may restrict the processing capacity of each intersection.

Recovery Time

The recovery time is the amount of time needed after the end of the peak period to process the additional vehicles that were not able to be processed during the peak period. Since the volumes during the peak hour may exceed to available capacity, additional time may be needed at the end of the peak period to process the additional vehicles that could not be processed during the peak period. The analyses have been completed for the Route 9 eastbound approach at the intersection of Washington Street / High Street and the Route 9 westbound approach at the intersection of Brookline Avenue, as these are the first traffic signals a driver will encounter in each direction. A summary of the recovery time is presented in Table 7.

Table 7 Recovery Time

Condition	Time Period	Route 9 EB Approach (at Wash. Street/High Street)	Route 9 WB Approach (at Brookline Avenue)
2020 Design	AM Peak Hour	n/a	n/a
	PM Peak Hour	n/a	n/a
Alt. 1	AM Peak Hour	90 minutes	n/a
	PM Peak Hour	50 minutes	n/a
Alt. 2/3	AM Peak Hour	90 minutes	n/a
	PM Peak Hour	50 minutes	n/a

Note: Recovery Time of n/a means that the volume to capacity ratio for the approach is under 1.00 and the volume approaching the intersection during the peak period should be processed during the peak period.

As shown in Table 7, under the 2020 Design Condition both approaches on Route 9 should be able to process the approaching volumes during the peak period and therefore additional recovery time is not expected to be required. Under the three alternatives, recovery time of 50-90 minutes will be needed on the Route 9 eastbound approach to account for the reduction in capacity from two general-purpose lanes to one general-purpose lanes. It should be noted that these analyses assume the non-peak volumes will be less than the available capacity and that the recovery time is able to start as soon as the peak period ends.

Similar to the person-delay analyses, the analyses presented in Tables 6 and 7 both assume that the volumes on the corridor will be the same under the 2020 Design Condition as under the three alternatives. In reality, a portion of the volumes may divert or change modes due to the increased delays caused by the reduced vehicle capacity on the corridor. A discussion of the possible reduced and diverted demand is provided in the following section.

Reduced and Diverted Demand

The analysis above focuses on the implications of providing dedicated bus lanes within the study area while maintaining 2019 peak traffic volumes. With the incorporation of dedicated bus lanes and the elimination of travel lanes through the corridor, non-bus traffic is expected to incur increased delays. However, the MBTA has seen an increase in transit ridership and a decrease in traffic volume along corridors where dedicated bus facilities have been previously installed. Therefore, it is reasonable to assume some traffic diversion would be likely in Brookline as well. The above analyses reflect the worst-case delay/congestion conditions if no diversion or mode shift occurs. This section reflects on the worst case for diversion potential by assuming that the traffic operations expected once the Gateway East project is complete can be maintained with the addition of dedicated bus lanes. In order to maintain current traffic delays with reduced capacity, a mode shift from vehicle to bus and/or a diversion of traffic away from the Gateway East area are needed.

Provision of a dedicated bus lane, regardless of the concept chosen, has a large impact on Route 9 traffic flow. The amount of traffic flow through the area during the peak hours appears to be driven by operations at the intersection

of Route 9 at Pearl Street/Jupiter Street, specifically the eastbound movement. In order to maintain traffic operations as they are under current conditions, it was determined that 575 morning peak hour and 405 evening peak hour vehicles, representing about 30 percent of total traffic volume, would need to be removed or diverted from the network. This could occur in a number of ways, primarily: by switching travel mode, altering travel time, or by altering travel route. The MBTA has anecdotal data that suggests traffic volumes may reduce by up to 20 percent when dedicated bus lanes are established. The data suggest bus ridership in the same area increases by about five percent, with the rest of the displaced traffic finding an alternate route, which may be regional or local. In cases where these diversions are evident, there has not been registered complaints of increased traffic on adjacent streets. This suggests that while route choice is affected, a large portion of the diverted traffic may be classified as "cut-through" and be returning to the primary routes they originally diverted from.

In the case of the Gateway East study area, a 20 percent reduction in traffic volumes would not be sufficient to offset travel impacts associated with the implementation of dedicated bus lanes. An additional 190 morning peak hour trips and 135 evening peak hour trips would have to be diverted from the corridor to maintain existing operational levels of service. Local trips may have the option to divert an increased percentage to the adjacent bus routes or Green Line D-branch. Trips of a more sub-regional nature may divert to one of two adjacent neighborhood routes, depending on their ultimate origin or destination:

- › Northbound –Cypress Street to Aspinwall Avenue
- › Southbound – Cyprus Street to Walnut Street to Pond Avenue or to Jamaicaway

A review of broad-level Street Light data suggest that up to 30 percent of traffic on Route 9 in Gateway East is destined to the Longwood Medical Area (LMA). Based on this information, it is reasonable to assume that up to 30 percent of the traffic that may divert would choose a northbound bypass route. The street light data suggest that up to 60 percent of the traffic on Route 9 in Gateway East is destined to Jamaica Plain, the Tremont Street Corridor, and points east (including I-93). Trips that may divert from Route 9 to these destinations are likely to choose the southbound bypass route via Pond Avenue and the Jamaicaway. The remaining 10 percent are estimated to be destined to the Huntington Avenue Corridor, Copley Square, and downtown Boston. Portions of traffic with these destinations may divert to Walnut Street via Cyprus Street and rejoin the Route 9 corridor at Pond Street or Walnut Street.

It is noted that as of summer 2020, traffic volumes along Route 9 were reduced by about 40 percent compared to 2019 conditions. Under current conditions, the Gateway East area could maintain planned traffic operations without any diversions. It is difficult to pinpoint exactly how many vehicles may divert from the corridor as traffic volumes return to 2019 levels (or how quickly a return to these levels may occur) and which route they might choose. If dedicated bus lanes are implemented, the town should monitor traffic volumes on adjacent local roads and may have to consider additional mitigation along these routes to discourage travel as a way to bypass Route 9.

Proposed Concepts – Traffic Design Issues/Implications

Beyond the calculation of potential benefits and impacts associated with the addition of dedicated bus lanes, the ongoing MassDOT construction project presents a number of challenges from a traffic design perspective. These challenges do not

invalidate the benefits of a dedicated bus facility for transit users. However, they will have to be addressed in some way as part of the bus lane implementation to maintain traffic safety in the study area.

- › **Brookline Avenue dual left-turns southbound to eastbound Route 9 (easterly project limits).** With the dedicated bus lane, only one receiving lane remains on Route 9 eastbound. This would require a change in the Brookline Avenue geometry to allow only one left-turn lane from Brookline Avenue to Route 9 EB. The queuing impacts of reducing the number of left-turn lanes are substantive and cannot be modeled accurately in synchro due to their anticipated length. We are highlighting the potential to drop exclusive use of a dedicated bus lane on Route 9 eastbound between Brookline Avenue to Pond Avenue (~200 feet). In this section, the bus lane could be striped with red dashed paint to denote shared use.
- › **Route 9 eastbound, west of High Street (westerly project limits).** This approach has two departure lanes through the intersection and is reduced to one receiving lane in front of the Fire Station due to adding bus lane (~175 feet). Geometrically, our recommendation is to reduce the approach to one through lane and one right-turn lane (to High Street). There is plenty of available distance on Route 9 to accommodate the increased queuing, although there is the potential for bottleneck issue where the lane drop occurs (where the impatient driver tries to go around the queue and cut in). This approach of Route 9 is under MassDOT jurisdiction and the town/MBTA would need to get state approval to drop the lane. An alternate solution to this would be to have a shared bus/vehicle lane along Route 9 in front of the firehouse.
- › **Route 9 eastbound at Pearl Street.** In conjunction with above, we reviewed maintain 2 lanes eastbound along Route 9 through Pearl Street, restricting eastbound left-turns from Route 9 to Pearl Street and converting the left-turn lane to a through lane. There are lane alignment concerns associated with this change, as traffic traveling in the left-most through lane would be forced to turn left onto Brookline Avenue. However, given the high left-turn volume at Brookline Avenue, this may be an acceptable compromise. Eastbound traffic destined to Pearl Street would also turn left onto Brookline Avenue and access Pearl Street at its intersection with Brookline Avenue. It is not possible to provide a U-turn for Route 9 eastbound traffic.
- › **High Street Northbound at Route 9.** The short block of High Street between Walnut Street and Route 9 (approximately 120 feet) currently provides two northbound through lanes to Washington Street and into Brookline Village. The westbound dedicated bus lane will eliminate a receiving lane for this traffic on Washington Street. In this case, it is suggested to allow for a shared use of the dedicated bus facility between Route 9 westbound and its terminus at Station Avenue. High Street south of Walnut Street experiences substantial queuing under current conditions and exacerbating conditions here would not likely be supportive by residents.
- › **Bus Blocking by excessive queuing at signals.** The inbound 95th percentile queue at Washington Street southbound at High Street increases from 294 feet to 817 in the morning and 261 feet to 788 feet in the evening. The outbound 95th percentile queue at Washington Street westbound at Brookline Avenue increases from 508 feet to 920 feet in the morning and 586 to 1054 feet in the evening. Without making the determination about whether the queue increase would be acceptable, queues would block access to the beginning of the eastbound bus lanes, which reduce their benefit. In the westbound direction, it is assumed the bus is already in a dedicated bus lane in Boston, the impact of the queue increase on the bus is eliminated.

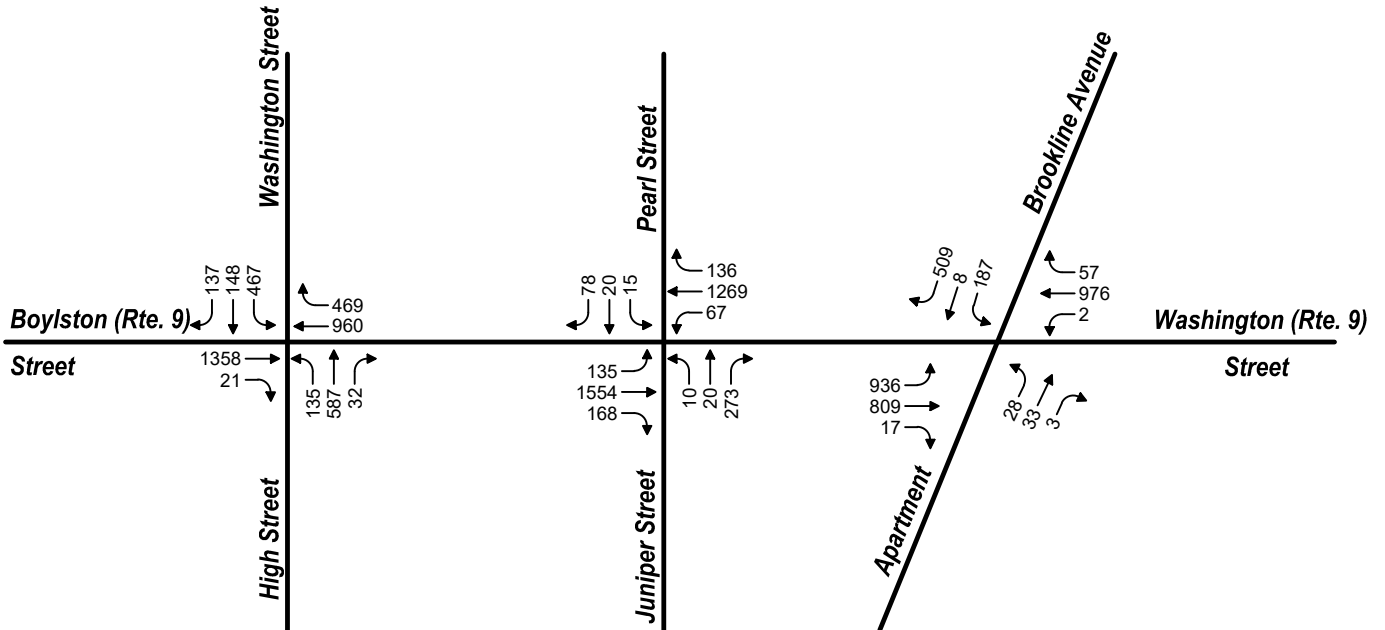
Given the overall benefits, impacts, and challenges with installation of the dedicated bus lanes, and in lieu of the recent MassDOT construction project, which is now substantially complete, it appears that dedicated bus lanes can be installed in the westbound direction without extensive disruption or requirements for reconstruction. Provision of dedicated bus lanes in the eastbound direction, regardless of the concept, will likely require more substantive design changes, potential reconstruction of the separated bike lane, and further coordination with MassDOT to modify sections of state highway. A dedicated bus lane in the eastbound direction will take longer to implement due to these challenges. It is likely most beneficial to focus efforts on a westbound dedicated bus lane at this time and follow with eastbound changes in the future.



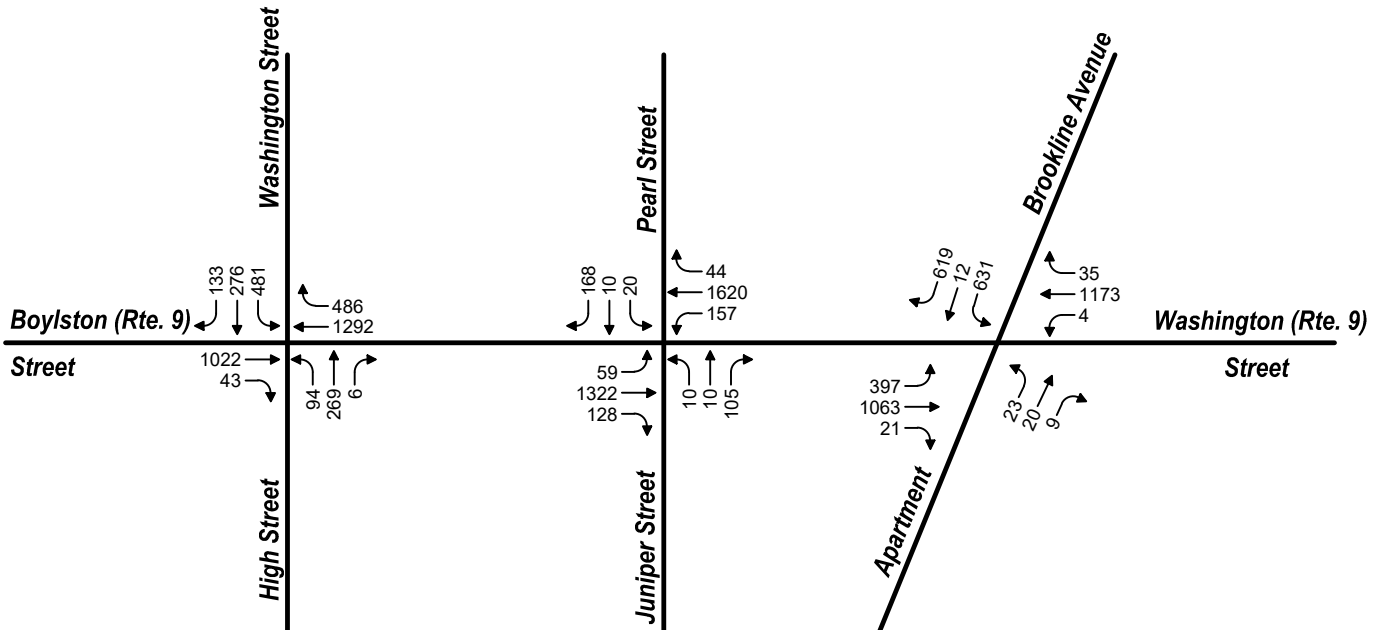
Attachments

- Graphics
- Transit Ridership Data
- Intersection Capacity Analyses
- Queue Diagrams

Morning Peak Hour



Evening Peak Hour



Vehicles →



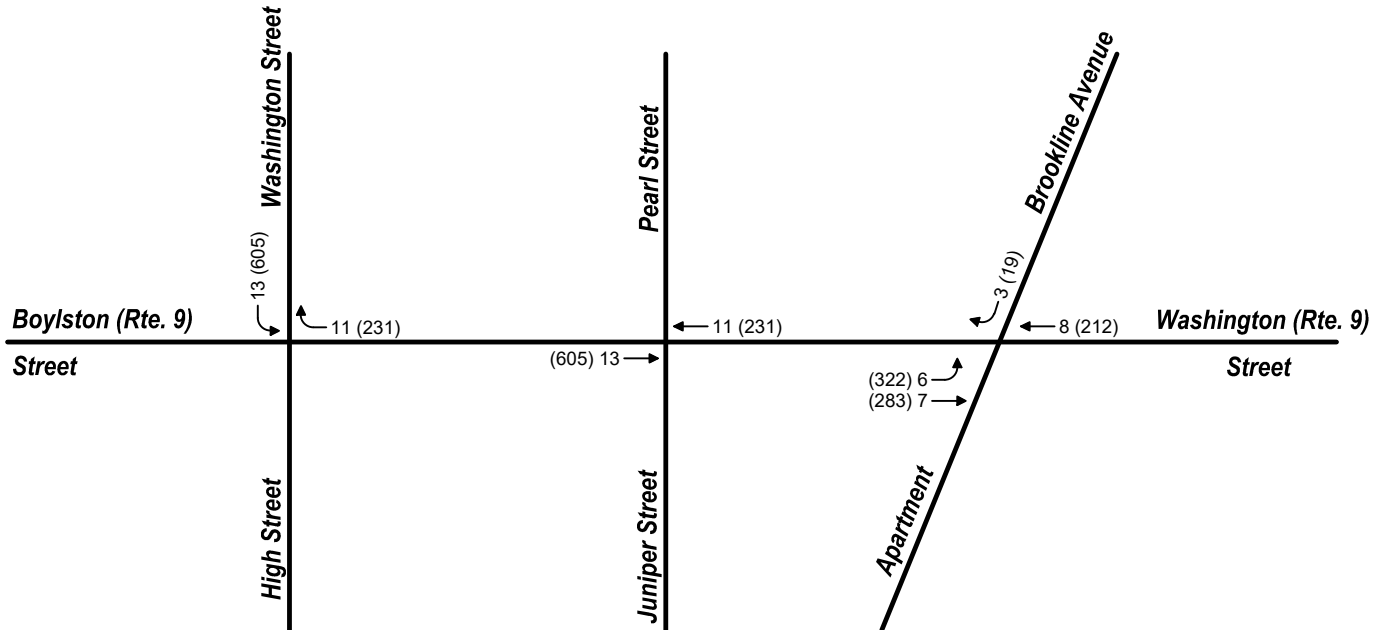
Not to Scale



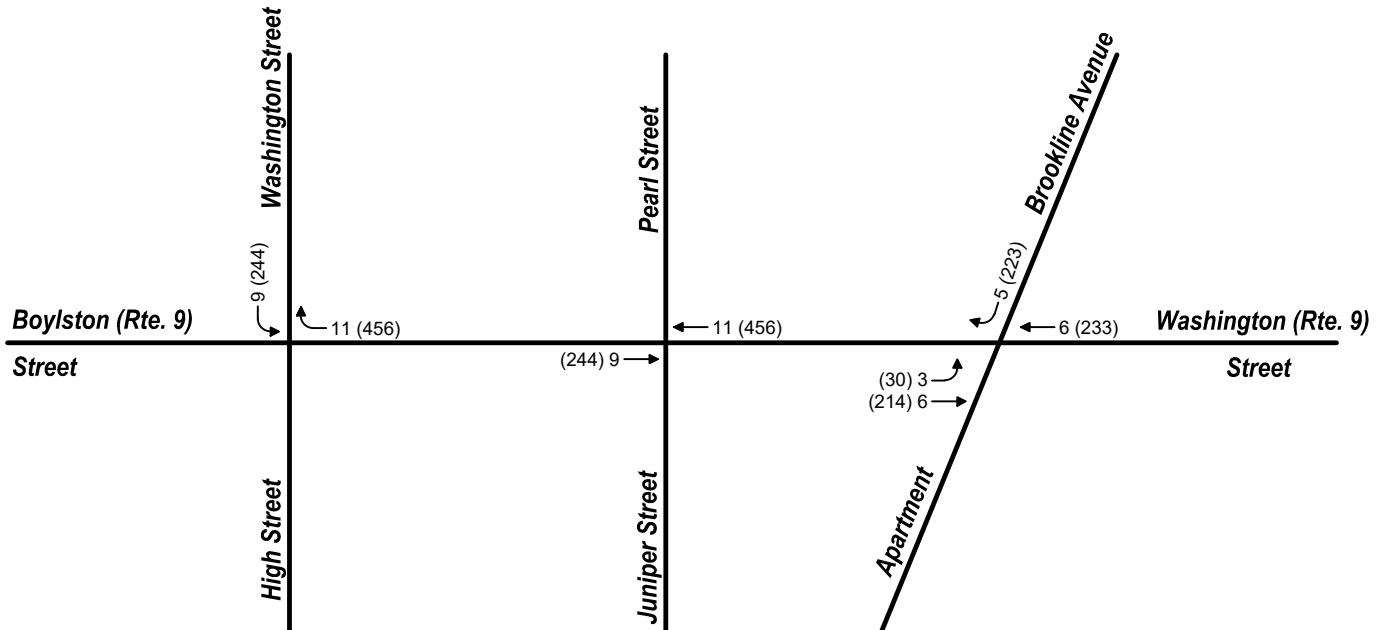
Gateway East - Transit Improvements
Network - Build Vehicle Volumes
Brookline, MA

Figure 1

Morning Peak Hour



Evening Peak Hour



(Riders) Buses →



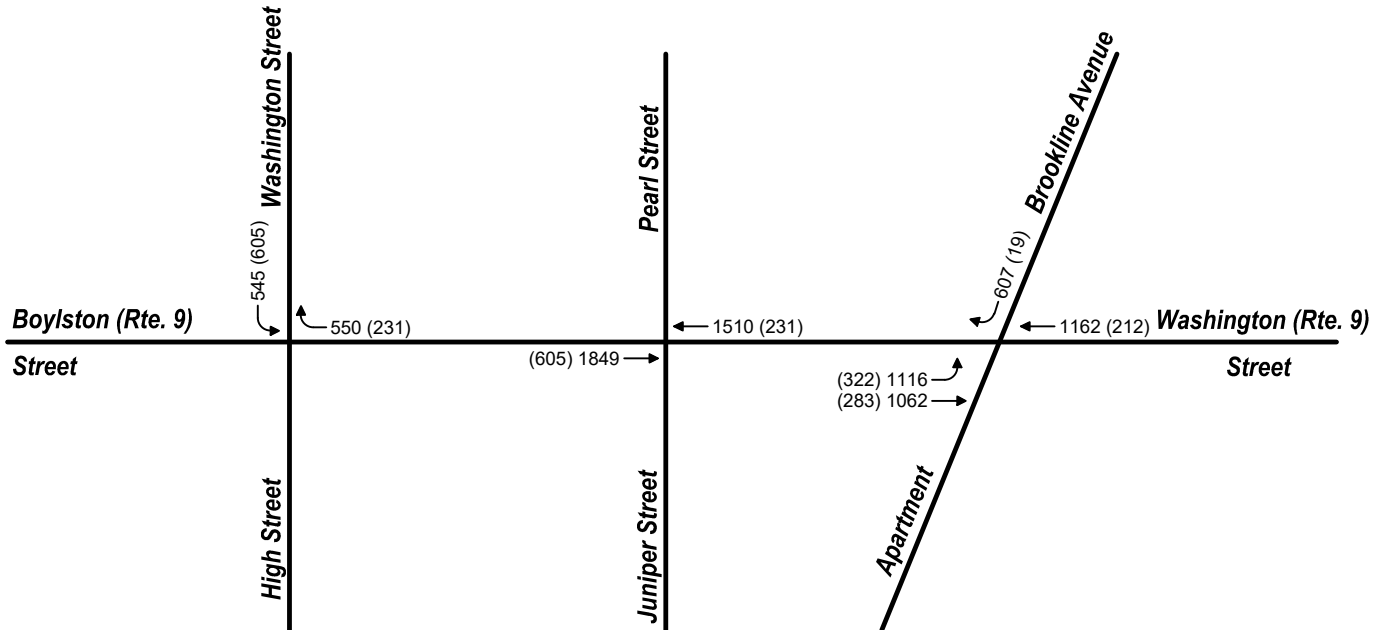
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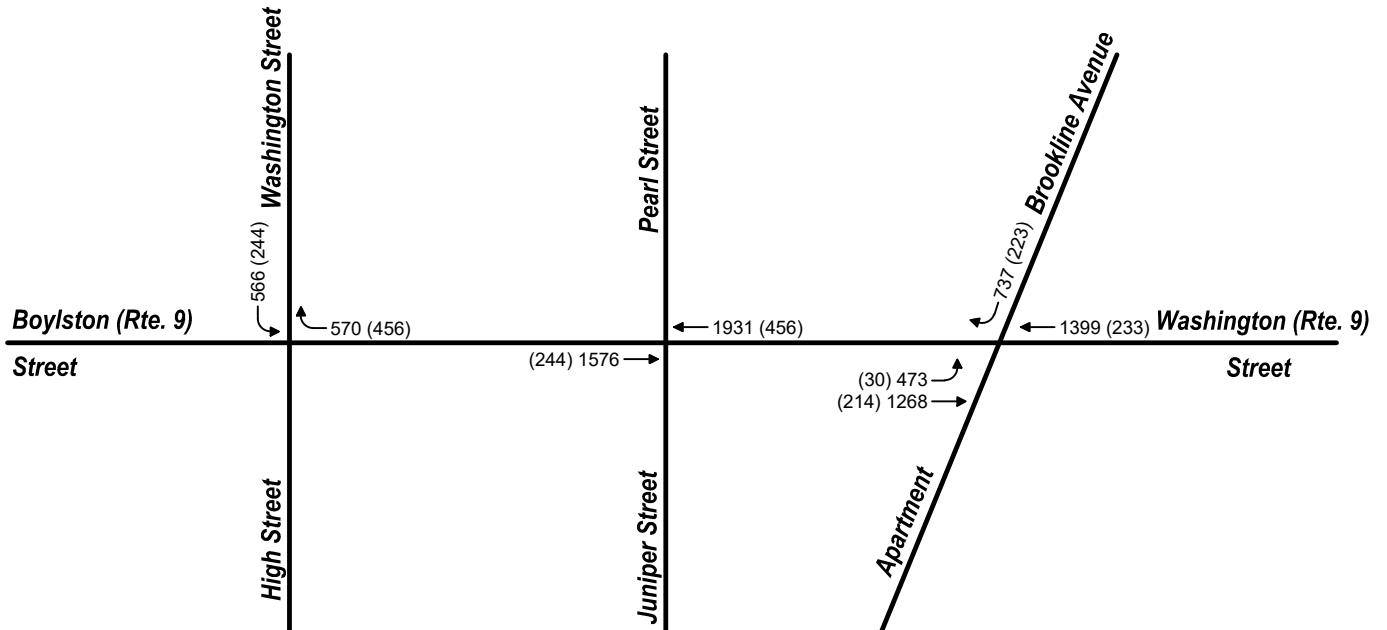
Gateway East - Transit Improvements
Network - Bus and Ridership Volumes
Brookline, MA

Figure 2

Morning Peak Hour



Evening Peak Hour



(Bus Riders) Vehicle Riders →



Not to Scale



Gateway East - Transit Improvements **Figure 3**
Network - Vehicle-People and Bus-People Volumes
Brookline, MA



Massachusetts Bay Transportation Authority
Route 65
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	05:58 (65.0)(B054) [66] {FA19}			06:20 (65.0)(B063) [11] {FA19}			06:40 (65.0)(B057) [7] {FA19}			06:56 (65.0)(B059) [8] {FA19}			07:07 (65.0)(B060) [13] {FA19}			07:17 (65.0)(B061) [8] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 1026 - CHESTNUT HILL AVE @ VERONICA	5.9	0	5.9	6.7	0	6.7	10.1	0	11.3	11.4	0	11.4	9.1	0	9.1	6.6	0	11.4
2 - 919 - WASHINGTON ST OPP WALDO TERR	5.3	0	11.3	5.5	0	12.2	2	0	13.3	5.8	0	17.1	6.6	0.1	15.6	8.1	0.1	19.4
3 - 1268 - WASHINGTON ST @ SHEPARD ST	0.8	0	12	1.5	0	13.6	1.3	0	14.6	3	0.3	19.9	2.8	0.1	19.6	3.5	0.1	22.8
4 - 1269 - WASHINGTON ST @ SNOW ST	0	0	12.4	1	0	14.6	0.1	0	14.7	1.4	0	21.3	0.5	0	20.2	0.4	0	23.1
5 - 1270 - WASHINGTON ST @ MONASTERY RD	1.2	0	13.6	2.5	0.1	17	1.4	0	16.1	2	0	23.3	1	0	21.2	1.1	0	24.3
6 - 1272 - WASHINGTON ST @ EUSTON ST	1.4	0	14.9	4.7	0.1	21.6	3	0	19.1	3.9	0.1	27	3.3	0.1	24.4	2	0	26.3
7 - 1273 - WASHINGTON ST @ COMMONWEALTH	3.1	0	18	5.6	0.2	27.1	4.3	0.1	23.3	6.1	0.3	32.9	5.2	0.2	29.4	6.4	0.5	32.1
8 - 1274 - WASHINGTON ST @ COREY RD	3.2	0.3	20.9	4.2	0.6	30.6	7.1	1.1	29.3	7.6	0.3	40.3	5.9	1.4	33.9	5.9	0.3	37.8
9 - 1275 - WAHINGTON ST @ EVANS RD	0.1	0	21	0.5	0	31.2	0.7	0.1	29.9	0.6	0	40.9	0.7	0	34.6	1.3	0	39
10 - 1276 - WASHINGTON ST @ BEACON ST	0.3	0	21.2	0.5	0.8	30.8	0.6	0.4	30	0.8	0.5	41.1	0.7	0.2	35.2	0.9	0.3	39.6
11 - 1277 - 684 WASHINGTON ST	0.8	0	22	2.6	0	33.5	2.4	0.1	32.3	1.3	0.1	42.3	1.6	0.2	36.5	2.1	0	41.8
12 - 1278 - WASHINGTON ST @ WINTHROP PATH	1.6	0	23.7	0.5	0	33.9	1.3	0	33.6	1.5	0	43.8	1.2	0.1	37.7	1.1	0	42.9
13 - 1279 - WASHINGTON ST @ GARDNER RD	0.8	0	24.4	0.5	0	34.4	0.4	0	34	0.6	0	44.4	0.5	0	38.2	0.1	0	43
14 - 1280 - WASHINGTON ST @ GARDNER PATH	1.2	0.1	25.5	0.1	0	34.5	0.1	0	34.1	0.8	0	45.1	1.2	0.1	39.4	0.4	0	43.4
15 - 1281 - WASHINGTON ST @ GREENOUGH CIR	0.8	0	26.3	1.1	0.1	35.5	0.1	0.1	34.1	0.3	0	45.4	0.5	0.2	39.7	0	0	43.4
16 - 1282 - WASHINGTON ST @ CYPRESS ST	0	0	26.3	0.4	0	35.8	0	0.3	33.9	0.1	0.5	45	0.2	0.5	39.5	0.5	1.6	42.3
17 - 1283 - WASHINGTON ST @ HARVARD ST	0	0.8	25.5	0.2	2.1	33.9	0.4	1	33.3	0.5	1.1	44.4	1.5	2.2	38.7	1.1	2.5	40.9
18 - 1555 - WASHINGTON ST @ WALNUT	0.5	1.8	24.1	0.6	1.1	33.5	0.4	1.6	32.1	0.1	3.3	41.3	1.2	2.5	37.4	0.5	0.8	40.6
19 - 1556 - 678 BROOKLINE AVE OPP PEARL S	0.2	0.5	23.8	0.5	0	33.9	1.1	0.7	32.6	0.5	0.6	41.1	0.5	0.5	37.4	0.4	0	41
20 - 1557 - BROOKLINE AVE OPP ASPINWALL A	0	0	23.8	0.1	0	34	0	0.7	31.9	0	0.4	40.8	0.2	0.2	37.4	0.1	0.1	41
21 - 1558 - BROOKLINE AVE @ FRANCIS ST	0.1	10.2	13.6	0.2	19.1	15.1	0	11.4	20.4	0.3	20.3	20.8	0.9	16.3	22	0.5	21.8	19.8
22 - 1559 - BROOKLINE AVE @ DEACONESS RD	0	4.1	9.6	0.1	4.5	10.7	0.1	3.1	17.4	0.3	2.5	18.5	0.4	5.7	16.7	0.4	7.5	12.6
23 - 1804 - BROOKLINE AVE @ LONGWOOD AVE	0.2	2.9	6.9	0.3	4.8	6.3	0.1	8.4	9.1	0.3	7.1	11.6	0.8	5.1	12.4	0.1	3.9	8.9
24 - 1805 - BROOKLINE AVE OPP SHORT ST	0.1	1.2	5.7	0.3	1.3	5.3	0	0.9	8.3	0.4	1	11	0.3	2.5	10.2	0.3	1.3	7.9
25 - 1806 - BROOKLINE AVE @ THE FENWAY	0	0.2	5.5	1.2	0.2	6.3	0.1	0.9	7.6	0	2	9	0.7	1.7	9.2	0.5	2.1	6.3
26 - 9441 - BROOKLINE AVE @ BOYLSTON ST	0.1	1.4	4.2	0.1	0.8	5.5	0	0.4	7.1	0	0.4	8.6	0	0.3	8.8	0	1.1	5.1
27 - 1562 - 132 BROOKLINE AVE OPP FULLERT	0.1	1.9	2.4	0.3	0.7	5.1	0.9	0.6	7.4	0	0.6	8	0.3	1.2	7.9	0.3	0.9	4.5
28 - 1563 - BROOKLINE AVE @ JERSEY ST	0.1	0	2.4	0	1.5	3.6	0.1	0.1	7.4	0	0.6	7.4	0	0.2	7.8	0	0.3	4.3
29 - 1564 - BROOKLINE AVE @ NEWBURY ST	0	0	2.4	0	0	3.6	0	0.1	7.3	0	0.1	7.3	0	0.2	7.6	0	0	4.3
30 - 899 - KENMORE STATION BUSWAY	0	2.3	0.1	0	4.4	0	0	7.3	0	0	7.3	0	0	7.6	0	0	4.3	0
Maximum			26.3			35.8			34.1			45.4			39.7			43.4
Total	27.9	27.7		41.8	42.4		38.1	39.4		49.6	49.4		47.8	49.4		44.6	49.5	

Massachusetts Bay Transportation Authority
Route 65
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	07:27 (65.0)(B063) [11] {FA19}			07:37 (65.0)(B064) [9] {FA19}			07:47 (65.0)(B057) [7] {FA19}			07:57 (65.0)(B058) [7] {FA19}			08:08 (65.0)(B059) [8] {FA19}			08:15 (65.0)(B061) [8] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 1026 - CHESTNUT HILL AVE @ VERONICA	11.5	0	11.7	10.2	0	10.2	12.3	0	14.4	11.1	0	11.1	11.9	0	15.1	5.2	0	6.6
2 - 919 - WASHINGTON ST OPP WALDO TERR	7.8	0.1	19.5	8.7	0	18.9	9	1.4	22	8.3	0	19.4	8.6	0.1	23.6	3.2	0	9.8
3 - 1268 - WASHINGTON ST @ SHEPARD ST	5.3	0	24.7	2.9	0	21.8	6.4	0	28.4	4.3	0.1	23.6	4.4	0.4	27.6	3	0	12.8
4 - 1269 - WASHINGTON ST @ SNOW ST	1.6	0	26.4	1.6	0	23.3	0.9	0.1	29.1	1.7	0	25.3	0.9	0	28.5	0.4	0	14.6
5 - 1270 - WASHINGTON ST @ MONASTERY RD	0.9	0.1	27.2	1.9	0	25.2	4.1	0.9	32.4	2.9	0.1	28	2.3	1	29.8	2.4	0.6	16.4
6 - 1272 - WASHINGTON ST @ EUSTON ST	4	0	31.2	4.1	0.1	29.2	5	0.1	37.3	6.7	0.1	34.6	5.6	0.3	35.1	3	0	19.4
7 - 1273 - WASHINGTON ST @ COMMONWEALTH	7.6	0.4	38.5	6	0.6	34.7	5.9	0.7	42.4	4.9	0.4	39	5.5	0.8	39.9	4.8	0.8	23.4
8 - 1274 - WASHINGTON ST @ COREY RD	5.2	0.4	43.3	6	0.9	39.8	6	0.1	48.3	8.1	0	47.1	6.3	1	45.1	4.3	0	27.6
9 - 1275 - WAHINGTON ST @ EVANS RD	1.1	0	44.4	0.4	0	40.2	0.6	0.6	48.3	1.4	0.6	48	0.5	0	45.6	0.4	0	28
10 - 1276 - WASHINGTON ST @ BEACON ST	1	0.4	45	1.6	1.9	39.9	2.7	1.7	49.3	2.1	0.9	49.3	0.5	0.8	45.4	1	1.1	27.9
11 - 1277 - 684 WASHINGTON ST	2.3	0.1	47.2	2	0.6	41.3	2.4	0.1	51.6	2.1	0.3	51.1	1.3	0.1	46.5	2.9	0	30.8
12 - 1278 - WASHINGTON ST @ WINTHROP PATH	1.2	0	48.4	1.4	0.4	42.3	2.7	0.1	54.1	4.1	0.3	55	1.1	0.4	47.3	3	0.1	33.6
13 - 1279 - WASHINGTON ST @ GARDNER RD	0.5	0	48.9	0.9	0	43.2	1	0.6	54.6	1.1	0	56.1	0.6	0	47.9	1.5	0	35.1
14 - 1280 - WASHINGTON ST @ GARDNER PATH	0.4	0	49.3	1.2	0	44.4	0.7	0	55.3	0.6	0	56.7	0.8	0.1	48.5	2.1	0	37.3
15 - 1281 - WASHINGTON ST @ GREENOUGH CIR	0.3	0.4	49.2	0.6	0.3	44.7	0.4	0.3	55.4	0.4	0	57.1	0.3	0.1	48.6	0.4	0.1	37.5
16 - 1282 - WASHINGTON ST @ CYPRESS ST	0.6	1.5	48.4	0.7	2.6	42.8	0.9	0.9	55.4	1	0	58.1	0.4	0.4	48.6	0.5	0.1	37.9
17 - 1283 - WASHINGTON ST @ HARVARD ST	1.1	1.7	47.7	1.3	2.1	42	2.1	1	56.6	1.3	1.7	57.7	2	1.5	49.1	1.3	1.4	37.8
18 - 1555 - WASHINGTON ST @ WALNUT	1.8	3	46.5	0.9	1	41.9	1	1.1	56.4	1.7	1.7	57.7	1.6	1.3	49.5	1.3	1.5	37.5
19 - 1556 - 678 BROOKLINE AVE OPP PEARL S	0.5	0	47	0.4	0.1	42.2	0.3	0	56.7	0.7	0.4	58	0.6	0.1	50	0.4	0.8	37.1
20 - 1557 - BROOKLINE AVE OPP ASPINWALL A	0.5	0.1	47.5	0.1	0.1	42.2	0.3	0.1	56.9	0.7	0.1	58.6	1	0.4	50.6	0.6	0	37.8
21 - 1558 - BROOKLINE AVE @ FRANCIS ST	0.5	23.7	24.2	0.6	21.6	21.2	0.6	21.4	36	1.7	21.3	39	2.1	22.8	30	0.5	12.1	26.1
22 - 1559 - BROOKLINE AVE @ DEACONESS RD	0.2	4.7	19.6	0.8	4.8	17.2	0.1	5.6	30.6	0.1	6.9	32.3	0.3	6.1	24.1	0.4	3.8	22.8
23 - 1804 - BROOKLINE AVE @ LONGWOOD AVE	0.5	5.5	14.5	0.1	6.9	10.4	0.6	9	22.1	0.7	6.7	26.3	0.8	8.8	16.1	0.4	5.4	17.8
24 - 1805 - BROOKLINE AVE OPP SHORT ST	0.3	2.5	12.4	0	1.8	8.7	0.1	2.7	19.6	0.6	2.3	24.6	0.6	1.6	16.1	0.1	1.6	16.3
25 - 1806 - BROOKLINE AVE @ THE FENWAY	0.1	2	10.5	0	1.6	7.1	0	2.7	16.9	0.3	2.3	22.6	0	3.1	13	0.4	2.6	14
26 - 9441 - BROOKLINE AVE @ BOYLSTON ST	0	1.7	9	0	2.9	4.2	0.9	2.7	15	0.3	2.7	20.1	0.3	2.7	10.6	0	2.8	11.3
27 - 1562 - 132 BROOKLINE AVE OPP FULLERT	0.2	0.7	8.5	0.4	1.2	3.4	0.6	1.1	14.4	0	0.7	19.4	0.3	2.5	8.1	0.3	1.4	10.1
28 - 1563 - BROOKLINE AVE @ JERSEY ST	0.1	0.8	7.7	0	0	3.4	0	0.6	13.9	0	0.4	19	0	1.1	7	0	0.4	9.8
29 - 1564 - BROOKLINE AVE @ NEWBURY ST	0	0	7.7	0	0.4	3	0	0.1	13.7	0	0.1	18.9	0	0.5	6.5	0	0.1	9.6
30 - 899 - KENMORE STATION BUSWAY	0	7.9	0	0	3	0	0	13.7	0	0	18.9	0	0	6.5	0	0	9.6	0
Maximum			49.3			44.7			56.9			58.6			50.6			37.9
Total	57.1	57.7		54.8	54.9		67.6	69.4		68.9	69		60.6	64.5		43.8	46.3	

Massachusetts Bay Transportation Authority
Route 65
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	Tri																	
	08:24 (65.0)(B060) [13] {FA19}			08:35 (65.0)(B064) [8] {FA19}			08:46 (65.0)(B063) [10] {FA19}			09:00 (65.0)(B057) [7] {FA19}			09:30 (65.0)(B061) [9] {FA19}			10:05 (65.0)(B063) [10] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 1026 - CHESTNUT HILL AVE @ VERONICA	4.8	0	6.2	9.8	0	9.8	9.6	0	10.7	10.4	0	12.9	6.3	0	7.3	6.5	0	7.7
2 - 919 - WASHINGTON ST OPP WALDO TERR	6.8	0.1	12.8	10.4	0.1	20	5.1	0	15.8	5.7	0	18.6	4.1	0	11.4	2.2	0.2	9.7
3 - 1268 - WASHINGTON ST @ SHEPARD ST	1.8	0.1	15.7	3.4	0	23.4	1.8	0	17.6	3.6	0	22.1	2.2	0	13.7	2.2	0	11.9
4 - 1269 - WASHINGTON ST @ SNOW ST	0.5	0	15	0.8	0.1	24	0.5	0	18.1	0.6	0	22.7	0.1	0	13.8	0.5	0	12.4
5 - 1270 - WASHINGTON ST @ MONASTERY RD	2.5	1.7	15.8	1.5	1.8	23.8	1.2	1.9	17.4	1.6	1.3	23	1.7	0.2	15.2	0.5	0.3	12.6
6 - 1272 - WASHINGTON ST @ EUSTON ST	2	0	17.8	3.1	0.1	26.8	5.4	0.5	22.3	6.4	0.3	29.1	6	0.2	21	2.4	0.3	14.7
7 - 1273 - WASHINGTON ST @ COMMONWEALTH	5.5	1	22.4	8.1	1.9	33	5.8	1	27.1	4.6	0.1	33.6	6.2	1.2	26	5.8	0.3	20.2
8 - 1274 - WASHINGTON ST @ COREY RD	4	0.4	26	7.1	0.5	39.6	8.6	0.4	35.3	8.7	0.6	41.7	8.3	0.4	33.9	8.7	0.5	28.4
9 - 1275 - WAHINGTON ST @ EVANS RD	0.4	0	26.4	0.3	0	39.9	0.2	0	35.5	0.6	0	42.3	0.3	0.1	34.1	0.9	0	29.3
10 - 1276 - WASHINGTON ST @ BEACON ST	0.7	0.4	26.7	2.6	0.8	41.8	0.9	0.9	35.5	1.3	0.7	42.9	0.3	0.4	34	0.8	1	29.1
11 - 1277 - 684 WASHINGTON ST	2.4	0.2	28.8	3.9	0.1	45.5	2.2	0.3	37.4	2.6	0.1	45.3	2.1	0	36.1	2.9	0.1	31.9
12 - 1278 - WASHINGTON ST @ WINTHROP PATH	1.8	0.1	30.5	3	0	48.5	2.2	0	39.6	3.1	0	48.4	2.3	0	38.4	1.5	0.1	33.3
13 - 1279 - WASHINGTON ST @ GARDNER RD	0.8	0	31.4	1.6	0	50.1	1.3	0	40.9	1.1	0.3	49.3	0.6	0.2	38.8	0.1	0.1	33.3
14 - 1280 - WASHINGTON ST @ GARDNER PATH	0.5	0	31.8	0.4	0	50.5	1.2	0.2	41.9	0.6	0	49.9	0.3	0	39.1	0.7	0	34
15 - 1281 - WASHINGTON ST @ GREENOUGH CIR	0.2	0.1	31.9	0	0	50.5	0	0.1	41.8	0.3	0	50.1	0.3	0	39.4	0.1	0.1	34
16 - 1282 - WASHINGTON ST @ CYPRESS ST	0.2	0.2	31.9	1.1	1.1	50.5	1.1	0.6	42.3	0.4	0.6	50	0.3	0.6	39.2	0.1	0.7	33.4
17 - 1283 - WASHINGTON ST @ HARVARD ST	0.5	1.1	31.4	1.6	1.3	50.9	1.2	1.4	42.1	0.9	2.6	48.3	0.4	2.9	36.8	0.2	4.2	29.4
18 - 1555 - WASHINGTON ST @ WALNUT	0.5	1.3	30.5	0.9	2	49.8	1.4	1.2	42.3	1.4	2	47.7	1.7	2.2	36.2	0.7	0.9	29.2
19 - 1556 - 678 BROOKLINE AVE OPP PEARL S	1	0.5	31.1	0.8	1.1	49.4	0.5	1.1	41.7	0.3	0.3	47.7	1	1.1	36.1	0.3	0.1	29.4
20 - 1557 - BROOKLINE AVE OPP ASPINWALL A	0.1	0.2	30.9	0.1	0	49.5	0	0.3	41.4	0	0.1	47.6	0.2	0.1	36.2	0.1	0.1	29.4
21 - 1558 - BROOKLINE AVE @ FRANCIS ST	0.3	14.5	16.7	1.6	21.8	29.4	0.4	16.7	25.1	0.3	24.9	23	0.6	10.6	26.2	0.2	10.2	19.4
22 - 1559 - BROOKLINE AVE @ DEACONESS RD	0.2	3.3	13.5	0.3	7.1	22.5	0	5.1	20	0.3	5.6	17.7	0	5.4	20.8	0.3	4	15.7
23 - 1804 - BROOKLINE AVE @ LONGWOOD AVE	0.5	6.6	7.5	1.1	11.9	11.8	0.4	7	13.4	1.3	9.4	9.6	1.1	9.1	12.8	1.8	6.8	10.7
24 - 1805 - BROOKLINE AVE OPP SHORT ST	0.2	0.8	6.8	0.3	3.9	8.1	0.7	1.7	12.4	1.4	1.1	9.9	0.9	2.6	11.1	1.3	1.6	10.4
25 - 1806 - BROOKLINE AVE @ THE FENWAY	0.1	1.8	5.1	0	1.8	6.4	0	0.9	11.5	0	1.7	8.1	0.2	1.2	10.1	0	1.3	9.1
26 - 9441 - BROOKLINE AVE @ BOYLSTON ST	0.2	1.5	3.7	0	1.9	4.5	0	0.8	10.7	0	1.4	6.7	0.2	0.6	9.8	0.1	0.9	8.3
27 - 1562 - 132 BROOKLINE AVE OPP FULLERT	0.4	1.2	2.8	0.1	1.6	3	0.3	1.5	9.5	0.6	2.4	4.9	0.8	1.1	9.4	1.2	2.1	7.4
28 - 1563 - BROOKLINE AVE @ JERSEY ST	0	0.5	2.4	0	0.6	2.4	0	0.1	9.4	0.1	0.3	4.7	0	1.1	8.3	0.1	0.6	6.9
29 - 1564 - BROOKLINE AVE @ NEWBURY ST	0	0.5	1.9	0	0.3	2.1	0	0.1	9.3	0	0	4.7	0	0.1	8.2	0	0.3	6.6
30 - 899 - KENMORE STATION BUSWAY	0	1.9	0	0	2.1	0	0	8.7	0	0	4.7	0	0	8.6	0	0	7.2	0
Maximum			31.9			50.9			42.3			50.1			39.4			34
Total	38.9	40		63.9	63.9		52	52.5		58.2	60.5		48.5	50		42.2	44	

Massachusetts Bay Transportation Authority
Route 65
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	p (RouteVar)(Block) [Observations]																	
	10:40 (65.0)(B061) [8] {FA19}			11:10 (65.0)(B063) [10] {FA19}			11:45 (65.0)(B061) [5] {FA19}			12:20 (65.0)(B063) [5] {FA19}			12:55 (65.0)(B061) [7] {FA19}			13:30 (65.0)(B063) [6] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 1026 - CHESTNUT HILL AVE @ VERONICA	3.5	0	4.9	2.8	0	2.9	3	0	4	3.2	0	5.4	5.6	0	7	5.3	0	7.5
2 - 919 - WASHINGTON ST OPP WALDO TERR	1.6	0	6.5	1.5	0	4.4	1.8	0	5.8	3.8	0.2	9	2.3	0	9.3	2	0	9.5
3 - 1268 - WASHINGTON ST @ SHEPARD ST	1.6	0	8.1	1.4	0.1	6.1	0.6	0	6.4	0.6	0	9.6	0.9	0	10.1	1.2	0	10.7
4 - 1269 - WASHINGTON ST @ SNOW ST	0.4	0	8.5	0.2	0.2	5.6	0.4	0	6.8	0.2	0	9.8	0	0	10.1	0.2	0	10.8
5 - 1270 - WASHINGTON ST @ MONASTERY RD	0.4	0.1	8.8	0	0	5.6	0.2	0.2	6.8	0.2	0.2	9.8	0	0.1	10	0.3	0.7	10.5
6 - 1272 - WASHINGTON ST @ EUSTON ST	1	0.3	9.5	1	0.1	6.5	0.2	0.2	6.8	0.4	1	9.2	0.3	0.4	9.9	0.8	0.3	11
7 - 1273 - WASHINGTON ST @ COMMONWEALTH	2.3	0.5	11.3	2.5	1	8	3.2	0.4	9.6	1.6	1.2	9.6	1.7	0.3	11.3	1.7	0.8	11.8
8 - 1274 - WASHINGTON ST @ COREY RD	4.9	0.8	15.4	3.8	0.4	11.4	4.4	1	13	5.6	1	14.2	2.3	0.6	13	3.8	1.3	14.3
9 - 1275 - WAHINGTON ST @ EVANS RD	0	0	15.4	0	0	11.4	0.2	0	13.2	0.2	0	14.4	0.1	0.1	13	0.5	0.2	14.7
10 - 1276 - WASHINGTON ST @ BEACON ST	0.4	1.3	14.5	0.2	0.5	11.1	0.2	0.6	12.8	0.4	0.8	14	0.4	0.7	12.7	0.2	0.8	14
11 - 1277 - 684 WASHINGTON ST	0.6	0	15.1	0.7	0	11.8	0.8	0.6	13	0.2	0.2	14	0.9	0	13.6	0.7	0	14.7
12 - 1278 - WASHINGTON ST @ WINTHROP PATH	0.8	0.3	15.6	0.9	0.1	12.6	0.2	0	13.2	0.8	0.2	14.6	0	0	13.6	0.2	0.2	14.7
13 - 1279 - WASHINGTON ST @ GARDNER RD	0	0	15.6	0.1	0.1	12.6	0.4	0	13.6	0	0	14.6	0.1	0.3	13.4	0	0	14.7
14 - 1280 - WASHINGTON ST @ GARDNER PATH	0.6	0.1	16.1	0.3	0.1	12.8	0.2	0.2	13.6	0.2	0.2	14.6	0.3	0.1	13.6	0	0.7	14
15 - 1281 - WASHINGTON ST @ GREENOUGH CIR	0	0.3	15.9	0	0.1	12.7	0.2	0	13.8	0.2	0.2	14.6	0.1	0.1	13.6	0.2	0	14.2
16 - 1282 - WASHINGTON ST @ CYPRESS ST	0	0.4	15.5	0	0.8	11.9	0.4	0.8	13.4	0.6	0.4	14.8	0.3	0.4	13.4	0.2	0.5	13.8
17 - 1283 - WASHINGTON ST @ HARVARD ST	0.6	2.1	14	0.2	1.4	10.7	0.4	0.8	13	0.4	1.4	13.8	0.6	1.4	12.6	0.2	0.8	13.2
18 - 1555 - WASHINGTON ST @ WALNUT	0.3	0.6	13.6	0.1	0.9	9.9	0	1.8	11.2	0.2	0.8	13.2	0.6	3.3	9.9	0.3	1.5	12
19 - 1556 - 678 BROOKLINE AVE OPP PEARL S	0.1	0.1	13.6	0.4	0.2	10.1	0	0.4	10.8	0.4	0.6	13	0.1	0.3	9.7	0	0	12
20 - 1557 - BROOKLINE AVE OPP ASPINWALL A	0.1	0	13.8	0	0	10.1	0	0	10.8	0.2	0.2	13	0	0.3	9.4	0.2	0.8	11.3
21 - 1558 - BROOKLINE AVE @ FRANCIS ST	1	2	12.8	0.7	2	8.8	0.6	2.2	9.2	0	2.2	10.8	1.1	0.9	9.7	0.7	3.5	8.5
22 - 1559 - BROOKLINE AVE @ DEACONESS RD	0.4	2.6	10.5	0.2	1.7	7.3	0.2	1.4	8	0.4	3.2	8	0.6	2.6	7.7	0	0.8	7.7
23 - 1804 - BROOKLINE AVE @ LONGWOOD AVE	1.6	3.5	8.6	4.1	1.4	10	3.2	2.6	8.6	2.8	0.8	10	1.4	2.7	6.4	1.5	1.8	7.3
24 - 1805 - BROOKLINE AVE OPP SHORT ST	1.3	0.5	9.4	1.1	0.8	10.3	2.2	1.2	9.6	1.6	0.6	11	1	1.3	6.3	1.5	0.8	8
25 - 1806 - BROOKLINE AVE @ THE FENWAY	0.5	1.4	8.5	0.3	1.4	9.2	0	1	8.6	0.4	1.6	9.8	0.4	1.1	5.6	0.5	0.7	7.8
26 - 9441 - BROOKLINE AVE @ BOYLSTON ST	0.1	0.4	8.3	0	0.9	8.3	0	1	7.6	0	2	7.8	0	0.1	5.4	0	1.5	6.3
27 - 1562 - 132 BROOKLINE AVE OPP FULLERT	1	1.8	7.5	0.9	1.2	8	0.8	3.2	5.2	1	2.8	6	0.7	1.4	4.7	1.2	1.8	5.7
28 - 1563 - BROOKLINE AVE @ JERSEY ST	0.1	0.5	7.1	0.1	0.5	7.6	0	0	5.2	0.2	0.6	5.6	0	1	3.7	0.2	0.2	5.7
29 - 1564 - BROOKLINE AVE @ NEWBURY ST	0	0.1	7	0	0.6	7	0	0.2	5	0	0.8	4.8	0	0	3.7	0	0.2	5.5
30 - 899 - KENMORE STATION BUSWAY	0	9.4	0	0	8	0	0	5.4	0	0	5	0	0	5	0	0	5.7	0
Maximum			16.1			12.8			13.8			14.8			13.6			14.7
Total	25.2	29.1		23.5	24.5		23.8	25.2		25.8	28.2		21.8	24.5		23.6	25.6	

Massachusetts Bay Transportation Authority
Route 65
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	14:05 (65.0)(B061) [9] {FA19}			14:40 (65.0)(B051) [14] {FA19}			15:00 (65.0)(B056) [7] {FA19}			15:16 (65.0)(B061) [11] {FA19}			15:35 (65.0)(B062) [9] {FA19}			15:55 (65.0)(B051) [13] {FA19}			16:15 (65.0)(B056) [	
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off
1 - 1026 - CHESTNUT HILL AVE @ VERONICA	4	0	5.9	3.9	0	4.6	2	0	4.3	0.9	0	3.5	2.4	0	2.9	1.9	0	6.9	2.8	0
2 - 919 - WASHINGTON ST OPP WALDO TERR	2.3	0	8.2	1.7	0	6.3	1.4	0	5.7	1.9	0.2	5.3	1.3	0	4.2	2	0.1	8.9	2.3	0
3 - 1268 - WASHINGTON ST @ SHEPARD ST	2.2	0	10.4	2.5	0	8.8	2.3	0	8	3.5	0	8.8	2.7	0	6.9	1.8	0.1	10.6	1.8	0
4 - 1269 - WASHINGTON ST @ SNOW ST	0.2	0	10.7	0.4	0	9.1	0	0	8	0.2	0	9	0	0	7.6	0	0	10.6	0	0
5 - 1270 - WASHINGTON ST @ MONASTERY RD	0.2	0.7	10.2	0.3	0	9.4	0	0.1	7.9	0.1	0.2	8.9	0.4	0.2	7.8	0.2	0.2	10.7	0.3	0.8
6 - 1272 - WASHINGTON ST @ EUSTON ST	0.4	0.3	10.3	1.1	0.4	10.2	0.3	0.1	8	0.6	0.7	8.8	0.1	0	7.9	0.3	0.5	10.5	0	0
7 - 1273 - WASHINGTON ST @ COMMONWEALTH	2.2	0.7	11.9	2	0.5	11.7	2.1	0.7	9.4	0.8	0.4	9.3	0.8	0.9	7.8	1.2	1	10.7	1.3	1.3
8 - 1274 - WASHINGTON ST @ COREY RD	3.1	0.6	14.4	3	1.4	13.3	1.4	0.6	10.3	2.3	0.5	11.1	1.4	0.2	9	2.1	0.8	11.9	0.8	0.5
9 - 1275 - WAHINGTON ST @ EVANS RD	0	0.1	14.3	0.1	0.2	13.1	0	0	10.3	0	0	11.1	0	0	9	0	0	11.9	0	0
10 - 1276 - WASHINGTON ST @ BEACON ST	0.2	0.3	14.2	1	1.6	12.5	0.6	0.9	10	0.1	0.5	10.7	0.3	1.8	7.6	0.5	0.5	12	0.5	1.5
11 - 1277 - 684 WASHINGTON ST	0.8	0	15	0.6	0.2	12.9	0.1	0.1	10	0.5	0.4	10.9	0.2	0	7.8	0.4	0.5	11.9	0.5	0.5
12 - 1278 - WASHINGTON ST @ WINTHROP PATH	0.4	0.1	15.3	0.9	0.3	13.5	0.3	0.1	10.1	0.1	0.4	10.6	0.8	0.2	8.3	0.8	0.1	12.7	0	0
13 - 1279 - WASHINGTON ST @ GARDNER RD	0.2	0	15.6	0.2	0.1	13.6	0.3	0	10.4	0	0.1	10.5	0	0.1	8.2	0.4	0.1	13	0.3	0
14 - 1280 - WASHINGTON ST @ GARDNER PATH	0.4	0.3	15.7	0.1	0.2	13.4	0.4	0	10.9	0.3	0	10.8	0	0.4	7.8	0.1	0.1	13	0.3	0
15 - 1281 - WASHINGTON ST @ GREENOUGH CIR	0	0.2	15.4	0	0.1	13.3	0	0	10.9	0	0	10.8	0	0.2	7.6	0	0	13	0	0
16 - 1282 - WASHINGTON ST @ CYPRESS ST	0.3	1.1	14.7	0.6	0.7	13.1	0.3	0.3	10.9	0.2	0.5	10.5	0.7	0.2	8	0.1	0.2	12.8	1.8	0.3
17 - 1283 - WASHINGTON ST @ HARVARD ST	0.6	1.4	13.8	0.6	1.5	12.3	0.1	1	10	0.5	0.5	10.5	0.4	1	7.4	0.8	1.7	11.9	0	0.8
18 - 1555 - WASHINGTON ST @ WALNUT	0.6	2	12.3	0.3	1.7	10.9	0.9	1.4	9.4	0.4	1.9	8.9	0	1	6.4	0.6	1.9	10.6	0.3	2
19 - 1556 - 678 BROOKLINE AVE OPP PEARL S	0	0.8	11.6	0.3	0.3	10.9	0.3	0.6	9.1	0.2	0.6	8.5	0	0.4	6	0.1	0.2	10.5	0	0.8
20 - 1557 - BROOKLINE AVE OPP ASPINWALL A	0.3	0.2	11.7	0.3	0	11.1	0	0	9.1	0.3	0	8.7	0.3	0	6.3	0	0.1	10.5	0.3	0
21 - 1558 - BROOKLINE AVE @ FRANCIS ST	0	2.8	8.9	0.9	1.5	10.5	1.3	0.9	9.6	0.8	1	8.7	1.3	0.8	6.8	0.5	1	9.9	2	0.3
22 - 1559 - BROOKLINE AVE @ DEACONESS RD	0.4	0.8	9.3	1.8	1.1	11.2	1.9	1	10.4	0.7	1.5	7.9	0.8	1.3	6.3	1.8	0.5	11.2	2.5	0.5
23 - 1804 - BROOKLINE AVE @ LONGWOOD AVE	4.4	2.3	10.7	4.1	2.1	13.1	6.1	1.1	15.4	4.9	0.5	12.4	4.3	0.4	10.1	6.3	0.5	17	4.3	0.3
24 - 1805 - BROOKLINE AVE OPP SHORT ST	1.8	1	11.4	2.6	0.4	15.3	2.7	0.3	17.9	2.3	0.1	14.5	3.3	0.3	13.1	2.7	0.4	19.3	2.5	0.3
25 - 1806 - BROOKLINE AVE @ THE FENWAY	0.6	0.7	11.3	0.3	1.3	14.3	0.6	0	18.4	0.1	0.3	14.4	0.6	0.6	13.1	0.5	0.8	19	0.5	0
26 - 9441 - BROOKLINE AVE @ BOYLSTON ST	0.3	1	10.7	0.2	1.7	12.8	0	0.9	17.6	0.1	1.1	13.4	0.3	0.5	12.9	0	1	18	0	1.3
27 - 1562 - 132 BROOKLINE AVE OPP FULLERT	1.1	2.6	9.2	1.1	1.9	12	0.9	3.7	14.7	1.2	1.8	12.7	1.8	1.5	13.1	1.5	2.1	17.4	1	1.5
28 - 1563 - BROOKLINE AVE @ JERSEY ST	0	0.8	8.4	0.4	1.1	11.4	0.7	1.6	13.9	0.1	1	11.8	0.5	1	12.6	0.5	2.5	15.3	0.8	4.5
29 - 1564 - BROOKLINE AVE @ NEWBURY ST	0	0.6	7.9	0	0.4	11	0	0.3	13.6	0	0.2	11.6	0	0.3	12.4	0	0.1	15.2	0	0
30 - 899 - KENMORE STATION BUSWAY	0	8.9	0	0	12.3	0	0	14.7	0	0	12.2	0	0	13.4	0	0	15.5	0	0	13.8
Maximum			15.7			15.3			18.4			14.5			13.1			19.3		
Total	27	30.3		31.3	33		27	30.4		23.1	26.6		24.7	26.7		27.1	32.5		26.9	31

Massachusetts Bay Transportation Authority
Route 65
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	4] {FA19}	16:40 (65.0)(B061) [6] {FA19}			17:00 (65.0)(B062) [6] {FA19}			17:20 (65.0)(B051) [7] {FA19}			17:45 (65.0)(B056) [4] {FA19}			18:15 (65.0)(B061) [5] {FA19}			Total		
	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 1026 - CHESTNUT HILL AVE @ VERONICA	7	1.3	0	5.5	1.2	0	6.3	2	0	10.4	3.3	0	9.3	1.6	0	8.8	211.6	0	291
2 - 919 - WASHINGTON ST OPP WALDO TERR	9.3	2.5	0	8	2.2	0	8.5	0.9	0	11.3	2.3	0	11.5	3.4	0	12.2	152.7	2.9	441
3 - 1268 - WASHINGTON ST @ SHEPARD ST	11	2	0	10	2.2	0	10.7	2	0	13.3	1.8	0	13.3	1.8	0	14	88.5	1.3	531.3
4 - 1269 - WASHINGTON ST @ SNOW ST	11	0.2	0	10.2	0.3	0.2	10.8	0	0	13.3	1	0	14.3	0.2	0	14.2	17.5	0.6	548.6
5 - 1270 - WASHINGTON ST @ MONASTERY RD	10.5	0.2	0.5	9.8	0	0.5	10.3	0.3	0.3	13.3	0	0.5	13.8	1	0.8	14.4	37	16.3	569.5
6 - 1272 - WASHINGTON ST @ EUSTON ST	10.5	0.2	0.2	9.8	1	0	11.3	0.1	0	13.4	0	0	13.8	0.2	0.2	14.4	80.3	7.4	642.4
7 - 1273 - WASHINGTON ST @ COMMONWEALTH	10.5	1.5	0.8	10.5	2	1.5	11.8	0.7	0.4	13.7	1	0.5	14.3	0.8	0.4	14.8	131.8	25	749.7
8 - 1274 - WASHINGTON ST @ COREY RD	10.8	0.8	0.8	10.5	2.2	0	14	1.4	0.7	14.4	0.5	0.5	14.3	1.6	0	16.4	162.6	21.8	890.3
9 - 1275 - WAHINGTON ST @ EVANS RD	10.8	0	0	10.5	0	0	14	0.1	0	14.6	0	0	14.3	0	0	16.4	12.2	2	900.8
10 - 1276 - WASHINGTON ST @ BEACON ST	9.8	0.5	0.5	10.5	0.3	1	13.3	0.4	0.1	14.9	0.5	0.5	14.3	0.4	1.4	15.4	26.7	29.1	898.5
11 - 1277 - 684 WASHINGTON ST	9.8	0	0.2	10.3	0.8	0	14.2	0.3	0.1	15	1.3	0.3	15.3	0.8	0	16.2	50.7	5.6	943.4
12 - 1278 - WASHINGTON ST @ WINTHROP PATH	9.8	0.3	0	10.7	0	0	14.2	0.1	0	15.1	0.8	0	16	0.8	0	17	43.1	3.9	982.6
13 - 1279 - WASHINGTON ST @ GARDNER RD	10	0	0	10.7	0	0	14.2	0.1	0	15.3	0	0	16	0	0	17	16.3	2.1	997.1
14 - 1280 - WASHINGTON ST @ GARDNER PATH	10.3	0.2	0.2	10.7	0.5	0	14.7	0.3	0.3	15.3	0.8	0.3	16.5	0	0	17	18.5	3.8	1011.7
15 - 1281 - WASHINGTON ST @ GREENOUGH CIR	10.3	0	0	10.7	0.2	0.2	14.7	0	0	15.3	0.8	0.3	17	0.6	0	17.6	8.5	3.8	1016
16 - 1282 - WASHINGTON ST @ CYPRESS ST	11.8	0	0.3	10.3	0.7	0.7	14.7	0	0.3	15	0	1	16	0.8	0.6	17.8	15.6	22.2	1009.4
17 - 1283 - WASHINGTON ST @ HARVARD ST	11	0.2	1.5	9	0.8	1	14.5	0.4	1	14.4	0	2.3	13.8	0.2	0.8	17.2	24.7	56.4	978.1
18 - 1555 - WASHINGTON ST @ WALNUT	9.3	0.3	1	8.3	0.8	3.2	12.2	0.3	1.9	12.9	0	1.3	12.5	0.2	2.6	14.8	24.8	62.6	940
19 - 1556 - 678 BROOKLINE AVE OPP PEARL S	8.5	0.3	0.2	8.5	0	0.7	11.5	0.1	0.4	12.6	0.3	0.8	12	0.2	0.4	14.6	12.9	16.4	936.6
20 - 1557 - BROOKLINE AVE OPP ASPINWALL A	8.8	0	0	8.5	0	0.7	10.8	0.3	0.1	12.7	0.3	0	12.3	0	0	14.6	6.7	5.5	937.8
21 - 1558 - BROOKLINE AVE @ FRANCIS ST	10.5	1.3	1	8.8	1	0.2	11.7	0.9	0.3	13.3	0.5	0.5	12.3	0.6	2.2	13	27	346.3	618.7
22 - 1559 - BROOKLINE AVE @ DEACONESS RD	12.5	3	0	11.8	1.5	0.3	12.8	1	0.7	13.6	0.3	0	12.5	0.2	0.6	12.6	23.1	110.7	531.3
23 - 1804 - BROOKLINE AVE @ LONGWOOD AVE	16.5	10.8	0.8	21.8	4.5	1.7	15.7	4.3	0.3	17.6	2.3	0.8	14	1.4	1.2	12.8	85.6	150.7	465.6
24 - 1805 - BROOKLINE AVE OPP SHORT ST	18.8	7.2	0.2	28.8	2.3	0.7	17.3	1.3	0	18.9	0.3	0.5	13.8	1	0.4	13.4	48.2	42.5	472.5
25 - 1806 - BROOKLINE AVE @ THE FENWAY	19.3	0	0.2	28.7	0.5	1.2	16.7	0	1	17.9	0	0	13.8	0	0.2	13.2	9.6	43.8	438.6
26 - 9441 - BROOKLINE AVE @ BOYLSTON ST	18	0.3	1.2	27.8	0.3	0.7	16.3	0	2.1	15.7	0	0.8	13	0	0.6	12.6	3.9	46.4	396
27 - 1562 - 132 BROOKLINE AVE OPP FULLERT	17.5	2	2.2	27.7	1.3	1	16.7	1.3	0.7	16.3	0.5	1	12.5	0.8	1.6	11.8	28	58.3	364.8
28 - 1563 - BROOKLINE AVE @ JERSEY ST	13.8	0.3	3	25	0	1.3	15.3	0.1	0.7	15.7	0.3	0.8	12	0	1	10.8	4.9	32.2	337.8
29 - 1564 - BROOKLINE AVE @ NEWBURY ST	13.8	0	0.2	24.8	0	0.7	14.7	0	0.4	15.3	0	0.3	11.8	0	0	10.8	0	8.5	329.4
30 - 899 - KENMORE STATION BUSWAY	0	0	24.8	0	0	15.8	0	0	15.3	0	0	12	0	0	10.8	0	0	343.6	0.1
Maximum	19.3			28.8			17.3			18.9			17			17.8			1016
Total		35.4	39.8		26.6	33.3		18.7	27.1		18.9	25		18.6	25.8		1373	1471.7	

Massachusetts Bay Transportation Authority
Route 65
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	06:14 (65.0)(B057) [7] {FA19}			06:50 (65.0)(B063) [11] {FA19}			07:12 (65.0)(B057) [7] {FA19}			07:31 (65.0)(B059) [8] {FA19}			07:47 (65.0)(B060) [13] {FA19}			08:07 (65.0)(B063) [11] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 899 - KENMORE STATION BUSWAY	9.4	0	9.4	5	0	5	5.4	0	5.4	6.9	0	6.9	4.5	0	4.5	6	0	6
2 - 8993 - BROOKLINE AVE OPP NEWBURY ST	0	0	9.4	0	0	5	0	0	5.4	0	0	6.9	0.1	0	4.6	0	0	6
3 - 1518 - BROOKLINE AVE OPP JERSEY ST	0.3	2	9	0.5	0.3	5.3	1.1	0	6.6	0.6	0.5	7	0	0.3	4.7	0.4	0.2	6.2
4 - 1519 - BROOKLINE AVE @ FULLERTON ST	0.7	0.7	9	0.3	0.6	4.9	0.4	0.7	6.3	0.6	0.8	6.9	0.1	0.5	4.3	0.6	0.6	6.2
5 - 1520 - BROOKLINE AVE @ PARK DR	0	0.1	8.9	0.2	0.5	4.5	0.9	0	7.1	0.6	0.1	7.4	0.8	0	5.1	1.1	0	7.3
6 - 1777 - BROOKLINE AVE @ PILGRIM RD	0	0	8.9	0.2	0	4.7	0	0.3	6.9	0	0.3	7.1	0.2	0.2	5.1	0.2	0	7.5
7 - 1778 - BROOKLINE AVE @ SHORT ST	0.4	3.6	5.7	0.5	1.4	3.9	0.6	1	6.4	0.5	1.8	5.9	0.3	1.6	3.8	0.1	1.7	5.8
8 - 1521 - BROOKLINE AVE @ LONGWOOD AVE	0	2.6	3.1	0.1	1.7	2.3	1.4	3	4.9	1.3	1.5	5.6	0.2	1.8	2.4	0.5	1.7	4.5
9 - 1523 - BROOKLINE AVE @ FRANCIS ST	0	1	2.1	0.1	0.6	1.8	2.6	0.4	7	2.5	1.8	6.4	0.5	0.8	2.1	0.7	1	4.3
10 - 1524 - BROOKLINE AVE @ ASPINWALL AVE	0	0.3	1.9	0	0	1.8	0.3	0	7.3	0	0	6.4	0.1	0	2.2	0.3	0	4.5
11 - 1525 - BROOKLINE AVE @ PEARL ST	0.1	0.4	1.6	0.1	0	1.9	0.3	0.3	7.3	0.4	0.4	6.4	0.3	0.1	2.4	0.1	0	4.6
12 - 1526 - WASHINGTON ST @ PEARL ST	0.4	0	2	0.5	0.1	2.3	0.7	0.4	7.6	1.5	0.1	7.8	1.7	0.1	4	0.5	0.2	4.9
13 - 1286 - WASHINGTON ST @ HARVARD ST	1.1	0	3.1	0.6	0.2	2.7	0.1	1	6.7	0.5	0.5	7.8	1.6	0.1	5.5	1.5	0	6.4
14 - 1287 - WASHINGTON ST @ SCHOOL ST	0	0	3.1	0	0.5	2.2	0.4	0.1	7	0.1	0.3	7.6	0.8	0.1	6.2	0.1	0.2	6.3
15 - 1288 - WASHINGTON ST OPP GREENOUGH S	0	0	3.1	0.5	0	2.7	0.7	0	7.7	0	0.3	7.4	0.2	0.5	5.9	0	0.1	6.2
16 - 1289 - WASHINGTON ST @ GRIGGS RD	0	0	3.1	0	0	2.7	0	0	7.7	0.1	0	7.5	0.1	0.1	5.9	0.2	0.5	5.9
17 - 1290 - WASHINGTON ST OPP GARDNER RD	0	0	3.1	0	0	2.7	0	0.1	7.6	0	0	7.5	0	0.1	5.8	0	0	5.9
18 - 1291 - WASHINGTON ST @ FAIRBANKS ST	0	0	3.1	0.1	0	2.8	0	0	7.6	0.3	0	7.8	0	0.1	5.8	0.2	0.2	5.9
19 - 1292 - WASHINGTON ST @ BEACON ST	0	0.6	2.6	0.8	0.3	3.4	0	2.4	5.1	1.3	0.5	8.5	0.6	0.3	6.1	0.6	0.2	6.4
20 - 1293 - WASHINGTON ST @ BARTLETT ST	0.6	0	3.1	0	0	3.4	0	0	5.1	0	0	8.5	0	0	6.1	0	0	6.4
21 - 1294 - WASHINGTON ST @ COREY RD	0	0.6	2.7	0.1	0.5	2.9	0.7	0.9	5	1.1	1.1	8.5	0.5	0.4	6.2	0.5	0.4	6.5
22 - 1295 - WASHINGTON ST @ COMMONWEALTH	1	0	3.7	0.4	0.2	3.1	1.1	0.1	6	0.9	1.3	8.1	0.5	0.6	6.1	0.2	0.8	5.9
23 - 1296 - WASHINGTON ST OPP EUSTON RD	1.1	0	4.9	0.3	0.1	3.3	1.4	1	6.4	0.5	0.4	8.3	0.2	0.3	5.9	0.5	0.3	6.1
24 - 1298 - WASHINGTON ST @ MONASTERY RD	0	0	4.9	0.5	0	3.8	0.9	0.1	7.1	0.3	0.5	8	0.5	0.5	5.9	0.1	0.1	6.1
25 - 1299 - WASHINGTON ST OPP SNOW ST	0	0	4.9	0	0	3.8	0	0	7.1	0	0.3	7.8	0	0.2	5.7	0	0.2	5.9
26 - 1300 - WASHINGTON ST OPP SHEPARD ST	0.1	2	3	0	1.5	2.4	0	0.9	6.3	0	1.5	6.3	0	2.2	3.5	0	1	4.9
27 - 1301 - 7 WINSHIP ST	0	0.3	2.7	0	0.7	1.6	0	2.1	4.1	0	2.4	3.9	0	1.5	2.2	0	0.7	4.2
28 - 1994 - WINSHIP ST @ UNION ST	0	0.3	2.4	0	0.4	1.4	0	0.3	3.9	0	0.5	3.5	0.1	0.8	1.5	0	0.5	3.7
29 - 1026 - CHESTNUT HILL AVE @ VERONICA	0	1.3	1.1	0	1.6	0.2	0	2.4	2.1	0	2.5	1	0	1.7	0.4	0	4.5	1
Maximum			9.4			5.3			7.7			8.5			6.2			7.5
Total	15.2	15.8		10.8	11.2		19	17.5		20	19.4		13.9	14.9		14.4	15.1	

Massachusetts Bay Transportation Authority
Route 65
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	08:27 (65.0)(B057) [7] {FA19}			08:42 (65.0)(B058) [7] {FA19}			09:00 (65.0)(B061) [9] {FA19}			09:30 (65.0)(B063) [10] {FA19}			10:10 (65.0)(B061) [9] {FA19}			10:40 (65.0)(B063) [10] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 899 - KENMORE STATION BUSWAY	4.9	0	4.9	8.4	0	8.4	4.1	0	4.1	8.6	0	8.6	4.8	0	4.8	3.5	0	3.5
2 - 8993 - BROOKLINE AVE OPP NEWBURY ST	0	0	4.9	0	0	8.4	0.1	0	4.2	0	0	8.6	0	0	4.8	0	0	3.5
3 - 1518 - BROOKLINE AVE OPP JERSEY ST	0.4	0	5.3	0.3	0.9	7.9	0.3	0.1	4.4	0.3	0.2	8.7	0.1	0.1	4.8	0.4	0	3.9
4 - 1519 - BROOKLINE AVE @ FULLERTON ST	1.3	0.3	6.3	0.4	0.9	7.4	0.3	0.6	4.2	1.1	1.3	8.5	1	0.3	5.4	1.4	0.8	4.5
5 - 1520 - BROOKLINE AVE @ PARK DR	0	0	6.3	0.1	0	7.6	0.2	0	4.4	0.2	0.2	8.5	0.3	0	5.8	0.4	0.1	4.8
6 - 1777 - BROOKLINE AVE @ PILGRIM RD	0.1	0.4	6	0.1	0	7.7	0.1	0.3	4.2	0.2	0.3	8.4	0.2	0.2	5.8	0.4	0	5.2
7 - 1778 - BROOKLINE AVE @ SHORT ST	0.1	1.7	4.4	0.1	0.4	7.4	0	0.9	3.3	0	2.3	6.1	0.2	1.4	4.6	0.7	1.3	4.6
8 - 1521 - BROOKLINE AVE @ LONGWOOD AVE	0.7	2.1	3	0.1	3.9	3.7	0.8	1.8	2.4	1.2	3.3	4	2.3	2.1	4.8	2.1	1.5	5.2
9 - 1523 - BROOKLINE AVE @ FRANCIS ST	0.9	0.3	3.6	0.3	1.1	2.9	0.9	0.1	3.2	1.5	0.8	4.7	2.3	0.3	6.8	3.2	0.6	7.8
10 - 1524 - BROOKLINE AVE @ ASPINWALL AVE	0	0	3.6	0	0.1	2.7	0.2	0	3.4	0	0	4.7	0	0.1	6.7	0	0.1	7.7
11 - 1525 - BROOKLINE AVE @ PEARL ST	0.4	0.4	3.6	0.6	0.4	2.9	0.6	0.6	3.4	0.7	0.2	5.2	0.6	0.1	7.1	0	0.5	7.2
12 - 1526 - WASHINGTON ST @ PEARL ST	1.1	0.3	4.4	1.1	0	4	1	0.3	4.1	1	0.1	6.1	1.6	0.2	8.4	0.7	0.5	7.4
13 - 1286 - WASHINGTON ST @ HARVARD ST	1	0.1	5.3	0.6	0.1	4.4	0.3	0.1	4.3	0.6	0	6.7	1.4	0.3	9.6	1.6	0.3	8.7
14 - 1287 - WASHINGTON ST @ SCHOOL ST	0	0.3	5	0	0.1	4.3	0	0.3	4	0.5	0.2	7	0	0.4	9.1	0.5	0.3	8.9
15 - 1288 - WASHINGTON ST OPP GREENOUGH S	0	0	5	0	0	4.3	0	0	4	0.2	0	7.2	0	0	9.1	0	0	8.9
16 - 1289 - WASHINGTON ST @ GRIGGS RD	0.1	0.3	4.9	0.3	0	4.6	0.2	0.1	4.1	0	0	7.2	0	0	9.1	0.1	0.2	8.8
17 - 1290 - WASHINGTON ST OPP GARDNER RD	0	0	4.9	0	0.3	4.3	0	0	4.1	0.3	0	7.5	0.1	0.2	9	0	0	8.8
18 - 1291 - WASHINGTON ST @ FAIRBANKS ST	0	0	4.9	0	0	4.3	0.1	0	4.2	0.2	0.1	7.6	0	0.1	8.9	0.2	0.4	8.6
19 - 1292 - WASHINGTON ST @ BEACON ST	1	0.1	5.7	0.4	0.1	4.6	0.6	0.1	4.7	0.3	0.5	7.4	0.2	1	8.1	0.3	2.4	6.5
20 - 1293 - WASHINGTON ST @ BARTLETT ST	0	0	5.7	0	0	4.6	0	0	4.7	0.1	0.2	7.3	0.2	0.7	7.7	0	0.2	6.3
21 - 1294 - WASHINGTON ST @ COREY RD	0.4	0.7	5.4	0	0.3	4.3	0.9	0.7	4.9	1.1	2	6.4	1.1	1.7	7.1	0.6	3	3.9
22 - 1295 - WASHINGTON ST @ COMMONWEALTH	0.4	1.3	4.6	0.4	1.3	3.4	0.6	0.8	4.7	0.2	0.5	6.1	0.3	0.4	7	0.2	0.9	3.2
23 - 1296 - WASHINGTON ST OPP EUSTON RD	1.4	0.4	5.6	0.7	0.1	4	0.2	0.3	4.6	0.9	0.4	6.6	0.7	0.3	7.3	0	0.4	2.8
24 - 1298 - WASHINGTON ST @ MONASTERY RD	1.1	0.3	6.4	0.6	0	4.6	0	0.1	4.4	0.1	0	6.7	0	0	7.3	0.1	0.1	2.8
25 - 1299 - WASHINGTON ST OPP SNOW ST	0	0	6.4	0	0	4.6	0	0.1	4.3	0	0	6.7	0	0.1	7.2	0	0	2.8
26 - 1300 - WASHINGTON ST OPP SHEPARD ST	0	0.4	6	0	0	4.6	0	0.8	3.6	0	1.2	5.5	0	0.6	6.7	0	0.8	2
27 - 1301 - 7 WINSHIP ST	0	2.7	3.3	0	1.4	3.1	0	0.8	2.8	0	1.1	4.4	0	0.7	6	0	0.5	1.5
28 - 1994 - WINSHIP ST @ UNION ST	0	0	3.3	0	0.1	3	0	0.2	2.6	0	0.7	3.7	0	0	6	0.1	0.6	1
29 - 1026 - CHESTNUT HILL AVE @ VERONICA	0	3.9	0.6	0	3	0	0	2	1	0	2.5	1.2	0	4.3	1.7	0	1.6	0.1
Maximum			6.4			8.4			4.9			8.7			9.6			8.9
Total	15.3	16		14.5	14.5		11.5	11.1		19.3	18.1		17.4	15.6		16.5	17.1	

Massachusetts Bay Transportation Authority
Route 65
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	Trip (RouteVar)(Blk																	
	11:15 (65.0)(B061) [5] {FA19}			11:50 (65.0)(B063) [3] {FA19}			12:25 (65.0)(B061) [6] {FA19}			13:00 (65.0)(B063) [6] {FA19}			13:35 (65.0)(B061) [8] {FA19}			14:00 (65.0)(B051) [12] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 899 - KENMORE STATION BUSWAY	7	0	7	7.7	0	7.7	4.2	0	4.2	6.3	0	6.3	3.4	0	3.4	4.2	0	4.2
2 - 8993 - BROOKLINE AVE OPP NEWBURY ST	0	0.4	6.6	0	0	7.7	0.3	0	4.5	0.2	0	6.5	0.1	0	3.5	0	0	4.2
3 - 1518 - BROOKLINE AVE OPP JERSEY ST	0.2	0	6.8	0	0.3	7.3	0.5	0	5	0	0	6.5	0	0	3.5	0	0.1	4.1
4 - 1519 - BROOKLINE AVE @ FULLERTON ST	1.8	0.4	8.2	1.3	0.7	8	4	0.4	9	3.2	1.2	8.5	1.9	0.5	4.9	2.6	0.2	6.5
5 - 1520 - BROOKLINE AVE @ PARK DR	0	0	8.2	0.7	0	8.7	0.7	0	8.7	0.2	0.2	8.5	0.5	0.3	5.1	1.2	0.1	8.1
6 - 1777 - BROOKLINE AVE @ PILGRIM RD	0	0	8.2	0.3	0.3	8.7	0.8	0.2	9.3	1.5	0.3	9.7	0.3	0.1	5.3	0.5	0.1	8.5
7 - 1778 - BROOKLINE AVE @ SHORT ST	0.2	2.8	5.6	0.3	2.3	6.7	1.5	1.5	9.3	1.8	1.5	10	1.4	0.9	5.8	1.1	1.7	7.9
8 - 1521 - BROOKLINE AVE @ LONGWOOD AVE	3.2	2.4	6.6	3.3	2.3	7.7	3.2	2.5	10	3.2	2	11.2	2.5	0.8	7.5	4.8	1.9	10.8
9 - 1523 - BROOKLINE AVE @ FRANCIS ST	2.2	0.8	8	1.7	0.3	9	1.3	1.3	10	1	1.7	10.5	2.6	0.3	9.9	1.5	0.3	12
10 - 1524 - BROOKLINE AVE @ ASPINWALL AVE	0	0	8	0	0	9	0.2	0	10.2	0.2	0.2	10.5	0.3	0	10.1	0.1	0	12.1
11 - 1525 - BROOKLINE AVE @ PEARL ST	0.8	0.6	8.2	0.3	0	9.3	0.3	0.7	9.8	0.8	0.2	11.2	0.6	0	10.8	0.2	0.9	11.3
12 - 1526 - WASHINGTON ST @ PEARL ST	0.8	0.8	8.2	1.3	0	10.7	0.2	0	10	1.3	1.3	11.2	0.8	0.4	11.1	1.7	0.5	12.5
13 - 1286 - WASHINGTON ST @ HARVARD ST	2.2	0.8	9.6	1.7	0.3	12	1.5	0.5	11	0.3	0.2	11.3	1.3	0.1	12.3	1.2	1.3	12.3
14 - 1287 - WASHINGTON ST @ SCHOOL ST	0.6	0.2	10	1	0	13	0.3	0.3	11	0.5	0.3	11.5	0.8	0.4	12.6	0.3	0.4	12.2
15 - 1288 - WASHINGTON ST OPP GREENOUGH S	0	0.2	9.8	0.3	0	13.3	0	0.2	10.8	0	0.3	11.2	0.3	0.1	12.8	0	0	12.2
16 - 1289 - WASHINGTON ST @ GRIGGS RD	0	0	9.8	0	0	13.3	0.2	0.3	10.7	0	0.2	11	0.1	0.1	12.8	0	0.1	12.1
17 - 1290 - WASHINGTON ST OPP GARDNER RD	0	0.2	9.6	0.7	0	14	0	0.8	9.8	0	0.2	10.8	0	0.1	12.6	0.2	0.3	11.9
18 - 1291 - WASHINGTON ST @ FAIRBANKS ST	0	0	9.6	0	0	14	0.2	0.2	9.8	0	0.2	10.7	0	0.1	12.5	0	0.4	11.5
19 - 1292 - WASHINGTON ST @ BEACON ST	1	1	9.6	0	0.3	13.7	1	0.8	10	1	1	10.7	0.5	1.3	11.8	0.3	0.8	11
20 - 1293 - WASHINGTON ST @ BARTLETT ST	0	0	9.6	0.7	0	14.3	0.3	0.2	10.2	0	0.2	10.5	0	0.1	11.6	0.3	0.3	11
21 - 1294 - WASHINGTON ST @ COREY RD	0.8	0.8	9.6	0	3	11.3	0.8	1.7	9.3	1	1.8	9.7	0.5	1.6	10.5	0.8	1.9	9.9
22 - 1295 - WASHINGTON ST @ COMMONWEALTH	0.4	2.6	7.4	0.3	4.3	7.3	0.2	2	7.5	0.2	2.5	7.3	0.5	2	9	0.5	2.8	7.7
23 - 1296 - WASHINGTON ST OPP EUSTON RD	0.6	0.6	7.4	0	0.7	6.7	0	0	7.5	0.5	0.7	7.2	0.3	1.3	8	0.3	0.5	6.9
24 - 1298 - WASHINGTON ST @ MONASTERY RD	0	0.2	7.2	0	0	6.7	0	0.5	7	0.3	0.2	7.3	0	1	7	0.9	0.8	7.7
25 - 1299 - WASHINGTON ST OPP SNOW ST	0	0.2	7	0	0	6.7	0	0	7	0	0.5	6.8	0	0.1	6.9	0	0.2	6.8
26 - 1300 - WASHINGTON ST OPP SHEPARD ST	0	1.2	5.8	0	0.7	6	0	1.7	5.3	0	0.7	6.2	0	0.9	6	0	0.8	6.1
27 - 1301 - 7 WINSHIP ST	0	1.2	4.6	0	0	6	0	0.7	4.7	0	1.2	5	0	1.8	4.3	0	2	4.1
28 - 1994 - WINSHIP ST @ UNION ST	0	1.2	3.4	0	0.3	5.7	0.2	1.3	3.5	0	1	4	0	0.6	3.8	0	0.5	3.6
29 - 1026 - CHESTNUT HILL AVE @ VERONICA	0	2.4	1	0	2	3.7	0	1.8	1.7	0	2.3	2.2	0	1.8	2.1	0	3.5	0.7
Maximum			10			14.3			11			11.5			12.8			12.5
Total	21.8	21		21.6	17.8		21.9	19.6		23.5	22.1		18.7	16.7		22.7	22.4	

Massachusetts Bay Transportation Authority
Route 65
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	ck) [Observations]																	
	14:25 (65.0)(B056) [7] {FA19}			14:45 (65.0)(B061) [10] {FA19}			15:20 (65.0)(B051) [13] {FA19}			15:40 (65.0)(B056) [2] {FA19}			16:00 (65.0)(B061) [5] {FA19}			16:17 (65.0)(B062) [3] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 899 - KENMORE STATION BUSWAY	3.3	0	3.3	3.8	0	3.8	4.3	0	4.3	10	0	10	4.2	0	4.2	6.7	0	6.7
2 - 8993 - BROOKLINE AVE OPP NEWBURY ST	0	0	3.3	0	0	3.8	0.1	0	4.4	2	0.3	11.7	0	0	4.2	0	0	6.7
3 - 1518 - BROOKLINE AVE OPP JERSEY ST	0.7	0	4	0	0.1	3.7	0.3	0.2	4.5	2	0	13.7	1	0	5.2	0	0	6.7
4 - 1519 - BROOKLINE AVE @ FULLERTON ST	1.6	0.4	5.1	2.5	0.8	5.4	2.5	0.5	6.4	5	0	8.5	1.8	0.2	6.8	3	0	9.7
5 - 1520 - BROOKLINE AVE @ PARK DR	0.3	0	5.4	1.1	0	6.5	0.7	0	7.1	1	0	9.5	0.4	0	7.2	0	0	9.7
6 - 1777 - BROOKLINE AVE @ PILGRIM RD	0.3	0	5.7	2	0.5	8	1.8	0.1	8.8	2	0	11.5	2	0.2	9	4	0.3	13.3
7 - 1778 - BROOKLINE AVE @ SHORT ST	0.3	0.9	5.1	0.8	0.6	8.2	5.1	1.2	12.7	4	0.5	15	6.4	1.2	14.2	15.3	0.7	28
8 - 1521 - BROOKLINE AVE @ LONGWOOD AVE	9.4	0.9	13.7	8	1.9	14.3	15.7	1.5	26.9	9.5	0	24.5	16	0.6	29.6	9	0.3	36.7
9 - 1523 - BROOKLINE AVE @ FRANCIS ST	2.3	0	16	3.5	0.1	17.7	9.2	0.3	35.8	5.5	0	30	11.2	0.6	40.2	6.3	0.3	42.7
10 - 1524 - BROOKLINE AVE @ ASPINWALL AVE	0.1	0	16.1	0.1	0	17.8	0.2	0	36	0	0	30	0	0	40.2	0.3	0	43
11 - 1525 - BROOKLINE AVE @ PEARL ST	0.4	0.7	15.9	0.6	0.7	17.7	0.7	0.6	36.1	3.5	1	32.5	0.6	0.8	40	0.3	0.3	43
12 - 1526 - WASHINGTON ST @ PEARL ST	1.7	0.9	16.7	1.9	0.4	19.2	3.5	1.6	38	0.5	0	33	3	0.6	42.4	3.7	0.3	46.3
13 - 1286 - WASHINGTON ST @ HARVARD ST	1.4	0.6	17.6	1.4	0.7	19.9	2.8	1.8	39	1	0.5	33.5	1.4	0.8	43	1	1	46.3
14 - 1287 - WASHINGTON ST @ SCHOOL ST	2.4	0.1	19.9	1.7	0	21.6	1.1	0.5	39.6	1	0.5	34	0.6	0.6	43	0.7	0.7	46.3
15 - 1288 - WASHINGTON ST OPP GREENOUGH S	0	0	19.9	0.3	0	21.9	0.5	0.2	39.8	0.5	0.5	34	0.6	0.2	43.4	0	0	46.3
16 - 1289 - WASHINGTON ST @ GRIGGS RD	0.4	0.1	20.1	0.1	0.4	21.6	0.2	0.5	39.5	0	0	34	0.2	0	43.6	0	0.7	45.7
17 - 1290 - WASHINGTON ST OPP GARDNER RD	0	0.3	19.9	0.1	0.4	21.3	0.1	0.3	39.3	0	0.5	33.5	0	0	43.6	0.3	1	45
18 - 1291 - WASHINGTON ST @ FAIRBANKS ST	0	1.6	18.3	0	0.6	20.7	0.3	0.7	38.9	0	0	33.5	0.4	1	43	0.3	0.3	45
19 - 1292 - WASHINGTON ST @ BEACON ST	0.1	1.3	17.1	0.8	1.9	19.6	0.9	2.4	37.5	1	4	30.5	0.4	3.2	40.2	1.3	4	42.3
20 - 1293 - WASHINGTON ST @ BARTLETT ST	0.4	0.6	17	0.2	0.6	19.2	0.4	0.8	37	1	4.5	27	0	0.4	39.8	0	0	42.3
21 - 1294 - WASHINGTON ST @ COREY RD	0.4	4	13.4	0.6	4.7	15.1	0.5	5.5	32.1	1	3	25	1	6.8	34	2.3	9	35.7
22 - 1295 - WASHINGTON ST @ COMMONWEALTH	0.6	2	12	0.1	2.4	12.8	0.2	5.1	27.2	0	3.5	21.5	0.4	5	29.4	0	2	33.7
23 - 1296 - WASHINGTON ST OPP EUSTON RD	0.7	0.6	12.1	0.1	1.4	11.5	0.8	3.1	24.9	0.7	0.7	27.3	0.4	2.6	27.2	0.7	3	31.3
24 - 1298 - WASHINGTON ST @ MONASTERY RD	0.9	0.3	12.7	0	1.1	10.4	0	1.4	23.5	0	0.5	21	0	1.6	25.6	0	1.3	30
25 - 1299 - WASHINGTON ST OPP SNOW ST	0	0.3	12.4	0	0.1	10.3	0	2.1	21.5	0	0.5	20.5	0	0.8	24.8	0	1.3	28.7
26 - 1300 - WASHINGTON ST OPP SHEPARD ST	0	1.9	10.6	0	1.6	8.7	0	2.1	19.4	0.3	1.3	25.7	0	3.2	21.6	0	3.3	25.3
27 - 1301 - 7 WINSHIP ST	0.4	3.7	7.3	0	2.6	6.1	0	2.7	16.7	1	5	21.7	0	5.6	16	0	8.3	17
28 - 1994 - WINSHIP ST @ UNION ST	0.1	1	6.4	0	1	5.1	0.2	3.2	13.7	0.5	1	12	0.6	1.8	14.8	0	1.7	15.3
29 - 1026 - CHESTNUT HILL AVE @ VERONICA	0	4.7	2.3	0	2.5	2.9	0	8.7	5	0	5.3	16	0	9.8	5	0	7.3	8
Maximum			20.1			21.9			39.8			34			43.6			46.3
Total	28.2	26.9		29.7	27.1		52.1	47.1		53	33.1		52.6	47.6		55.2	47.1	

Massachusetts Bay Transportation Authority
Route 65
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	16:35 (65.0)(B051) [7] {FA19}			16:45 (65.0)(B009) [9] {FA19}			16:55 (65.0)(B056) [4] {FA19}			17:05 (65.0)(B049) [15] {FA19}			17:20 (65.0)(B061) [5] {FA19}			17:40 (65.0)(B062) [5] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 899 - KENMORE STATION BUSWAY	4	0	4	3.7	0	3.7	1.5	0	1.5	2.5	0	2.5	3.8	0	3.8	7.8	0	7.8
2 - 8993 - BROOKLINE AVE OPP NEWBURY ST	0	0	4	0.1	0	3.8	0	0	1.5	0.1	0.1	2.9	0	0	3.8	0	0	7.8
3 - 1518 - BROOKLINE AVE OPP JERSEY ST	0.3	0.3	4	0.2	0	4	1.8	0	3.3	0.3	0	3.4	0.8	0	4.6	0.6	0	8.4
4 - 1519 - BROOKLINE AVE @ FULLERTON ST	1.4	0.4	5	3.3	0.2	7.1	3.3	0	6.5	3.9	0.3	7.6	5	0.2	9.4	6.4	1.2	13.6
5 - 1520 - BROOKLINE AVE @ PARK DR	1.3	0.1	6.1	2.2	0	9.3	3.3	0.3	9.5	3.2	0	11.9	2.8	0	12.2	3	0	16.6
6 - 1777 - BROOKLINE AVE @ PILGRIM RD	3.9	0.1	9.9	3.7	0.8	12.2	2.8	0	12.3	3.3	0.2	13.8	4.4	0	16.6	3.8	0	20.4
7 - 1778 - BROOKLINE AVE @ SHORT ST	5.9	0.3	15.4	7.1	0.9	18.4	8.5	0.3	20.5	8.5	0.4	22.8	8.8	0.4	25	9.8	0.6	29.6
8 - 1521 - BROOKLINE AVE @ LONGWOOD AVE	19.7	0.6	34.6	15.2	0.7	33	21.8	0.8	41.5	20.6	1.3	42.1	23	0.8	47.2	20.2	0.8	49
9 - 1523 - BROOKLINE AVE @ FRANCIS ST	8.4	0.3	42.7	4.7	0.3	37.3	7.5	0.3	48.8	6.7	0.2	48.6	6	0.8	52.4	4.6	0.8	52.8
10 - 1524 - BROOKLINE AVE @ ASPINWALL AVE	1.1	0.3	43.6	0	0.2	37.1	0	0	48.8	0.1	0.1	48.5	0.4	0.4	52.4	0	0.2	52.6
11 - 1525 - BROOKLINE AVE @ PEARL ST	0.4	0.4	43.6	0.4	0.3	37.2	0.5	0.5	48.8	0.9	2.7	46.7	1.4	2	51.8	1.6	1.8	52.4
12 - 1526 - WASHINGTON ST @ PEARL ST	3.4	2.1	44.9	2.8	0.9	39.1	2.3	0.8	50.3	0.9	1	46.6	1.6	0.2	53.2	2	0.2	54.2
13 - 1286 - WASHINGTON ST @ HARVARD ST	2	0.7	46.1	0.6	0.7	39	1.3	1.5	50	0.9	1	46.5	0.8	0.6	53.4	2.2	1.4	55
14 - 1287 - WASHINGTON ST @ SCHOOL ST	0.9	0.7	46.3	0.6	0.1	39.4	0.3	0	50.3	0.4	0.4	46.5	1.2	0.2	54.4	0.8	0.4	55.4
15 - 1288 - WASHINGTON ST OPP GREENOUGH S	0.3	0.1	46.4	0.2	0	39.7	0.5	0.5	50.3	0.3	0.6	46.2	0.2	1.8	52.8	0.4	0.4	55.4
16 - 1289 - WASHINGTON ST @ GRIGGS RD	0.3	0.3	46.4	0	0.6	39.1	0	0	50.3	0.1	0.5	45.8	0.4	1.2	52	0.2	0.4	55.2
17 - 1290 - WASHINGTON ST OPP GARDNER RD	0.1	0.7	45.9	0.2	0.4	38.9	0.5	0.5	50.3	0.1	0.7	45.3	0.2	1.6	50.6	0	0.8	54.4
18 - 1291 - WASHINGTON ST @ FAIRBANKS ST	0.1	0.9	45.1	0.2	1.6	37.6	0.8	1.5	49.5	0.5	1.4	44.3	0	0.6	50	1	1.8	53.6
19 - 1292 - WASHINGTON ST @ BEACON ST	0.6	1.7	44	0.9	5.1	33.3	1	3	47.5	1.3	3.9	41.7	1.2	2.6	48.6	2.2	3.6	52.2
20 - 1293 - WASHINGTON ST @ BARTLETT ST	0.3	0.4	43.9	0	0.8	32.6	0	0	47.5	0.4	0.6	41.5	0	0.2	48.4	0.8	0.8	52.2
21 - 1294 - WASHINGTON ST @ COREY RD	0.1	7.6	36.4	1	5.7	27.9	0.5	7.5	40.5	0.8	6.1	36.2	0.8	8.4	40.8	2	9	45.2
22 - 1295 - WASHINGTON ST @ COMMONWEALTH	0.7	5.9	31.3	0.2	5	23.1	0.5	6	35	0.3	4.9	31.6	0	6.4	34.4	1.2	8.6	37.8
23 - 1296 - WASHINGTON ST OPP EUSTON RD	0.1	4.3	27.1	0.2	2.4	20.9	0	2	33	0.5	3.7	28.4	0	3.4	31	0.4	2.6	35.6
24 - 1298 - WASHINGTON ST @ MONASTERY RD	0	0.9	26.3	0	1.2	19.7	0	2	31	0.1	1.9	26.6	0	1.4	29.6	0	2.8	32.8
25 - 1299 - WASHINGTON ST OPP SNOW ST	0	1.1	25.1	0	0.8	18.9	0	1.5	29.5	0	0.7	25.9	0	0	29.6	0	3	29.8
26 - 1300 - WASHINGTON ST OPP SHEPARD ST	0	2	23.1	0	2.7	16.2	0	1.3	28.3	0.1	2.1	23.9	0	3.6	26	0	3	26.8
27 - 1301 - 7 WINSHIP ST	0	6.9	16.3	0.1	9	7.3	0.3	9.3	19.3	0.1	9.1	14.9	0	10.2	15.8	0	11.6	15.2
28 - 1994 - WINSHIP ST @ UNION ST	0	2.9	13.4	0	2	5.3	0	3.8	15.5	0	3.6	11.3	0	1.6	14.2	0	5	10.2
29 - 1026 - CHESTNUT HILL AVE @ VERONICA	0	5.3	8.4	0	5.3	0	0	10	6	0	9.9	1.5	0	7	7.2	0	10.2	0
Maximum			46.4			39.7			50.3			48.6			54.4			55.4
Total	55.3	47.3		47.6	47.7		59	53.4		56.9	57.4		62.8	55.6		71	71	

Massachusetts Bay Transportation Authority
Route 65
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	18:00 (65.0)(B051) [7] {FA19}			18:25 (65.0)(B056) [5] {FA19}			18:50 (65.0)(B061) [5] {FA19}			19:35 (65.0)(B253) [62] {FA19}			20:35 (65.0)(B253) [58] {FA19}			Total		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 899 - KENMORE STATION BUSWAY	4.6	0	4.6	6	0	6	2.2	0	2.2	3	0	3	3.1	0	3.1	178.8	0	178.8
2 - 8993 - BROOKLINE AVE OPP NEWBURY ST	0	0	4.6	0	0	6	0	0	2.2	0	0	3	0.1	0	3.1	3.2	0.8	181.5
3 - 1518 - BROOKLINE AVE OPP JERSEY ST	0.9	0	5.4	0	0	6	0.2	0	2.4	0.3	0	3.2	0.2	0	3.4	15	5.6	192.9
4 - 1519 - BROOKLINE AVE @ FULLERTON ST	3	0	8.4	4.4	0.4	10	5.2	0.2	7.4	2.5	0.3	5.5	2.3	0.2	5.5	80.1	16.8	246.9
5 - 1520 - BROOKLINE AVE @ PARK DR	1.3	0.3	9.4	1	0	11	1.8	0	9.2	1.4	0.2	6.8	1.1	0	6.6	34	2.5	279
6 - 1777 - BROOKLINE AVE @ PILGRIM RD	1.1	0	10.6	1	0	12	2.2	0.2	11.2	1.7	0.1	8.3	1.1	0.1	7.6	46.2	5.6	318.4
7 - 1778 - BROOKLINE AVE @ SHORT ST	3.4	0.4	13.6	5.6	0.6	17	6.6	0.2	17.6	4.7	0.4	12.6	1.9	0.1	9.3	112.5	39.5	392.2
8 - 1521 - BROOKLINE AVE @ LONGWOOD AVE	15.9	0	29.4	15.2	1	31.2	13.8	0.4	31	13.8	0.5	25.9	8.1	0.3	17.1	285.8	51.3	627.4
9 - 1523 - BROOKLINE AVE @ FRANCIS ST	6.6	0	36	4.4	1	34.6	4.4	0.4	35	4.7	0.3	30.4	2.1	0.2	19.1	123.9	19.4	732.2
10 - 1524 - BROOKLINE AVE @ ASPINWALL AVE	0.6	0.3	36.3	0	0	34.6	0.4	0	35.4	0.1	0.3	30.1	0	0.2	18.8	5.1	2.8	734.1
11 - 1525 - BROOKLINE AVE @ PEARL ST	1	0.4	36.9	2	0.4	36.2	0.4	0.8	35	0.5	0.5	30.1	0.3	1	18.1	22.7	20.7	736.2
12 - 1526 - WASHINGTON ST @ PEARL ST	1	0.7	37.1	2.4	0.4	38.2	2.2	0.8	36.4	0.8	0.6	30.3	0.5	0.3	18.3	52.1	17.1	770.9
13 - 1286 - WASHINGTON ST @ HARVARD ST	1.7	0.6	38.3	1.2	0	39.4	1.6	2	36	1	0.3	31	0.6	0.2	18.7	42	20.3	792.4
14 - 1287 - WASHINGTON ST @ SCHOOL ST	1.4	0.4	39.3	2.6	0.8	41.2	1.6	1.2	36.4	0.8	0.4	31.5	0.9	0.3	19.3	24.9	11.7	805.4
15 - 1288 - WASHINGTON ST OPP GREENOUGH S	0	0.1	39.1	0	0.6	40.6	0	0.2	36.2	0.1	0.5	31	0.1	0.3	19	6.2	7.7	803.6
16 - 1289 - WASHINGTON ST @ GRIGGS RD	0.4	0.7	38.9	0	0.4	40.2	0	0.2	36	0	0.3	30.8	0	0.2	18.9	3.7	8.4	799.3
17 - 1290 - WASHINGTON ST OPP GARDNER RD	0.4	0.9	38.4	0	0.8	39.4	0.4	0.6	35.8	0.1	0.9	30	0.2	0.4	18.7	4	13.1	790.2
18 - 1291 - WASHINGTON ST @ FAIRBANKS ST	0	1.1	37.3	0.2	1.8	37.8	0	1.4	34.4	0.1	0.8	29.2	0	0.6	18.1	5.2	19.5	775.9
19 - 1292 - WASHINGTON ST @ BEACON ST	1	3.3	35	0.6	3	35.4	1.6	4.2	31.8	0.6	2.3	27.6	0.8	1.7	17.3	26.2	64.9	737.5
20 - 1293 - WASHINGTON ST @ BARTLETT ST	0.1	0.7	34.4	0	0.8	34.6	0.2	0.4	31.6	0	0.1	27.5	0.1	0.2	17.2	6.1	13.8	729.8
21 - 1294 - WASHINGTON ST @ COREY RD	0.7	10.6	24.6	1	7	28.6	0.8	6.8	25.6	0.4	6.5	21.4	0.2	3.5	13.9	25	134.8	620.5
22 - 1295 - WASHINGTON ST @ COMMONWEALTH	0.1	4.9	19.9	0.6	7.4	21.8	0.2	7.6	18.2	0.4	4.8	17	0.2	3.1	10.9	14	109	525.7
23 - 1296 - WASHINGTON ST OPP EUSTON RD	0	3.7	16.1	0.2	4.6	17.4	0	5.6	12.6	0.3	3.4	13.9	0	2.3	8.6	14.7	57.2	488.4
24 - 1298 - WASHINGTON ST @ MONASTERY RD	0	1	15.1	0.2	2	15.6	0.2	1.4	11.4	0	1.2	12.8	0	0.9	7.7	6.8	27.3	462.7
25 - 1299 - WASHINGTON ST OPP SNOW ST	0	2	13.1	0	1	14.6	0	0.4	11	0	0.3	12.5	0	0.4	7.3	0	18.2	443.9
26 - 1300 - WASHINGTON ST OPP SHEPARD ST	0.3	2.4	11	0	0.6	14	0	1.6	9.4	0	1.4	11.1	0	0.9	6.4	0.8	53.9	397.7
27 - 1301 - 7 WINSHIP ST	0	3.9	7.1	0	4.4	9.6	0	6	3.4	0	3.7	7.4	0	1.3	5.1	1.9	125.1	274.7
28 - 1994 - WINSHIP ST @ UNION ST	0	1.3	5.9	0	2.6	7	0	0.4	3	0	1.7	5.7	0	1.1	4	1.8	45	222.8
29 - 1026 - CHESTNUT HILL AVE @ VERONICA	0	5.9	0	0	7	0	0	3	0	0	4.4	2	0	4	0	0	155.4	86.1
Maximum			39.3			41.2			36.4			31.5			19.3			805.4
Total	45.5	45.6		48.6	48.6		46	46		37.3	36.2		23.9	23.8		1142.7	1067.4	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name																					
	06:19 (66.4)(B120) [71] {FA19}			06:20 (66.6)(B338) [63] {FA19}			06:30 (66.2)(B082) [71] {FA19}			06:30 (66.6)(B339) [38] {FA19}			06:40 (66.6)(B340) [54] {FA19}			06:48 (66.6)(B341) [34] {FA19}			06:56 (66.6)(B319) [41] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
13 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	.	.	.	2.8	0	2.8	.	.	.	2.5	0	2.5	3.4	0	3.5	2.1	0	2.1	1.9	0	2
14 - 32549 - ELIOT ST @ BENNETT ST	.	.	.	1.5	0	4.3	.	.	.	2.6	0	5	1.9	0	5.5	2.6	0	4.8	2.9	0	4.9
15 - 2550 - JFK ST @ ELIOT ST	.	.	.	0.3	0	4.6	.	.	.	1	0	6	0.9	0	6.5	0.9	0	5.6	0.7	0	5.6
16 - 2551 - N HARVARD ST @ GATE 2 HARVARD	.	.	.	0.2	0.1	4.7	.	.	.	0.6	0.3	6.2	0.2	0.1	6.6	0	0.2	5.4	0.2	0.3	5.5
17 - 2553 - N HARVARD ST @ WESTERN AVE	.	.	.	1.4	0.2	5.9	.	.	.	1.5	0.3	7.4	0.8	0.3	7.1	1	0.5	5.9	1	0.5	6
18 - 2554 - N HARVARD ST @ FRANKLIN ST	.	.	.	3.2	0	9.1	.	.	.	5.2	0.1	12.5	4.1	0.2	10.9	7.4	2.9	13.2	4.2	0.3	9.9
19 - 2555 - N HARVARD ST @ COOLIDGE RD	.	.	.	0.9	0.1	9.9	.	.	.	2.6	0	15.1	0.8	0.1	11.7	1.9	0.1	15	4.3	0	14.1
20 - 2556 - N HARVARD ST @ HOOKER ST	.	.	.	2.2	0	12.1	.	.	.	1.5	0.6	16.1	0.9	0.2	12.4	2.2	0.3	16.9	3.9	0.1	17.9
21 - 1191 - CAMBRIDGE ST @ LINCOLN ST	.	.	.	1.1	0	13.2	.	.	.	3	0	19	2.2	0.1	14.6	3.3	0	20.2	2.9	0	20.8
22 - 1193 - CAMBRIDGE ST @ FRANKLIN ST	.	.	.	0.5	0.3	13.4	.	.	.	1.1	0.6	19.6	2.3	0.3	16.6	2.4	0.9	21.7	1.7	0.4	22
23 - 1195 - CAMBRIDGE ST @ EMERY RD	.	.	.	0.4	0.5	13.3	.	.	.	2.3	1.5	20.5	1.1	1.6	16.1	3.7	1.9	23.5	1.9	1.2	22.8
24 - 926 - BRIGHTON AVE @ CAMBRIDGE ST	2	0.3	35.8	4.6	0.9	17	3.7	0.2	10.8	8.1	1.8	26.8	5	1.7	19.5	6.3	3.7	26.1	4.2	8.6	18.4
25 - 927 - BRIGHTON AVE @ ALLSTON ST	1	0.4	36.5	0.9	0.2	17.7	1.8	0.1	12.5	1.2	0.4	27.6	1.2	0.1	20.6	1.3	0	27.4	1.9	0.4	19.8
26 - 10928 - HARVARD AVE @ BRIGHTON AVE	1.6	0.4	37.7	0.9	0.2	18.4	2.2	0.5	14.2	1.9	0.1	29	4	0.1	24.5	4.1	0.2	31.3	4	0.1	23.7
27 - 1302 - HARVARD AVE @ COMMONWEALTH AV	5.1	0.7	42.1	5.3	0.6	23.1	8	0.6	21.6	3.8	0.8	32	8.9	1.2	32.1	9.8	1.5	39.8	12	1.1	34.5
28 - 11302 - HARVARD ST @ VERNDAL ST	1.5	0.1	43.5	1.2	0.2	24.2	1.9	0.1	23.5	1.9	0.2	33.8	3.1	0	35.1	3.4	0	42.8	4	0	38.5
29 - 1304 - HARVARD ST @ COOLIDGE ST	0.4	0.1	43.8	0.2	0.1	24.3	0.6	0.2	23.9	0.6	0.2	34.2	1.1	0.1	36.1	1.1	0.2	43.6	1.4	0.3	39.6
30 - 1306 - HARVARD ST @ SHAILER ST	0.3	0.1	44	0.1	0.5	24	0.2	0.3	23.7	0.2	0.2	34.2	0.6	0.5	36.2	0.6	0.9	43.4	0.7	0.3	40
31 - 1308 - HARVARD ST @ BEACON ST	1.4	0.8	44.6	0.6	0.8	23.7	0.6	0.5	23.8	0.6	1.6	33.2	1.8	1.2	36.8	2.9	2.1	44.1	3	2.1	40.9
32 - 1309 - HARVARD ST @ MARION ST	0	0	44.6	0.1	0	23.8	0	0	23.9	0.1	0	33.3	0.5	0.1	37.3	0.9	0.4	44.7	0.7	0.3	41.3
33 - 1310 - HARVARD ST @ HARRIS ST	0.2	0.2	44.7	0.2	0.1	23.9	0.1	0.4	23.6	0.2	0.4	33.1	0.5	0.4	37.3	0.3	0.2	44.8	0.3	0.1	41.5
34 - 1311 - HARVARD ST @ SCHOOL ST	0.3	0.1	45	0.1	0.3	23.6	0.1	0.1	23.6	0.1	0.1	33.1	0.4	0.2	37.5	0.5	0.6	44.7	0.7	1.2	40.9
35 - 1313 - HARVARD ST @ WASHINGTON ST	0.6	0.6	45	0.6	0.8	23.5	0.4	1.3	22.7	0.3	2.2	31.2	0.6	3.3	34.8	0.8	2.9	42.6	0.7	3.7	37.9
36 - 1555 - WASHINGTON ST @ WALNUT	0.4	0.2	45.2	0.7	0.2	23.9	0.8	0.1	23.4	0.9	1.6	30.5	0.5	0.5	34.8	0.7	0.4	43	0.8	0.5	38.2
37 - 1314 - HUNTINGTON AVE @ S HUNTINGTON	0.3	0.9	44.6	0.3	2	22.3	0.5	1.7	22.2	0.4	1.4	29.6	1.4	4	32.2	1	6	38	1	4.1	35.1
38 - 1315 - HUNTINGTON AVE @ PARKER HILL	2.4	0.2	46.8	4.1	0.3	26.1	4.3	0.4	26.2	3.1	0.2	32.5	4.2	1	35.3	5.2	1.2	41.9	5.1	1.7	38.6
39 - 1317 - HUNTINGTON AVE OPP FENWOOD RD	1.1	2.4	45.5	1.3	6	21.4	2.4	4.6	24	2.5	10	24.9	3.3	12.6	26	2.9	13.5	31.3	3	15.8	25.8
40 - 1319 - TREMONT ST OPP WIGGLESWORTH S	0.7	0.5	45.6	1.2	0.3	22.2	1.3	0.7	24.6	1.4	0.7	25.7	3.4	0.8	28.6	2.1	1.2	32.2	1.9	1.4	26.2
41 - 1320 - TREMONT ST @ SAINT ALPHONSUS	0.3	0.3	45.6	0.2	0.3	22.1	0.6	1	24.1	0.6	1.3	25.1	0.9	1.4	28.1	0.4	1.4	31.3	0.3	0.9	25.7
42 - 1322 - TREMONT ST @ SEWALL ST	0	0.2	45.5	0.1	0.6	21.7	0	0.4	23.8	0.1	0.1	25	0.4	0.5	28	0.4	0.7	31	0.3	1.2	24.8
43 - 1323 - TREMONT ST @ COLUMBUS AVE	6.1	1.9	49.7	10.4	4.4	27.7	13	3	33.7	10.9	3.5	32.4	8.1	6.1	30	5.2	8.1	28.1	3.6	7	21.4
44 - 11257 - MALCOLM X BLVD @ KING ST	0.6	0.8	49.5	1.6	0.7	28.6	2.3	0.7	35.4	1.6	0.6	33.3	2	1.6	30.4	1.2	1.9	27.4	0.9	1.5	20.8
45 - 1259 - MALCOLM X BLVD OPP MADISON PA	0	0.1	49.5	0.1	0.5	28.2	0.1	0.7	34.7	0.1	1.3	32.1	0.2	3.5	27	0.1	5.1	22.3	0	3.8	17.1
46 - 11323 - MALCOLM X BLVD OPP O'BRYANT H	0.8	20.9	29.4	0.1	20.1	8.3	0.1	26.3	8.5	0.2	24.9	7.4	0	12.9	14.1	0	5.4	16.9	0	3.7	13.4
47 - 11259 - MALCOLM X BLVD @ SHAWMUT AVE	0	0.4	29.1	0	0.6	7.7	0	1.2	7.3	0	0.8	6.6	0	1.4	12.8	0.1	1.1	15.9	0	1.7	11.7
48 - 64000 - DUDLEY STATION	0.3	2.6	26.8	0	7.7	0	0	7	0.2	0	6.6	0	0	12.7	0.1	0	13.1	2.8	0	11.7	0
Maximum			49.7			28.6			35.4			34.2			37.5			44.8			41.5
Total	64.1	64.9		49.4	49.6		53.1	53.2		64.7	64.4		70.7	70.8		78.8	78.6		76.1	76	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name																					
	07:04 (66.6)(B320) [12] {FA19}			07:13 (66.6)(B328) [61] {FA19}			07:22 (66.6)(B329) [35] {FA19}			07:31 (66.6)(B331) [41] {FA19}			07:40 (66.6)(B333) [33] {FA19}			07:48 (66.6)(B334) [36] {FA19}			07:57 (66.6)(B335) [31] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
13 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	2.7	0	2.7	2.9	0	3	4.1	0	4.1	4.9	0	4.9	6.6	0	6.9	6	0	6	5.8	0	7.7
14 - 32549 - ELIOT ST @ BENNETT ST	3.9	0	6.6	4	0	7	3.8	0	7.9	5.3	0	10.1	6.1	0	13	7.4	0	13.4	7.2	0.1	15.4
15 - 2550 - JFK ST @ ELIOT ST	0.6	0	6.7	1	0	8.6	1	0	8.9	0.5	0.1	10.6	0.6	0	13.5	1	0	14.4	1.9	0.3	17.3
16 - 2551 - N HARVARD ST @ GATE 2 HARVARD	0.2	0.5	7	0.2	0.4	8.5	0.3	0.4	8.7	0.2	0.6	10.2	0.2	0.8	13	0	0.6	13.8	0.1	0.7	14
17 - 2553 - N HARVARD ST @ WESTERN AVE	2.6	1.1	8.5	0.7	0.6	8.6	0.7	0.8	8.7	0.9	0.7	10.3	0.9	1.7	12.2	0.9	1.9	12.8	1.9	1.9	14.2
18 - 2554 - N HARVARD ST @ FRANKLIN ST	4.1	0.1	12.5	4	0.2	12.4	2.5	0.1	11.1	2.3	0.3	12.4	3	0.4	14.8	3.4	0.3	15.9	5.2	0.4	19
19 - 2555 - N HARVARD ST @ COOLIDGE RD	3.3	0.1	15.7	1.3	0.1	13.6	0.7	0.1	11.7	0.9	0.4	12.9	1.7	0.2	16.3	1.6	0.3	17.2	2.1	0.3	20.8
20 - 2556 - N HARVARD ST @ HOOKER ST	2.3	0	18	2	0.1	15.6	1.5	0.1	13.1	1.8	0.4	14.3	2.6	0.3	18.5	3.6	0.3	20.4	3.3	0.1	24
21 - 1191 - CAMBRIDGE ST @ LINCOLN ST	3.3	0	19.8	3.2	0	18.8	1.9	0.1	14.9	2.1	0.1	16.4	1.6	0.1	20.1	1.6	0	22	2.2	0.1	26
22 - 1193 - CAMBRIDGE ST @ FRANKLIN ST	1	0.9	19.8	1.9	1.1	19.5	2.1	1.1	15.8	0.8	0.6	16.5	1	0.6	20.5	0.8	0.6	22.2	1.5	1.6	25.9
23 - 1195 - CAMBRIDGE ST @ EMERY RD	1.5	1.3	20	2.2	1.5	20.4	2	1.3	16.5	2.1	1.6	17	1.7	2.1	20.1	1.5	2	21.7	1.3	2	25.1
24 - 926 - BRIGHTON AVE @ CAMBRIDGE ST	3.3	5.7	17.7	4.6	3.7	21.3	5.5	1.8	20.3	7.8	1.8	22.9	5.1	1.9	23.3	5.5	2.2	25	5.9	1.7	29.3
25 - 927 - BRIGHTON AVE @ ALLSTON ST	1.3	0.1	18.9	2.1	0.3	23.1	1.8	0.1	22	2.6	0.4	25.1	2.7	0.8	25.2	2.6	0.4	27.2	3.2	0.5	32
26 - 10928 - HARVARD AVE @ BRIGHTON AVE	3.2	1	21.1	4.4	0.6	26.9	4.2	0.5	25.7	4.7	0.8	29	6.3	1.4	30.1	5.2	1	31.4	6.5	0.5	38
27 - 1302 - HARVARD AVE @ COMMONWEALTH AV	11.4	1.8	30.8	10.7	2.2	35.1	7.8	1.6	32	9.5	1.7	36.9	12.1	2.8	39.4	9.8	2.5	38.7	10.2	2.3	45.9
28 - 11302 - HARVARD ST @ VERNDALE ST	2.3	0.2	32.9	3.7	0.2	38.6	2.5	0.1	34.3	3.8	0.1	40.5	3.1	0.1	42.4	4.9	0.1	43.5	3	0.4	48.5
29 - 1304 - HARVARD ST @ COOLIDGE ST	1.8	0.1	34.7	2.2	0.3	40.5	2.7	0.1	36.9	1.7	0.2	42	2.2	0.4	44.2	1.6	0.5	44.7	2.5	0.6	50.3
30 - 1306 - HARVARD ST @ SHAILER ST	0.3	0	35	1.1	0.5	41.1	1.1	0.8	37.3	1.3	0.7	42.6	1	0.4	44.8	0.9	0.5	45	0.5	0.4	50.4
31 - 1308 - HARVARD ST @ BEACON ST	1.6	2.3	34.3	3.8	3.1	41.9	2.7	3.4	36.5	3.5	3.7	42.4	3.8	5.1	43.5	3.9	3.4	45.6	3.4	3.2	50.7
32 - 1309 - HARVARD ST @ MARION ST	0.6	0.2	34.8	1.1	0.3	42.7	0.7	0.2	37.1	1	0.2	43.1	0.9	0.1	44.3	0.8	0.2	46.2	0.9	0.4	51.2
33 - 1310 - HARVARD ST @ HARRIS ST	0.3	0.1	34.9	0.4	0.3	42.8	0.3	0.2	37.1	0.3	0.4	43.1	0.5	0.5	44.2	0.5	0.5	46.2	0.8	0.7	51.3
34 - 1311 - HARVARD ST @ SCHOOL ST	1.2	0.9	35.2	2.4	2	43.1	1.2	1.9	36.4	1.9	2.1	42.9	1.7	1.3	44.6	1	0.9	46.3	1.7	1.4	51.7
35 - 1313 - HARVARD ST @ WASHINGTON ST	1.4	4	32.6	1.5	3	41.6	0.9	3.8	33.5	2.2	5.7	39.4	1.8	5	41.5	1.7	4.7	43.3	2	3.7	50
36 - 1555 - WASHINGTON ST @ WALNUT	0.5	0.5	32.6	1.2	0.7	42.1	0.6	0.9	33.2	0.7	1	39.1	0.9	0.8	41.6	1.6	0.7	44.1	1.1	1	50
37 - 1314 - HUNTINGTON AVE @ S HUNTINGTON	0.8	3.6	29.8	0.9	3	39.9	1	1.7	32.5	1.1	2	38.2	0.7	2.2	40	0.9	3.5	41.6	1.8	3.3	48.5
38 - 1315 - HUNTINGTON AVE @ PARKER HILL	3.8	0.9	32.8	4.3	1.8	42.4	3.4	1.1	34.8	3.3	0.7	40.8	1.8	0.7	41.2	2.6	0.8	43.4	2.8	1.2	50.1
39 - 1317 - HUNTINGTON AVE OPP FENWOOD RD	1.4	15.3	18.8	2.1	14.1	30.4	2.4	10.4	26.8	2.7	15	28.4	2.9	14	30.2	2.5	16.8	29	2.8	19.6	33.3
40 - 1319 - TREMONT ST OPP WIGGLESWORTH S	2.1	1.1	19.8	1.4	1.1	30.8	2.6	0.9	28.5	1.4	1.5	28.4	1.6	1.2	30.6	1.8	2.5	28.3	1.6	1.3	33.6
41 - 1320 - TREMONT ST @ SAINT ALPHONSUS	0.3	1	19.1	0.5	1.7	29.7	0.5	1.1	28	1.2	1.1	28.5	0.6	1.4	29.8	0.3	1.7	26.9	0.4	2.6	31.4
42 - 1322 - TREMONT ST @ SEWALL ST	0.2	1.7	17.6	0.2	3	26.9	0.5	3.2	25.2	0.4	3.2	25.6	0.1	2.9	27	0.3	2.8	24.4	0.3	2	29.7
43 - 1323 - TREMONT ST @ COLUMBUS AVE	2	6	13.6	1.5	10.1	18.3	2.3	8.4	19.1	2	8.2	19.4	1.9	10.3	18.6	1.8	9.6	16.6	1.8	10.5	21
44 - 11257 - MALCOLM X BLVD @ KING ST	1	2.5	12.1	0.3	2.1	16.5	0.6	1.7	18	0.5	1	18.9	0.2	1	17.8	0.6	1	16.3	1.1	1	21.1
45 - 1259 - MALCOLM X BLVD OPP MADISON PA	0	1.8	10.3	0	1.3	15.2	0.1	0.5	17.5	0	0.8	18	0	0.5	17.3	0	0.5	15.8	0	0.7	21.6
46 - 11323 - MALCOLM X BLVD OPP O'BRYANT H	0	1.3	9	0	2	13.2	0	1.2	16.4	0	0.7	17.4	0.1	1.2	16.2	0	1.1	14.6	0.1	0.7	19.7
47 - 11259 - MALCOLM X BLVD @ SHAWMUT AVE	0	1.5	7.5	0.1	1.6	11.6	0.1	1.3	15.1	0	1.8	15.6	0	1.5	14.7	0.1	2.1	12.6	0	3.4	16.4
48 - 64000 - DUDLEY STATION	0	7.5	0	0	11.5	0.1	0	15	0.1	0	15.6	0	0	14.7	0	0	12.6	0	0	15.8	2
Maximum			35.2			43.1			37.3			43.1			44.8			46.3			51.7
Total	66.3	65.1		73.9	74.5		66.1	65.9		75.4	75.2		78	78.4		78.7	78.6		86.9	86.4	

Seq - StopID - Stop Name																					
	08:07 (66.6)(B337) [46] {FA19}			08:16 (66.6)(B338) [29] {FA19}			08:25 (66.6)(B339) [44] {FA19}			08:34 (66.6)(B340) [34] {FA19}			08:43 (66.6)(B326) [33] {FA19}			08:52 (66.6)(B341) [32] {FA19}			09:00 (66.6)(B319) [40] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
13 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	4.2	0	4.2	4.8	0	4.8	4.6	0	4.6	4.4	0	4.4	2.8	0	2.9	3.2	0	3.2	4	0	4
14 - 32549 - ELIOT ST @ BENNETT ST	5.1	0	9.3	5.9	0.1	10.6	5.3	0	9.9	4.8	0.5	9.2	4.5	0	7.4	2.8	0.1	5.9	3.9	0	7.7
15 - 2550 - JFK ST @ ELIOT ST	1.3	0	10.6	1.6	0	12.1	1.6	0	11.5	1.9	0.1	11.2	1.1	0	8.5	1.5	0.1	7.3	1.3	0	9.2
16 - 2551 - N HARVARD ST @ GATE 2 HARVARD	0.1	0.5	10.3	0.2	0.4	12	0.2	0.5	11.1	0.1	0.9	10.4	0.1	0.8	7.8	0	1	6.4	0.1	0.7	8.5
17 - 2553 - N HARVARD ST @ WESTERN AVE	1.1	1.3	10.1	1	1.7	11.6	1.4	1.6	11	2.2	1.3	11.3	1	1.3	7.5	0.8	1	6.2	1	1.3	8.2
18 - 2554 - N HARVARD ST @ FRANKLIN ST	3.2	0.5	12.8	3	0.4	14.1	2.9	0.5	13.4	2.8	0.5	13.6	1.7	0.2	9	1.5	0.3	7.3	1.4	0.3	9.4
19 - 2555 - N HARVARD ST @ COOLIDGE RD	2.1	0.2	14.7	2.1	0.2	16	1.4	0.2	14.6	1.6	0.1	15.1	1.2	0	10.2	0.9	0	8.3	1.3	0.1	10.6
20 - 2556 - N HARVARD ST @ HOOKER ST	1.7	0	16.4	1.2	0	17.3	0.9	0.2	15.3	1.2	0	16.3	0.6	0.1	10.6	1	0.2	9	0.7	0.2	11.1
21 - 1191 - CAMBRIDGE ST @ LINCOLN ST	1	0.1	17.3	1.6	0.1	18.8	1.3	0	16.6	1.2	0.1	17.3	0.7	0	11.3	0.7	0.2	9.5	0.8	0.1	11.7
22 - 1193 - CAMBRIDGE ST @ FRANKLIN ST	0.7	1	17	0.9	1.2	18.5	0.6	1.5	15.7	0.4	1.4	16.4	0.2	0.8	10.7	0.9	0.5	9.9	0.5	1	11.2
23 - 1195 - CAMBRIDGE ST @ EMERY RD	1.6	1	18	1.5	1.8	18.2	1.2	1.5	15.4	1.6	1.4	16.6	1	1.2	10.9	0.4	1.1	9.3	0.7	1.9	10.1
24 - 926 - BRIGHTON AVE @ CAMBRIDGE ST	4	1.7	20.4	5.8	1.9	22.1	3	1.3	17	4.5	0.8	20.3	2.9	0.5	13.3	2.9	1	11.2	3.3	0.9	12.5
25 - 927 - BRIGHTON AVE @ ALLSTON ST	2.4	0.2	22.6	3.8	0.6	25.3	3	0.6	19.3	2	0.9	21.5	1.9	0.7	14.6	2.2	0.3	13	1.6	0.6	13.5
26 - 10928 - HARVARD AVE @ BRIGHTON AVE	3.6	0.6	25.1	5.4	0.9	29.9	3.8	0.9	22.3	2.3	0.8	23	2.5	0.2	16.5	3.3	0.2	16.1	3.5	0.5	16.5
27 - 1302 - HARVARD AVE @ COMMONWEALTH AV	8.4	1.5	31.9	9.3	2.5	36.7	8.5	2	28.7	6.8	2.1	27.7	5.8	1.5	20.8	6.8	1.3	21.6	7.2	1.4	22.3
28 - 11302 - HARVARD ST @ VERNDAL ST	3.2	0.2	35.3	3	0.1	39.6	4	0.1	32.6	2.8	0.2	30.3	1.8	0.2	22.3	2.9	0.1	24.3	2.1	0.2	24.2
29 - 1304 - HARVARD ST @ COOLIDGE ST	1.5	0.4	36.4	1.9	0.9	40.5	1	0.5	33.2	0.7	0.4	30.6	1.3	0.3	23.4	1.3	0.3	25.4	1.2	0.2	25.2
30 - 1306 - HARVARD ST @ SHAILER ST	0.6	0.3	36.7	0.5	0.3	40.7	0.8	0.3	33.6	0.6	0.2	31.1	0.4	0.2	23.6	0.7	0.1	26	0.8	0.4	25.6
31 - 1308 - HARVARD ST @ BEACON ST	3.3	3.5	36.6	2.5	3.1	40	3.7	2.8	34.4	3	3.6	30.4	2.7	2.4	23.9	2.6	3.1	25.4	3.4	3.5	25.5
32 - 1309 - HARVARD ST @ MARION ST	0.8	0.3	37	1.1	0.1	41.1	0.9	0.3	35	0.8	0.6	30.6	0.9	0.3	24.6	0.9	0.3	26.1	0.8	0.2	26.1
33 - 1310 - HARVARD ST @ HARRIS ST	0.7	0.5	37.2	0.7	0.5	41.3	0.9	0.4	35.4	0.4	0.4	30.7	0.5	0.6	24.5	0.4	0.2	26.3	0.8	0.3	26.6
34 - 1311 - HARVARD ST @ SCHOOL ST	0.9	1	37.2	1.2	1.7	40.9	1.1	1.5	34.9	0.6	0.9	30.5	0.8	0.8	24.4	0.6	1.1	25.8	1	0.8	26.7
35 - 1313 - HARVARD ST @ WASHINGTON ST	1.4	2.5	36.1	1.3	2.5	39.7	1.2	2.8	33.3	0.6	2.3	28.9	0.8	1.9	23.3	1.3	2.4	24.8	0.8	2.2	25.3
36 - 1555 - WASHINGTON ST @ WALNUT	0.8	0.7	36.3	0.4	0.9	39.2	0.5	0.5	33.3	0.4	0.6	28.7	0.8	0.4	23.8	1	0.4	25.3	0.5	0.5	25.3
37 - 1314 - HUNTINGTON AVE @ S HUNTINGTON	1	3.6	33.7	1.1	3.4	36.9	0.4	2.9	30.8	0.6	2.5	26.8	0.3	1.4	22.8	0.9	1.9	24.4	0.9	2.3	23.8
38 - 1315 - HUNTINGTON AVE @ PARKER HILL	2	1.3	34.4	1.5	1.2	37.2	1.8	1	31.6	1.7	0.7	27.8	1.6	0.7	23.6	2.3	0.8	25.9	1.8	0.6	25
39 - 1317 - HUNTINGTON AVE OPP FENWOOD RD	1.6	14	22.1	1.5	16.3	22.4	1.2	14.8	18.1	1.7	12.9	16.6	0.8	11.2	13.3	1.1	12	15	0.8	12.4	13.4
40 - 1319 - TREMONT ST OPP WIGGLESWORTH S	1.2	1.6	21.7	1.3	1.4	22.3	1.8	1.3	18.5	1.4	1.5	16.5	1.2	1	13.4	1.7	1.6	15.1	2.1	1.7	13.7
41 - 1320 - TREMONT ST @ SAINT ALPHONSUS	0.4	1.8	20.3	0.5	1.3	21.4	0.4	1.5	17.4	0.3	1	15.9	0.3	1.1	12.6	0.4	0.6	15	0.4	0.9	13.2
42 - 1322 - TREMONT ST @ SEWALL ST	0.2	1.3	19.2	0.2	0.6	21	0.3	0.5	17.2	0.2	0.6	15.5	0.1	0.4	12.3	0	1	14	0.1	1	12.3
43 - 1323 - TREMONT ST @ COLUMBUS AVE	1.7	7.6	13.3	1.8	8.1	14.7	1.3	6	12.5	1.5	6.7	10.4	1.6	4.8	9.1	1.7	5.2	10.5	1.2	4.5	9
44 - 11257 - MALCOLM X BLVD @ KING ST	0.3	0.8	12.9	0.6	1.5	13.8	0.8	0.9	12.3	0.3	1	9.7	0.7	0.8	8.9	0.5	1.2	9.8	0.3	0.9	8.5
45 - 1259 - MALCOLM X BLVD OPP MADISON PA	0	0.8	12.1	0	0.3	13.5	0	0.2	12.2	0	0.5	9.2	0	0.2	8.7	0	0.1	9.8	0	0.2	8.3
46 - 11323 - MALCOLM X BLVD OPP O'BRYANT H	0	0.5	11.6	0	0.6	12.9	0	0.5	11.7	0	0.3	8.9	0	0.4	8.4	0	0.2	9.6	0.1	0.1	8.2
47 - 11259 - MALCOLM X BLVD @ SHAWMUT AVE	0	1.8	9.8	0	2.2	10.7	0	2	9.8	0.1	2.1	6.9	0	1.4	7	0	1.7	8	0	1.2	7
48 - 64000 - DUDLEY STATION	0	9.7	0.1	0	10.4	0.2	0	9.6	0.1	0	5.9	1	0	7	0	0	7.9	0	0	7	0
Maximum			37.2			41.3			35.4			31.1			24.6			26.3			26.7
Total	62.1	62.8		69.2	69.2		61.8	61.2		55.5	55.8		44.6	44.8		49.2	49.5		50.4	50.1	

Seq - StopID - Stop Name																					
	09:08 (66.6)(B320) [24] {FA19}			09:17 (66.6)(B321) [40] {FA19}			09:25 (66.6)(B328) [43] {FA19}			09:33 (66.6)(B329) [39] {FA19}			09:43 (66.6)(B333) [35] {FA19}			09:55 (66.6)(B334) [29] {FA19}			14:08 (66.6)(B334) [43] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
13 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	4.3	0	4.3	4.3	0	4.3	3.7	0	3.8	4.9	0	5	4.3	0	4.3	4.1	0	4.1	6.5	0	6.6
14 - 32549 - ELIOT ST @ BENNETT ST	4.9	0	9.2	5.6	0	9.9	5.2	0	8.9	4.6	0	9.5	3.4	0	7.7	5.2	0	9.2	6.2	0	12.6
15 - 2550 - JFK ST @ ELIOT ST	1	0	10.2	1.3	0	11.1	1.5	0	10.3	1	0	10.5	0.8	0	8.5	0.9	0	10.1	3.4	0.1	16.1
16 - 2551 - N HARVARD ST @ GATE 2 HARVARD	0.2	0.6	9.8	0.2	0.8	10.5	0.1	0.3	10.2	0.3	0.7	10.2	0.1	0.6	8	0.2	0.4	9.9	0.6	0.2	16.5
17 - 2553 - N HARVARD ST @ WESTERN AVE	1.1	2	8.9	1.6	1.5	10.6	0.5	1.5	9.2	1.2	1.5	9.8	1.5	1.4	8.1	1.6	1	10.5	2	1.6	16.9
18 - 2554 - N HARVARD ST @ FRANKLIN ST	2.3	0.2	11	2	0.3	12.3	2.1	0.3	11	1.9	0.3	11.4	2.2	0.1	10.1	1.9	0.2	12.2	1	0.8	17.2
19 - 2555 - N HARVARD ST @ COOLIDGE RD	1.9	0.1	12.8	1.5	0	13.8	1.4	0.2	12.2	0.6	0.1	11.9	0.7	0.1	10.7	0.9	0.1	12.9	0.3	0.5	16.9
20 - 2556 - N HARVARD ST @ HOOKER ST	0.9	0.6	13.1	1	0.3	14.3	0.5	0.3	12.4	0.9	0.4	12.4	0.7	0.2	11.2	0.8	0.4	13.3	0.6	0.9	16.6
21 - 1191 - CAMBRIDGE ST @ LINCOLN ST	1.3	0	14.3	1.9	0	16.2	1.1	0	13.5	1.2	0.1	13.5	1.1	0.1	12.2	1.2	0	14.5	1	0.3	17.3
22 - 1193 - CAMBRIDGE ST @ FRANKLIN ST	0.3	1.3	13.3	0.8	1.2	15.9	0.7	1.1	13.1	0.5	1.2	12.8	0.4	1.1	11.5	0.3	1.8	13	0.6	1.6	16.2
23 - 1195 - CAMBRIDGE ST @ EMERY RD	1.5	1.1	13.7	1.5	0.9	16.5	1.2	1.2	13.2	0.8	0.8	12.8	0.9	0.9	11.5	0.9	1.2	12.8	1.3	1	16.5
24 - 926 - BRIGHTON AVE @ CAMBRIDGE ST	4.6	1.1	17.2	3.9	1	19.4	3.7	0.9	15.9	2.1	1	13.9	3.5	0.9	14	5.1	1.3	16.5	6.3	1.4	21.3
25 - 927 - BRIGHTON AVE @ ALLSTON ST	1.5	0.4	18.4	1.5	0.6	20.3	1.1	0.7	16.4	1.1	0.6	14.4	1.2	0.7	14.6	1.9	0.7	17.7	2.8	1.3	22.9
26 - 10928 - HARVARD AVE @ BRIGHTON AVE	2.2	0.6	19.9	3.3	0.7	22.9	2.9	0.7	18.7	2.4	0.4	16.4	2.1	0.8	15.9	3.4	0.9	20.1	3.8	1.5	25.2
27 - 1302 - HARVARD AVE @ COMMONWEALTH AV	7.8	1.8	25.8	7.7	2	28.6	5.8	1.7	22.8	6.5	1.3	21.6	5.5	1.2	20.2	7.5	1.3	26.3	5.3	2.7	27.9
28 - 11302 - HARVARD ST @ VERNDALE ST	1.9	0.3	27.4	2.4	0.3	30.7	1.7	0.3	24.1	1.8	0.2	23.2	1.3	0.3	21.2	2	0.5	27.8	1.8	0.7	29
29 - 1304 - HARVARD ST @ COOLIDGE ST	1.4	0.2	28.5	1.1	0.7	31.1	0.9	0.7	24.3	0.7	0.6	23.4	0.6	0.6	21.1	0.7	1.1	27.4	0.8	0.5	29.4
30 - 1306 - HARVARD ST @ SHAILER ST	0.4	0.3	28.6	0.5	0.5	31	0.5	0.6	24.2	0.5	0.5	23.4	0.3	0.3	21.1	1.2	0.7	27.9	1.2	0.8	29.8
31 - 1308 - HARVARD ST @ BEACON ST	3.2	4.5	27.3	2.3	4.5	28.8	2	3.2	23	2.5	2.8	23.1	2.3	2.9	20.5	2.6	3.8	26.7	3.6	4.7	28.7
32 - 1309 - HARVARD ST @ MARION ST	0.3	0.5	27	1	0.4	29.5	0.6	0.4	23.2	0.4	0.4	23.1	0.3	0.2	20.6	1	0.4	27.4	0.7	0.6	28.7
33 - 1310 - HARVARD ST @ HARRIS ST	0.5	0.3	27.3	0.6	0.3	29.8	0.5	0.3	23.3	0.7	0.3	23.5	0.2	0.3	20.5	0.5	0.4	27.5	0.6	0.4	29
34 - 1311 - HARVARD ST @ SCHOOL ST	0.5	0.9	26.9	0.9	0.7	30	0.5	0.7	23.1	0.8	1.3	23	0.5	0.6	20.4	1	0.4	28.1	1.7	0.9	29.7
35 - 1313 - HARVARD ST @ WASHINGTON ST	0.9	2.1	25.7	1.7	2.8	28.9	1	2.3	21.8	0.8	2.2	21.7	0.5	2.5	18.4	1.7	3.7	26.1	2.1	1.9	29.8
36 - 1555 - WASHINGTON ST @ WALNUT	0.3	0.5	25.5	0.9	0.8	29	0.7	0.6	21.9	0.8	0.7	21.7	0.5	0.5	18.4	1.7	1.1	26.7	1.9	1.2	30.6
37 - 1314 - HUNTINGTON AVE @ S HUNTINGTON	1	2.1	24.4	0.7	2.1	27.6	0.6	1.9	20.6	0.6	1.6	20.7	0.7	1.6	17.5	1.2	1.9	26	1	2.7	28.9
38 - 1315 - HUNTINGTON AVE @ PARKER HILL	1.9	1.2	25.2	3.5	1.6	29.5	1.8	1.3	21.1	1.9	0.8	21.8	1.4	0.7	18.1	1.9	1.6	26.4	1.1	2.5	27.5
39 - 1317 - HUNTINGTON AVE OPP FENWOOD RD	0.9	12.2	13.9	1	10.7	19.8	1	8.9	13.2	1.3	8	15.2	0.8	6.7	12.2	1.2	6.8	20.8	1.8	2.7	26.6
40 - 1319 - TREMONT ST OPP WIGGLESWORTH S	1.7	1	14.6	2.4	0.9	21.3	2.2	0.9	14.5	2.4	0.7	16.9	2.8	1.1	13.9	4.1	1	24	6.4	1.1	31.9
41 - 1320 - TREMONT ST @ SAINT ALPHONSUS	0.5	1.5	13.6	0.4	1.6	20.2	0.4	0.8	14.1	0.3	0.7	16.5	0.6	0.5	13.9	0.5	0.6	23.9	0.4	0.4	31.9
42 - 1322 - TREMONT ST @ SEWALL ST	0	0.4	13.3	0.1	0.7	19.6	0.1	0.8	13.4	0.2	0.6	16.1	0.1	0.6	13.3	0.4	0.8	23.4	0.3	0.8	31.3
43 - 1323 - TREMONT ST @ COLUMBUS AVE	1.4	5.4	9.3	1.2	6.8	13.9	0.9	4.7	9.6	0.9	5.6	11.4	1.3	4.5	10.1	1.2	7.6	17.1	2	11.1	22.3
44 - 11257 - MALCOLM X BLVD @ KING ST	0.6	1	8.8	0.7	1.4	13.1	0.4	0.7	9.3	0.7	0.8	11.2	0.5	0.7	9.9	0.8	1	16.9	0.8	3.1	19.9
45 - 1259 - MALCOLM X BLVD OPP MADISON PA	0	0.1	8.7	0	0.4	12.7	0	0.4	9	0.1	0.3	11	0.1	0.2	9.8	0	0.1	16.8	0.2	0.5	19.6
46 - 11323 - MALCOLM X BLVD OPP O'BRYANT H	0	0.2	8.5	0	0.4	12.4	0	0.5	8.5	0.1	0.6	10.5	0.1	0.3	9.7	0	0.3	16.5	0	1.1	18.5
47 - 11259 - MALCOLM X BLVD @ SHAWMUT AVE	0	1	7.5	0	1.7	10.7	0.1	1.4	7.2	0.1	1.4	9.2	0	1.2	8.5	0	2.6	14	0.1	3.7	15
48 - 64000 - DUDLEY STATION	0	7.5	0	0	10.7	0	0	7.1	0.1	0	9.1	0.1	0	8.5	0	0	14	0	0	15	0
Maximum			28.6			31.1			24.3			23.5			21.2			28.1			31.9
Total	53.2	53		59.5	59.3		47.4	47.4		47.6	47.6		43.3	42.9		59.6	59.7		70.2	70.3	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	Trip (RouteVar)(Block) [Observations]																				
	14:18 (66.6)(B335) [41] {FA19}			14:28 (66.6)(B337) [38] {FA19}			14:32 (66.7)(B306) [62] {FA19}			14:35 (66.7)(B342) [69] {FA19}			14:38 (66.6)(B339) [34] {FA19}			14:39 (66.7)(B336) [66] {FA19}			14:45 (66.7)(B097) [66] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
13 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	8.8	0	8.8	6.9	0	6.9	.	.	.	.	.	.	7	0	7.1	.	.	.	.	.	.
14 - 32549 - ELIOT ST @ BENNETT ST	6.7	0	15.5	5.5	0	12.4	.	.	.	.	.	.	7.2	0	14.1	.	.	.	.	.	.
15 - 2550 - JFK ST @ ELIOT ST	3.1	0	18.6	2.6	0.1	14.9	.	.	.	.	.	.	4	0.1	18	.	.	.	.	.	.
16 - 2551 - N HARVARD ST @ GATE 2 HARVARD	1.5	0.4	19.7	0.8	0.2	15.6	.	.	.	.	.	.	1	0.2	18.8	.	.	.	.	.	.
17 - 2553 - N HARVARD ST @ WESTERN AVE	2	1.7	20	1.4	1.3	15.8	.	.	.	.	.	.	2.9	1.5	20.3	.	.	.	.	.	.
18 - 2554 - N HARVARD ST @ FRANKLIN ST	1.7	0.7	21	2	0.7	17.1	.	.	.	.	.	.	4.1	1.2	23.2	.	.	.	.	.	.
19 - 2555 - N HARVARD ST @ COOLIDGE RD	0.4	0.4	21	0.7	0.5	17.3	.	.	.	.	.	.	0.4	0.6	22.9	.	.	.	.	.	.
20 - 2556 - N HARVARD ST @ HOOKER ST	0.7	0.6	21.1	1	0.9	17.3	.	.	.	.	.	.	0.5	1.3	22.2	.	.	.	.	.	.
21 - 1191 - CAMBRIDGE ST @ LINCOLN ST	0.6	0.2	21.5	0.6	0.1	17.9	.	.	.	.	.	.	0.6	0	22.7	.	.	.	.	.	.
22 - 1193 - CAMBRIDGE ST @ FRANKLIN ST	0.8	1.5	20.8	0.5	1.2	17.2	.	.	.	.	.	.	0.5	2	21.2	.	.	.	.	.	.
23 - 1195 - CAMBRIDGE ST @ EMERY RD	1.6	2	20.3	1.2	1.7	16.7	.	.	.	.	.	.	1.4	2.3	20.4	.	.	.	.	.	.
24 - 926 - BRIGHTON AVE @ CAMBRIDGE ST	3.1	1.3	22.1	2.7	1.4	18	2.1	1.8	23.5	1.8	2	32.2	3.2	1.8	21.7	2.5	0.7	18	2.4	0.3	8.1
25 - 927 - BRIGHTON AVE @ ALLSTON ST	1.1	1.1	22.1	1.7	1.3	18.4	1.4	2.3	22.6	1	3.7	29.5	2.6	2.1	22.2	1.5	1.6	18	2	0.8	9.3
26 - 10928 - HARVARD AVE @ BRIGHTON AVE	1.5	1.2	22.4	1.2	1.3	18.3	1.5	0.5	23.6	1.3	0.8	30	1.7	1	22.9	0.9	0.3	18.6	1.2	0.2	10.2
27 - 1302 - HARVARD AVE @ COMMONWEALTH AV	2.7	4	21.1	1.8	2.8	17.2	2.7	0.8	25.5	2.7	0.6	32.1	4.5	3.2	24.3	1.9	0.6	19.9	2.8	0.6	12.4
28 - 11302 - HARVARD ST @ VERNDAL ST	0.7	0.7	21.1	0.8	0.6	17.4	1	0.3	26.2	0.6	0.2	32.6	0.7	0.6	24.4	0.5	0.1	20.2	0.9	0.2	13.2
29 - 1304 - HARVARD ST @ COOLIDGE ST	0.1	0.4	20.8	0.8	0.3	17.9	0.5	0.2	26.5	0.2	0	32.7	0.6	0.5	24.5	0.2	0	20.4	0.3	0	13.5
30 - 1306 - HARVARD ST @ SHAILER ST	1.3	0.7	21.4	0.8	0.8	17.9	1.3	0.2	27.6	1.1	0.2	33.7	0.9	0.9	24.6	0.8	0.1	21.1	0.7	0.2	14
31 - 1308 - HARVARD ST @ BEACON ST	1.6	3.2	19.8	1.7	3.6	16	1.8	1.7	27.7	1.5	1.1	34.1	2.7	4	23.3	1.1	0.9	21.3	1.8	1.1	14.6
32 - 1309 - HARVARD ST @ MARION ST	0.5	0.5	19.7	0.3	0.4	15.9	0.4	0.1	28	0.6	0.1	34.6	1.1	1	23.4	0.3	0.2	21.5	0.6	0.1	15.1
33 - 1310 - HARVARD ST @ HARRIS ST	0.3	0.3	19.7	0.4	0.5	15.8	0.5	0.5	28	0.3	0.3	34.6	0.7	0.4	23.6	0.2	0.2	21.5	0.5	0.2	15.3
34 - 1311 - HARVARD ST @ SCHOOL ST	0.5	0.8	19.4	0.8	0.6	16	0.5	0.6	27.9	0.3	0.6	34.2	1.2	0.9	23.9	0.4	0.3	21.6	0.4	0.2	15.5
35 - 1313 - HARVARD ST @ WASHINGTON ST	1.1	2.6	17.9	1	1.9	15.1	1	0.8	28.2	1.4	0.9	34.7	1.4	1.9	23.5	1.1	0.5	22.2	1.2	0.6	16.2
36 - 1555 - WASHINGTON ST @ WALNUT	0.7	0.9	17.7	1	0.8	15.3	0.5	0.5	28.1	0.8	0.6	35	1.4	0.8	24.1	0.5	0.3	22.4	0.9	0.4	16.7
37 - 1314 - HUNTINGTON AVE @ S HUNTINGTON	0.5	2.2	16	0.5	1.5	14.3	0.4	1.8	26.7	0.7	2.1	33.5	0.8	1.9	23.1	0.3	1.2	21.6	0.9	1.2	16.4
38 - 1315 - HUNTINGTON AVE @ PARKER HILL	0.6	1.1	15.5	0.3	0.8	13.8	1	1.3	26.4	0.7	1.6	32.6	0.7	1.9	21.9	0.6	0.6	21.5	0.8	0.6	16.6
39 - 1317 - HUNTINGTON AVE OPP FENWOOD RD	3.1	1.3	17.3	3.1	1.4	15.5	4.8	0.9	30.3	4.1	0.8	35.9	4.1	1.7	24.3	4	0.8	24.7	4.3	1	20
40 - 1319 - TREMONT ST OPP WIGGLESWORTH S	3.9	0.7	20.5	5.5	0.7	20.3	3.5	0.8	32.9	5.2	1	40.1	9.4	1.4	32.3	4.9	0.8	28.8	6.7	0.8	25.9
41 - 1320 - TREMONT ST @ SAINT ALPHONSUS	0.9	0.2	21.1	0.6	0.3	20.6	0.9	0.5	33.3	0.6	0.2	40.5	0.9	0.4	32.7	0.8	0.2	29.4	1.1	0.4	26.5
42 - 1322 - TREMONT ST @ SEWALL ST	0.2	1	20.4	0.3	0.5	20.4	0.4	0.9	32.8	0.3	1	39.9	0.4	1.1	32.1	0.3	1.5	28.2	0.5	1.1	25.9
43 - 1323 - TREMONT ST @ COLUMBUS AVE	0.9	8.3	13	1.1	8.4	13.1	1.4	13.1	21.1	2.2	16.2	25.9	2.1	11.4	22.8	1.7	14.3	15.5	2	11.2	16.7
44 - 11257 - MALCOLM X BLVD @ KING ST	0.4	2.1	11.2	0.4	2.3	11.2	0.8	5.9	16	0.8	7	19.7	0.6	3.6	19.7	0.6	3.3	12.9	0.7	3.2	14.2
45 - 1259 - MALCOLM X BLVD OPP MADISON PA	0.1	0.5	10.8	0.1	0.5	10.8	0.1	0.4	15.6	0.1	0.4	19.4	0.1	0.9	18.9	0	0.2	12.7	0.1	0.4	14
46 - 11323 - MALCOLM X BLVD OPP O'BRYANT H	0.1	0.6	10.4	0.1	0.9	10.1	0.1	0.8	14.9	0.1	0.9	18.7	0.1	2.3	16.7	0.2	0.7	12.2	0.1	0.9	13.2
47 - 11259 - MALCOLM X BLVD @ SHAWMUT AVE	0	1.7	8.7	0.1	2.7	7.5	0	2.7	12.5	0.1	3.1	15.6	0.1	3.6	13.2	0	2.2	10	0.2	3.2	10.2
48 - 64000 - DUDLEY STATION	0	8.7	0	0	7.4	0.1	0	12.2	0	0	15.6	0	0	13.1	0.1	0	10	0	10.1	0.1	0.1
Maximum			22.4			20.6			33.3			40.5			32.7			29.4			26.5
Total	53.8	53.6		50.3	50.4		52.1	51.9		61	61.7		71.6	71.6		41.7	41.7		38.7	39	

Seq - StopID - Stop Name																					
	14:48 (66.6)(B326) [38] {FA19}			14:58 (66.6)(B350) [48] {FA19}			15:05 (66.7)(B323) [63] {FA19}			15:08 (66.6)(B322) [44] {FA19}			15:18 (66.6)(B321) [38] {FA19}			15:28 (66.6)(B324) [43] {FA19}			15:38 (66.6)(B327) [34] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
13 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	7.7	0	7.7	7.3	0	7.3	.	.	.	6.6	0	6.6	8	0	8.1	11.6	0	11.7	11.9	0	11.9
14 - 32549 - ELIOT ST @ BENNETT ST	5	0.1	12.6	5.9	0	12.9	.	.	.	5.9	0	12.5	6.5	0	14.6	7.6	0	19.2	10.4	0.2	22.2
15 - 2550 - JFK ST @ ELIOT ST	3.2	0	15.8	3.4	0.1	16.3	.	.	.	2.8	0	15.4	4.1	0.1	18.6	4	0.1	23	4	0.1	26.1
16 - 2551 - N HARVARD ST @ GATE 2 HARVARD	0.8	0.1	16.6	0.8	0.1	16.9	.	.	.	1.2	0.2	16.4	1.3	0.3	19.6	0.8	0.2	23.7	1.6	0.2	27.5
17 - 2553 - N HARVARD ST @ WESTERN AVE	2.4	1.7	17.2	2.7	1.6	18	.	.	.	2.6	1.2	17.9	2.1	1.8	19.8	2.9	1.7	25	2	2.1	27.4
18 - 2554 - N HARVARD ST @ FRANKLIN ST	1.4	0.7	17.9	2.6	0.9	19.7	.	.	.	2.8	1.1	19.6	3.1	1.1	21.9	2.5	1	26.5	2.1	0.8	28.7
19 - 2555 - N HARVARD ST @ COOLIDGE RD	0.3	0.6	17.6	0.4	0.5	19.6	.	.	.	0.4	0.6	19.3	0.8	0.5	22.2	0.5	0.8	26.1	0.4	0.7	28.4
20 - 2556 - N HARVARD ST @ HOOKER ST	0.8	1.2	17.2	0.8	1.1	19.3	.	.	.	0.6	0.8	19.2	0.5	0.8	21.9	1	1.3	25.8	1.1	1.1	28.4
21 - 1191 - CAMBRIDGE ST @ LINCOLN ST	0.8	0	17.9	0.3	0	19.5	.	.	.	0.5	0.1	19.6	0.6	0.2	22.3	0.7	0.2	26.3	0.6	0.3	28.7
22 - 1193 - CAMBRIDGE ST @ FRANKLIN ST	0.4	2.1	16.2	0.5	2.4	17.7	.	.	.	0.7	1.8	18.5	0.7	1.8	21.3	0.6	2.2	24.7	1	2.5	27.2
23 - 1195 - CAMBRIDGE ST @ EMERY RD	1.4	2	15.6	1.4	1.6	17.5	.	.	.	1.4	2.2	17.7	1.6	1.9	20.9	1.3	2.4	23.6	1.9	1.4	27.6
24 - 926 - BRIGHTON AVE @ CAMBRIDGE ST	4.2	1.2	18.6	4.5	1.5	20.5	2.4	1.5	22.9	6.2	1.3	22.6	6.3	2	25.2	5.1	2.5	26.2	5.8	2.5	30.9
25 - 927 - BRIGHTON AVE @ ALLSTON ST	3.1	1.2	20.5	4.4	1.6	23.4	2	3.1	21.8	5.7	1.3	27.1	4.7	1.2	28.8	4	1.4	28.8	5.2	1.5	34.7
26 - 10928 - HARVARD AVE @ BRIGHTON AVE	1.7	1.2	21	2.4	1	24.8	1.8	0.6	23	2.8	0.9	29	3.2	1.8	30.2	2	1.1	29.7	3.8	1.1	37.4
27 - 1302 - HARVARD AVE @ COMMONWEALTH AV	4.7	3	22.8	4.1	3	25.9	3.7	1.7	25	5.5	3	31.5	4.8	3.2	31.9	4.3	4.2	29.8	5	4.4	37.9
28 - 11302 - HARVARD ST @ VERNDAL ST	1.7	0.6	23.8	0.8	0.5	26.3	1	0.2	25.8	1.9	0.4	33	1.8	0.7	33	1.3	1	30.1	2.1	0.6	39.5
29 - 1304 - HARVARD ST @ COOLIDGE ST	0.6	0.5	23.9	0.5	0.6	26.1	0.6	0.1	26.3	0.5	0.7	32.7	0.7	0.8	32.9	0.5	0.8	29.8	0.8	0.9	39.4
30 - 1306 - HARVARD ST @ SHAILER ST	0.8	0.7	24.1	0.7	1.1	25.8	0.7	0.5	26.6	0.7	1.3	32.1	0.5	1.6	31.9	0.4	1.1	29	0.6	1.6	38.3
31 - 1308 - HARVARD ST @ BEACON ST	2.4	3.7	22.8	2.4	4.7	23.4	2.5	2.1	26.9	4.6	5	31.7	4.8	6.7	29.9	3.5	5.5	27	5	6.1	37.3
32 - 1309 - HARVARD ST @ MARION ST	0.7	0.8	22.7	0.7	0.8	23.3	0.7	0.3	27.3	1.1	0.7	32.2	0.8	0.5	30.2	1.1	0.7	27.4	1.4	0.5	38.1
33 - 1310 - HARVARD ST @ HARRIS ST	0.9	0.7	22.9	0.4	0.5	23.3	0.6	0.2	27.8	1.2	0.8	32.6	0.9	0.5	30.6	0.9	0.9	27.5	1.1	0.6	38.7
34 - 1311 - HARVARD ST @ SCHOOL ST	0.9	0.6	23.2	0.5	0.8	22.9	0.7	0.3	28.1	1	0.8	32.8	0.8	0.8	30.6	0.3	0.6	27.2	1.1	0.9	38.9
35 - 1313 - HARVARD ST @ WASHINGTON ST	1.1	1.5	22.8	1.3	1.8	22.4	1.3	1.4	28	2.4	2.7	32.5	1.7	2.8	29.5	1.2	2	26.4	1.7	2.4	38.1
36 - 1555 - WASHINGTON ST @ WALNUT	1.8	1.2	23.4	2.8	0.8	24.4	2.5	0.4	30.2	3.8	1.1	35.1	2.2	1	30.7	3	0.9	28.4	2.9	1.6	39.5
37 - 1314 - HUNTINGTON AVE @ S HUNTINGTON	1.3	2.2	22.6	0.9	1.1	24.2	1	1.7	29.5	2	1.9	35.2	1.9	2.4	30.1	1.8	1.5	28.7	1.8	2.8	38.5
38 - 1315 - HUNTINGTON AVE @ PARKER HILL	1	1.2	22.4	1	1.1	24.1	1	0.7	29.7	1.4	1.4	35.1	1.1	1.6	29.6	1.2	1.1	28.9	2	1.9	38.6
39 - 1317 - HUNTINGTON AVE OPP FENWOOD RD	2	1.6	22.8	1.7	1.2	24.5	2.4	1.5	30.7	2.6	1.4	36.4	2.1	1.6	30.1	2.4	1.5	29.9	2.4	2.6	38.4
40 - 1319 - TREMONT ST OPP WIGGLESWORTH S	10.6	1.2	32.1	7.3	0.7	31.2	7.7	0.8	37.6	6.9	1	42.3	9.1	1.1	38	9.1	1.4	37.5	8.4	1.4	45.4
41 - 1320 - TREMONT ST @ SAINT ALPHONSUS	0.7	0.8	32	0.5	0.5	31.1	0.9	1	37.5	0.6	1	41.9	0.4	0.5	37.9	0.6	0.5	37.6	1.2	0.8	45.8
42 - 1322 - TREMONT ST @ SEWALL ST	0.7	1	31.7	0.2	0.9	30.5	0.3	0.6	37.3	0.6	1	41.5	0.9	0.6	38.2	0.4	1	37.1	0.9	1.6	45
43 - 1323 - TREMONT ST @ COLUMBUS AVE	2.2	8.9	25	2.6	10.3	22.7	2.8	11.9	28.2	2.6	12.8	31.4	2.8	11.3	29.8	2.9	11.1	28.9	2.3	13.3	34.1
44 - 11257 - MALCOLM X BLVD @ KING ST	0.9	3.9	22	1	4.1	19.6	0.9	4.4	24.6	0.8	4.8	27.4	0.8	4.5	26	0.8	5.7	24	0.7	5.1	29.6
45 - 1259 - MALCOLM X BLVD OPP MADISON PA	0	1.1	20.9	0.1	0.4	19.3	0	0.6	24	0.2	0.5	27.1	0.1	0.3	25.7	0	0.8	23.3	0	0.4	29.3
46 - 11323 - MALCOLM X BLVD OPP O'BRYANT H	0.2	2.2	18.8	0.1	2	17.4	0.1	2	22.2	0.1	1.3	25.8	0.1	0.9	25	0.1	1.2	22.2	0.2	1.6	27.9
47 - 11259 - MALCOLM X BLVD @ SHAWMUT AVE	0.1	5.9	13	0.1	3.9	13.6	0.2	6.8	15.6	0.2	5.9	20.1	0.2	5	20.2	0.2	5.5	16.8	0.2	5.4	22.7
48 - 64000 - DUDLEY STATION	0	13	0	0	13.5	0.1	0	15.5	0.1	0	20	0.2	0	20.2	0	0	16.8	0	0	22.7	0
Maximum			32.1			31.2			37.6			42.3			38.2			37.6			45.8
Total	68.5	68.4		67.1	66.7		59.6	60		80.9	81		82	82.1		80.6	80.7		93.6	93.7	

Seq - StopID - Stop Name	15:48 (66.6)(B328) [29] {FA19}			15:58 (66.6)(B330) [24] {FA19}			16:08 (66.6)(B333) [39] {FA19}			16:18 (66.6)(B332) [48] {FA19}			16:28 (66.6)(B334) [41] {FA19}			16:38 (66.6)(B335) [33] {FA19}			16:48 (66.6)(B336) [28] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
13 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	10.8	0	10.8	11.5	0	11.5	13.1	0	13.2	12.3	0	12.3	15.9	0	15.9	15.5	0	15.5	14.6	0	14.6
14 - 32549 - ELIOT ST @ BENNETT ST	6.2	0	16.9	8	0	19.5	9.6	0.1	22.8	9.1	0.1	21.6	11.7	0	27.6	12.2	0.1	27.6	8.8	0.1	23.2
15 - 2550 - JFK ST @ ELIOT ST	3.1	0.1	19.9	4	0	23.5	3.4	0.3	25.9	3.6	0.1	24.6	5.6	0.3	32.9	3.8	0.2	31.2	3.4	0.1	27.3
16 - 2551 - N HARVARD ST @ GATE 2 HARVARD	1	0.2	20.7	1.9	0.1	25.2	1.5	0.1	27.3	1.3	0.2	25.7	2.1	0.2	34.8	1.6	0.4	32.4	1.8	0.1	28
17 - 2553 - N HARVARD ST @ WESTERN AVE	1.8	1	21.5	2.9	1.8	26.3	2.1	1.6	27.8	2.5	1.7	26.5	3.1	2	36	2.2	1.6	33	3.4	2.1	29.4
18 - 2554 - N HARVARD ST @ FRANKLIN ST	2	0.7	22.9	3	1	28.2	1.8	0.9	28.7	2	0.8	27.6	2.8	1.1	37.7	2.2	1.4	33.8	1.7	1.1	30
19 - 2555 - N HARVARD ST @ COOLIDGE RD	0.2	0.4	22.7	0.3	0.9	27.6	0.6	0.8	28.4	0.5	0.9	27.3	0.3	1	37	0.5	1.2	33.1	0.6	0.9	29.8
20 - 2556 - N HARVARD ST @ HOOKER ST	1	1.3	22.4	0.8	1.5	26.9	0.9	0.8	28.5	0.7	1.3	26.7	0.7	1.9	35.8	1.4	2.2	32.3	1.1	1.7	29.1
21 - 1191 - CAMBRIDGE ST @ LINCOLN ST	0.5	0.4	22.5	0.6	0.2	27.3	0.6	0.2	28.9	0.7	0.4	27	1	0.5	36.3	0.3	0.2	32.4	0.6	0.2	29.5
22 - 1193 - CAMBRIDGE ST @ FRANKLIN ST	1.4	2	21.9	1.3	2.3	26.3	0.8	2.4	27.3	0.9	2.9	24.9	0.7	3.4	33.5	0.8	2.6	30.6	0.8	3.2	27.2
23 - 1195 - CAMBRIDGE ST @ EMERY RD	1.3	1.7	21.6	1.6	1.3	26.5	0.8	2.5	25.6	1.6	3.2	23.4	2.9	4.7	31.7	0.9	2.7	28.8	0.8	2.5	25.5
24 - 926 - BRIGHTON AVE @ CAMBRIDGE ST	3.8	1.7	23.6	6.3	2.1	30.8	4.2	2.2	27.7	4.5	2.1	25.9	5.9	3.5	34.2	4.1	3.8	29.1	3.9	2.7	26.7
25 - 927 - BRIGHTON AVE @ ALLSTON ST	4.9	1.1	27.4	4.9	2	33.7	3.2	1.8	29.1	3.4	2.1	27.1	3.7	2	36.1	2.3	2.3	29.1	1.9	1.4	27.3
26 - 10928 - HARVARD AVE @ BRIGHTON AVE	4.3	1	30.7	4	1.6	36	2.3	1	30.4	2.3	1.5	27.9	2.3	1.3	37.2	3.2	1.4	31	1.7	1.3	27.7
27 - 1302 - HARVARD AVE @ COMMONWEALTH AV	4.7	4.4	30.9	6.1	4.3	37.8	4.5	4.8	30.1	5	4.1	28.8	5.3	4.6	38	4.3	5.3	30	4.7	4.2	28.2
28 - 11302 - HARVARD ST @ VERNDALE ST	1	0.4	31.5	2.4	1.4	38.8	1.8	0.9	31.1	1.8	0.8	29.9	2.4	0.9	39.5	1.7	0.6	31.1	2	0.7	29.5
29 - 1304 - HARVARD ST @ COOLIDGE ST	0.8	0.6	31.8	0.8	1	38.6	0.3	0.8	30.5	0.5	0.8	29.6	0.5	0.6	39.4	0.8	0.8	31.1	1.4	1	29.8
30 - 1306 - HARVARD ST @ SHAILER ST	0.4	0.8	31.4	1	1.3	38.2	0.3	0.8	30	0.5	1.1	29	1.1	1.3	39.1	0.7	1.2	30.5	0.8	1	29.6
31 - 1308 - HARVARD ST @ BEACON ST	3.3	4.5	30.2	6	5.5	38.8	3.8	4.6	29.2	4	5	28	4.1	5.7	37.6	4.1	5.5	29.1	4.6	5.1	29.2
32 - 1309 - HARVARD ST @ MARION ST	1.4	0.8	30.9	1.5	0.5	39.9	1.8	0.4	30.6	2.4	0.8	29.5	1.7	0.6	38.7	1.6	0.5	30.2	1.2	1	29.4
33 - 1310 - HARVARD ST @ HARRIS ST	1.1	0.3	31.7	1.3	0.7	40.5	0.9	0.3	31.2	1.5	0.9	30.1	1.4	0.8	39.3	1.6	0.6	31.2	1.9	0.7	30.5
34 - 1311 - HARVARD ST @ SCHOOL ST	0.4	0.6	31.6	1	0.8	40.8	0.8	1	31	1.1	1.1	30.1	1.1	1.3	39.1	1.4	1.1	31.5	2.1	1.6	31
35 - 1313 - HARVARD ST @ WASHINGTON ST	1.5	1.8	31.3	1.2	2	39.9	1.1	1.8	30.3	1.8	2.5	29.3	2.8	2.4	39.5	1.8	2.4	30.8	1.6	2.3	30.3
36 - 1555 - WASHINGTON ST @ WALNUT	1.7	1	32	3	1.8	41	2.5	1.1	31.7	3.1	1.5	30.9	3.7	1.4	41.9	2.9	1.4	32.4	3.3	1.3	32.3
37 - 1314 - HUNTINGTON AVE @ S HUNTINGTON	2.1	3.5	30.6	2	4.2	38.8	1.8	2.8	30.7	1.2	3.1	28.9	2.2	3.3	40.7	1.3	4.4	29.3	1.6	3.6	30.2
38 - 1315 - HUNTINGTON AVE @ PARKER HILL	1.6	2	30.2	1	1.5	38.3	1.4	1.1	31	1.5	1.6	28.8	1.3	2.6	39.5	0.9	2.1	28	0.8	0.9	30.1
39 - 1317 - HUNTINGTON AVE OPP FENWOOD RD	1.5	1.1	30.7	1.9	2.3	37.8	2.3	2.3	31	2.5	2	29.3	2.8	2.7	39.5	1.7	2.3	27.4	1.7	2.1	29.7
40 - 1319 - TREMONT ST OPP WIGGLESWORTH S	9.8	0.9	39.6	8.3	1.8	44.3	8.4	0.9	38.4	11.3	1.4	39.2	10.7	1.2	49	8.1	1.6	33.9	6.8	1.4	35.1
41 - 1320 - TREMONT ST @ SAINT ALPHONSUS	0.7	1	39.2	0.5	1.5	43.3	0.8	0.8	38.5	1	0.9	39.4	0.7	2.1	47.6	0.4	1	33.3	0.7	1.3	34.5
42 - 1322 - TREMONT ST @ SEWALL ST	0.7	1.7	38.2	0.5	1.2	42.7	0.3	1.3	37.6	0.4	0.8	38.9	0.3	1.6	46.3	0.5	1.3	32.5	0.4	1.8	33.1
43 - 1323 - TREMONT ST @ COLUMBUS AVE	1.3	13.9	25.6	2.3	13.3	31.7	1.4	9.9	29.1	2.2	11.8	29.3	2.2	12.5	36	1.3	11.1	22.7	1.8	10	24.9
44 - 11257 - MALCOLM X BLVD @ KING ST	0.6	5.6	20.6	1.2	6.8	26	1.1	5.9	24.4	1.2	5.8	24.7	0.7	5.1	31.7	0.8	4.7	18.8	0.5	4.8	20.6
45 - 1259 - MALCOLM X BLVD OPP MADISON PA	0	0.2	20.3	0.2	0.7	25.5	0	0.5	23.8	0	0.3	24.5	0	0.5	31.2	0	0.4	18.4	0	0.5	20.1
46 - 11323 - MALCOLM X BLVD OPP O'BRYANT H	0	0.7	19.7	0.1	2	23.7	0.1	1.7	22.2	0.5	2.7	22.3	0	1.6	29.6	0.4	1.4	17.4	0	0.9	19.3
47 - 11259 - MALCOLM X BLVD @ SHAWMUT AVE	0	3.6	16.1	0.1	4.5	19.3	0.1	4.7	17.6	0.2	4.7	17.8	0.1	5.3	24.4	0.1	3.9	13.6	0	4.2	15.1
48 - 64000 - DUDLEY STATION	0	16.1	0	0	19.3	0	0	17.6	0	17.7	0.1	0	0	24	0.4	0	13.6	0	0	15	0.1
Maximum			39.6			44.3			38.5			39.4			49			33.9			35.1
Total	76.9	77.1		93.5	93.2		80.4	80.7		89.1	88.7		103.8	104		87.4	87.3		83	82.8	

Seq - StopID - Stop Name	16:58 (66.6)(B339) [36] {FA19}			17:08 (66.6)(B326) [46] {FA19}			17:18 (66.6)(B325) [67] {FA19}			17:28 (66.6)(B323) [46] {FA19}			17:38 (66.6)(B322) [51] {FA19}			17:48 (66.6)(B321) [36] {FA19}			17:58 (66.6)(B324) [38] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
13 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	20.9	0	20.9	23.7	0	23.8	24.5	0	24.5	21.9	0	21.9	20.9	0	20.9	18.4	0	18.4	19.8	0	19.8
14 - 32549 - ELIOT ST @ BENNETT ST	14.6	0.3	35.3	14	0.3	38.1	12.7	0.2	37	12.6	0.1	36.5	13.8	0.2	34.5	11.5	0.3	29.2	11.6	0.1	31.4
15 - 2550 - JFK ST @ ELIOT ST	5.6	0.2	40.7	5.2	0.2	42.3	5.3	0.1	42.1	5.8	0.1	39	4.7	0.3	38.4	3.9	0.5	34.3	5.9	0.2	37.1
16 - 2551 - N HARVARD ST @ GATE 2 HARVARD	3.8	0.1	44.4	2.2	0.2	44.3	1.6	0.2	43.5	1.4	0.1	40.4	3.4	0.2	42.4	2.2	0.3	35.5	1.4	0.1	38.4
17 - 2553 - N HARVARD ST @ WESTERN AVE	3.9	2.3	45.9	4.2	2.7	45.7	3.4	2.4	44.5	2.9	2.4	40.8	3.9	2.4	43.9	3	2.4	36.1	3.7	1.7	40.3
18 - 2554 - N HARVARD ST @ FRANKLIN ST	2.3	1	47.2	2.2	1.4	46.5	2.2	1.4	45.3	2.8	1.9	41.8	1.6	1.5	43.9	1.7	1.4	36.4	1.8	1.1	41.1
19 - 2555 - N HARVARD ST @ COOLIDGE RD	0.9	1.3	46.9	0.5	0.8	46.2	0.8	1.3	44.8	0.5	1.6	40.7	0.7	1.7	42.9	0.8	1.7	35.5	0.5	1.3	40.2
20 - 2556 - N HARVARD ST @ HOOKER ST	1.2	1.5	46.6	0.7	1.8	45.1	0.7	1.6	43.9	0.6	1.5	39.9	0.7	2.1	41.5	0.6	1.9	34.2	0.4	1.7	38.9
21 - 1191 - CAMBRIDGE ST @ LINCOLN ST	0.5	0.3	46.8	0.6	0.3	45.4	0.5	0.2	44.2	0.3	0.3	39.9	0.3	0.3	41.5	0.3	0.1	34.4	0.5	0.3	39.1
22 - 1193 - CAMBRIDGE ST @ FRANKLIN ST	0.9	4.4	43.4	1.1	4.3	42.2	0.6	4	40.9	1	4.7	36.3	0.6	3.7	38.4	0.8	3.4	31.9	0.8	3	36.8
23 - 1195 - CAMBRIDGE ST @ EMERY RD	2.6	2.6	43.3	1.2	2.8	40.5	1	2.5	39.4	1.2	2.7	34.8	1.1	3	36.6	1.4	2.7	30.6	1.1	2.6	35.3
24 - 926 - BRIGHTON AVE @ CAMBRIDGE ST	4.2	2.4	45.1	3.8	2.9	41.5	3.5	2.7	40.2	3.2	3.2	35	4.4	2.6	38.3	2.8	3.1	30.4	2.2	2.7	34.8
25 - 927 - BRIGHTON AVE @ ALLSTON ST	2.9	2.1	45.9	1.7	3	40.1	1.7	2.9	39	1.1	3	33.1	1.6	2.9	37	1.8	3.3	28.9	2	3.2	33.7
26 - 10928 - HARVARD AVE @ BRIGHTON AVE	3.1	2.3	46.7	2.9	1.6	41.4	2.3	2.1	39.3	2.2	1.9	33.3	2.5	1.7	37.8	2.6	1.7	29.9	1.8	1.7	33.7
27 - 1302 - HARVARD AVE @ COMMONWEALTH AV	5.3	7.3	44.7	4.7	8.1	38	4.1	7.7	35.7	3.5	6.4	30.6	5	7.6	35.2	4.4	6.7	27.8	2.7	6.1	30.3
28 - 11302 - HARVARD ST @ VERNDAL ST	2	1.3	45.4	1.8	0.9	39	2	1	36.7	1.5	1	31.1	1.7	1.4	35.5	1.2	0.7	28.3	1.7	0.8	31.2
29 - 1304 - HARVARD ST @ COOLIDGE ST	1	1.3	45.1	0.8	1.6	38.2	0.8	1.4	36	0.9	1	31	0.6	1.2	35	0.8	1	28.1	0.9	0.8	31.3
30 - 1306 - HARVARD ST @ SHAILER ST	0.3	1.5	44	0.7	1.3	37.6	0.6	1.5	35.1	0.7	1.2	30.5	0.9	1.5	34.4	1.1	1.8	27.5	0.5	1.2	30.7
31 - 1308 - HARVARD ST @ BEACON ST	5.9	7.9	42	4.7	8.3	34	3.7	7	31.9	3.7	7.5	26.7	5.6	7.2	32.9	4	5.4	26.1	3.7	6.1	28.2
32 - 1309 - HARVARD ST @ MARION ST	1.5	0.8	42.7	1.7	0.7	35	1	0.9	31.9	1.4	0.5	27.6	1.4	0.6	33.6	0.8	0.9	26	1.1	0.9	28.4
33 - 1310 - HARVARD ST @ HARRIS ST	1.6	0.9	43.3	1.3	0.8	35.4	1.2	1.3	31.9	0.9	0.8	27.7	1.2	0.5	34.4	1.4	0.7	26.7	1	1.1	28.4
34 - 1311 - HARVARD ST @ SCHOOL ST	1.2	1.6	43	1.7	1.8	35.3	0.8	1.4	31.3	1.1	1.2	27.5	1.5	1.2	34.7	1	1.1	26.6	0.8	0.9	28.3
35 - 1313 - HARVARD ST @ WASHINGTON ST	2.4	3.1	42.4	2	3	34.3	2.3	2.9	30.7	2.1	2	27.7	2	2.5	34.2	1	2.6	25	0.9	2.3	27
36 - 1555 - WASHINGTON ST @ WALNUT	3.9	1.9	44.3	3.3	1.8	35.7	3.6	2.3	32	2.8	1.7	28.8	2	2.4	33.8	2	2.1	24.9	1.4	1.7	26.7
37 - 1314 - HUNTINGTON AVE @ S HUNTINGTON	2.6	4.7	42.2	1.9	4	33.6	1.8	3.4	30.4	1.6	3.8	26.6	1.3	4.1	31	1	2.9	22.9	1.4	3.1	25
38 - 1315 - HUNTINGTON AVE @ PARKER HILL	0.8	1.8	41.2	1	1.7	32.9	0.9	1.1	30.2	0.7	1.5	25.8	1.3	1.6	30.7	0.9	1.5	22.4	0.8	1.7	24.1
39 - 1317 - HUNTINGTON AVE OPP FENWOOD RD	2.3	2.7	40.8	1.5	2.4	32	1.2	2.5	28.9	1.2	1.8	25.2	0.8	2.7	28.9	0.4	2	20.8	1	1.9	23.2
40 - 1319 - TREMONT ST OPP WIGGLESWORTH S	7	1.5	46.2	5	2.1	34.9	4.3	1.6	31.6	3.7	1.4	27.5	4.2	1.6	31.5	3.6	1	23.4	3.8	1.2	25.7
41 - 1320 - TREMONT ST @ SAINT ALPHONSUS	0.4	0.9	45.8	0.3	1.2	34.1	0.2	1.1	30.7	0.4	1.6	26.4	0.5	1.2	30.8	0.2	1.1	22.4	0.3	0.6	25.4
42 - 1322 - TREMONT ST @ SEWALL ST	0.4	1.1	45.1	0.2	1.3	33	0.2	1.4	29.5	0.3	1.5	25.2	0.1	1.5	29.3	0.3	1.3	21.5	0.1	0.9	24.6
43 - 1323 - TREMONT ST @ COLUMBUS AVE	2	13.9	33.3	1.3	10.1	24.2	0.9	8.9	21.4	1.1	7.8	18.5	0.8	9.2	20.9	0.7	7.8	14.4	0.9	7	18.5
44 - 11257 - MALCOLM X BLVD @ KING ST	0.5	5.4	28.3	0.3	4	20.5	0.3	4.4	17.3	0.4	4.1	14.7	0.4	5	16.3	0.2	3.9	10.7	0.4	3.8	15.1
45 - 1259 - MALCOLM X BLVD OPP MADISON PA	0	0.4	27.9	0.1	0.7	19.8	0	0.3	17	0	0.2	14.5	0	0.2	16.1	0	0	10.6	0	0.3	14.8
46 - 11323 - MALCOLM X BLVD OPP O'BRYANT H	0.2	0.9	27.2	0.1	0.6	19.3	0.1	0.7	16.5	0.2	0.6	14.1	0	0.3	15.8	0	0.2	10.4	0.1	0.5	14.3
47 - 11259 - MALCOLM X BLVD @ SHAWMUT AVE	0	4.7	22.5	0.1	2.8	16.5	0	2.7	13.8	0	1.6	12.5	0	2.3	13.5	0	1.8	8.6	0	2.3	12.1
48 - 64000 - DUDLEY STATION	0	22.3	0.2	0	16.5	0.1	0	13.8	0	0	12.1	0.5	0	13.4	0.1	0	8.1	0.5	0	11.9	0.2
Maximum			47.2			46.5			45.3			41.8			43.9			36.4			41.1
Total	108.7	108.7		98.5	98		90.8	90.9		85.7	84.8		91.5	91.8		76.8	77.4		77	76.8	

Seq - StopID - Stop Name	18:08 (66.6)(B327) [48] {FA19}			18:18 (66.6)(B328) [32] {FA19}			18:30 (66.6)(B330) [31] {FA19}			18:42 (66.6)(B332) [46] {FA19}			18:54 (66.6)(B334) [37] {FA19}			19:05 (66.6)(B336) [31] {FA19}			19:17 (66.6)(B339) [44] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
13 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	18.7	0	19.1	20.7	0	20.7	21.3	0	21.3	19.6	0	19.6	18.8	0	19.4	14	0	14	14.7	0	14.7
14 - 32549 - ELIOT ST @ BENNETT ST	11.3	0.1	30.4	9.7	0.1	31	10.1	0.3	31.4	11	0.2	30.1	9.5	0.1	28.7	11.6	0	25.4	9.8	0.1	24.5
15 - 2550 - JFK ST @ ELIOT ST	5	0.2	35.2	4.6	0.1	34.5	5.4	0.1	36.2	5.1	0.2	35	5.3	0.2	33.9	5.5	0.2	30.5	4.8	0.2	29.1
16 - 2551 - N HARVARD ST @ GATE 2 HARVARD	1.6	0.3	36.5	1.5	0.2	35.8	0.7	0.3	36.6	1.2	0.3	35.9	1	0.1	34.8	1.4	0.1	31.8	1	0.2	30
17 - 2553 - N HARVARD ST @ WESTERN AVE	3.6	2.4	37.7	3.1	2.1	36.8	2.9	2.7	36.8	2.4	2.3	36	2.9	2.3	35.4	2.3	1.9	32.2	2.7	2.2	30.5
18 - 2554 - N HARVARD ST @ FRANKLIN ST	2.3	1.1	39	1.4	1.5	36.8	1.5	1.3	37	1.4	1.6	35.8	1.9	1.5	35.8	1.5	1.7	31.9	1.8	1.3	31
19 - 2555 - N HARVARD ST @ COOLIDGE RD	0.6	1.2	38.4	0.5	0.8	36.4	0.5	1.9	35.6	0.4	1.3	34.9	0.2	1.2	34.8	0.3	1.5	30.7	0.5	1.3	30.1
20 - 2556 - N HARVARD ST @ HOOKER ST	0.5	1.7	37.2	0.3	1.3	35.4	0.4	1	35	0.5	1.4	33.9	0.3	1.5	33.6	0.4	1.3	29.8	0.2	1.4	28.9
21 - 1191 - CAMBRIDGE ST @ LINCOLN ST	0.3	0.3	37.2	0.4	0.1	35.7	0.3	0.1	35.2	0.3	0.4	33.8	0.5	0.3	33.8	0.4	0.4	29.8	0.3	0.5	28.8
22 - 1193 - CAMBRIDGE ST @ FRANKLIN ST	1.4	4.1	34.7	0.8	3.6	32.9	1	4.1	32.1	0.7	3.8	30.8	0.7	3.2	31.4	0.5	3.3	27.1	0.6	2.3	27.1
23 - 1195 - CAMBRIDGE ST @ EMERY RD	1.3	2.4	33.6	1.1	2.6	31.4	0.8	2.4	30.5	1.1	1.9	30	1.2	2.6	30.1	1	2.4	25.7	0.4	1.9	25.6
24 - 926 - BRIGHTON AVE @ CAMBRIDGE ST	2.8	1.9	34.5	2.4	2.7	31.2	2.5	2.1	31	2.1	1.7	30.4	2.1	2	30.2	2.7	1.5	26.9	2	1.7	26
25 - 927 - BRIGHTON AVE @ ALLSTON ST	1.4	2.8	33.1	1.1	2.7	29.6	1	2.8	29.2	1.1	2.8	28.7	1.5	2.6	29.1	1	2.3	25.7	1.2	2.5	24.6
26 - 10928 - HARVARD AVE @ BRIGHTON AVE	3.1	1.2	35	2.3	1.5	30.3	2.2	1.7	29.6	1.9	1.8	28.7	2.8	2.6	29.4	1.1	2.1	24.7	1.7	1.6	24.8
27 - 1302 - HARVARD AVE @ COMMONWEALTH AV	4.2	7	32.2	3.3	6.7	26.9	3.9	6.6	26.9	4	6.8	25.9	3.8	6.8	26.3	3.2	4.9	23	3.4	4.1	24.1
28 - 11302 - HARVARD ST @ VERNDAL ST	1.6	1.1	32.6	1.2	0.7	27.4	1.6	1.1	27.4	1.4	1	26.3	1.6	0.8	27.2	0.8	0.9	22.9	1.2	1.3	24
29 - 1304 - HARVARD ST @ COOLIDGE ST	0.9	1	32.4	0.7	0.8	27.3	0.3	1.3	26.5	0.6	1.1	25.8	0.6	0.7	27.1	0.3	0.6	22.6	0.6	0.7	23.9
30 - 1306 - HARVARD ST @ SHAILER ST	0.8	1	32.2	0.6	1.3	26.6	0.8	1.4	25.9	1.2	1.2	25.8	0.9	0.9	27.1	0.3	0.7	22.2	0.4	0.7	23.5
31 - 1308 - HARVARD ST @ BEACON ST	5	5.9	31.4	4.1	5.3	25.4	3.7	5	24.6	4.2	6.1	23.9	4.1	4.9	26.3	2.5	3.5	21.2	4	4.9	22.6
32 - 1309 - HARVARD ST @ MARION ST	1.4	0.6	32.1	1.6	1.2	25.8	1.1	0.9	24.8	1.3	0.9	24.3	1.4	1	26.7	1.4	1.2	21.4	1.3	1.6	22.3
33 - 1310 - HARVARD ST @ HARRIS ST	0.9	0.8	32.2	0.7	0.8	25.6	0.7	0.7	24.9	0.9	0.7	24.5	1	0.4	27.4	0.4	0.3	21.5	0.5	0.8	22.1
34 - 1311 - HARVARD ST @ SCHOOL ST	0.6	1.6	31.3	0.7	1.6	24.7	0.8	1.6	24.1	0.8	1.4	23.9	0.4	0.7	27.1	0.3	0.8	21	0.7	1	21.8
35 - 1313 - HARVARD ST @ WASHINGTON ST	0.8	2.4	29.6	0.7	2.3	23.1	0.5	3.1	21.4	1.2	2.5	22.7	1.2	2.4	25.8	1	1.8	20.1	1	1.5	21.3
36 - 1555 - WASHINGTON ST @ WALNUT	1.3	2	28.9	1.2	1.9	22.4	1.2	1.8	20.8	1.3	1.3	22.7	1.8	1.8	25.8	1	1.3	19.8	1	1.4	20.9
37 - 1314 - HUNTINGTON AVE @ S HUNTINGTON	0.7	4	25.6	0.6	3.5	19.6	0.8	3	18.5	0.7	4	19.3	0.4	4.1	22.2	0.4	3.3	16.9	0.7	3.8	17.8
38 - 1315 - HUNTINGTON AVE @ PARKER HILL	0.9	2.2	24.3	0.8	2.1	18.3	1.2	1.5	18.3	0.5	1.3	18.5	0.5	1.2	21.5	0.7	1.2	16.4	0.7	1.3	17.1
39 - 1317 - HUNTINGTON AVE OPP FENWOOD RD	0.7	2	23	0.5	0.9	17.8	0.9	1.4	17.7	1	1.6	17.8	0.7	1.7	20.5	0.4	1.5	15.3	0.3	1.5	15.9
40 - 1319 - TREMONT ST OPP WIGGLESWORTH S	4	1.4	25.6	2.9	1	19.8	3.5	1.1	20.1	3.7	0.9	20.7	3.8	1.3	23.1	3.7	0.9	18.1	2.5	1.1	17.3
41 - 1320 - TREMONT ST @ SAINT ALPHONSUS	0.3	0.6	25.3	0.1	0.8	19.1	0.3	1.1	19.3	0.4	1.2	19.9	0.5	0.9	22.6	0.4	0.8	17.7	0.4	0.8	16.9
42 - 1322 - TREMONT ST @ SEWALL ST	0.1	1.2	24.3	0.1	0.8	18.4	0.2	1.3	18.3	0	1	18.9	0.1	1	21.7	0.1	1.2	16.7	0.1	0.8	16.1
43 - 1323 - TREMONT ST @ COLUMBUS AVE	0.6	7.2	17.8	0.7	6.3	12.8	0.7	6.5	12.5	0.8	7.3	12.4	0.4	7.5	14.6	0.5	6	11.2	0.5	5.6	11
44 - 11257 - MALCOLM X BLVD @ KING ST	0.5	4.1	14.2	0.4	2.8	10.4	0.5	2	10.9	0.4	2.1	10.7	0.3	1.6	13.3	0.2	1.5	9.9	0.4	2.3	9.2
45 - 1259 - MALCOLM X BLVD OPP MADISON PA	0	0.2	14	0	0.1	10.3	0	0.3	10.6	0	0.4	10.3	0	0.4	12.9	0	0	9.9	0	0	9.2
46 - 11323 - MALCOLM X BLVD OPP O'BRYANT H	0	0.4	13.6	0	0.4	9.9	0.1	0.5	10.2	0.2	1	9.4	0.1	1.2	11.8	0.1	0.8	9.2	0.1	0.2	9.1
47 - 11259 - MALCOLM X BLVD @ SHAWMUT AVE	0	2.2	11.5	0	1.6	8.3	0	1.8	8.4	0	1.8	7.6	0	1.9	9.9	0	1.4	7.8	0	1.3	7.8
48 - 64000 - DUDLEY STATION	0	11.2	0.3	0	8.3	0	0	8.3	0.1	0	7.6	0	0	9.8	0.1	0	7.8	0	0	7.8	0
Maximum			39			36.8			37			36			35.8			32.2			31
Total	79.2	79.8		70.8	70.5		73.4	73.1		73.4	72.9		72.3	73.2		61.4	61.1		61.5	61.7	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name												
	19:29 (66.6)(B326) [35] {FA19}			19:41 (66.6)(B325) [46] {FA19}			19:53 (66.6)(B322) [45] {FA19}			Total		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
13 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	15	0	15.4	14	0	14.1	12.8	0	12.8	919.4	0	928.7
14 - 32549 - ELIOT ST @ BENNETT ST	8.4	0.1	23.7	10.3	0	24.4	10.2	0	23	722.5	6.4	1648
15 - 2550 - JFK ST @ ELIOT ST	3.9	0.2	27.7	4	0	28.4	4.7	0.1	27.4	286.6	7.7	1924.4
16 - 2551 - N HARVARD ST @ GATE 2 HARVARD	1.1	0.1	28.6	0.8	0.1	29.1	0.8	0.1	28.2	75.3	28.6	1969.2
17 - 2553 - N HARVARD ST @ WESTERN AVE	2.8	2.1	29.3	2.7	2.1	29.7	2.3	2	28.5	185.8	140	2015.3
18 - 2554 - N HARVARD ST @ FRANKLIN ST	1.5	1.1	29.2	1	1.2	29.5	1.1	1.8	27.8	208.7	79.5	2147
19 - 2555 - N HARVARD ST @ COOLIDGE RD	0.4	1.3	28.3	0.1	1.8	27.9	0.6	1.5	26.9	74.2	64.3	2156.5
20 - 2556 - N HARVARD ST @ HOOKER ST	0.4	1.5	27.6	0.2	1.2	26.9	0.2	1.1	26	89	100.1	2146.1
21 - 1191 - CAMBRIDGE ST @ LINCOLN ST	0.4	0.7	27.2	0.3	0.4	26.8	0.2	0.2	26	81.9	17.1	2208.5
22 - 1193 - CAMBRIDGE ST @ FRANKLIN ST	0.5	2.8	24.9	0.4	2.6	24.6	0.4	2.7	23.6	70.5	188.3	2091.2
23 - 1195 - CAMBRIDGE ST @ EMERY RD	0.4	2.3	22.5	0.5	2.3	22.9	0.4	2.8	21.3	107.5	178.9	2021.8
24 - 926 - BRIGHTON AVE @ CAMBRIDGE ST	2.9	2.3	23.1	2.6	1.9	23.6	2.6	2.3	21.6	388.1	194.2	2357.5
25 - 927 - BRIGHTON AVE @ ALLSTON ST	1.2	1.9	22.5	0.7	2.2	22.1	0.7	2	20.4	193.9	149.8	2403.8
26 - 10928 - HARVARD AVE @ BRIGHTON AVE	1.4	1.5	22.4	1.2	1	22.3	1.9	1.1	21.2	272	108.5	2565.6
27 - 1302 - HARVARD AVE @ COMMONWEALTH AV	4.1	4.7	22.4	4.5	5.3	21.6	4.1	4.6	20.7	562.1	345.4	2782.5
28 - 11302 - HARVARD ST @ VERNDAL ST	1.3	0.8	22.9	1.6	0.7	22.5	2.2	0.7	22.2	186.5	55.7	2914.1
29 - 1304 - HARVARD ST @ COOLIDGE ST	0.7	0.5	23.1	0.7	0.7	22.5	0.9	0.6	22.4	81.7	58.9	2937.3
30 - 1306 - HARVARD ST @ SHAILER ST	0.5	0.5	23.1	0.5	0.6	22.4	0.4	0.5	22.2	62.4	72	2927.9
31 - 1308 - HARVARD ST @ BEACON ST	3.1	4.5	21.7	3.1	4.5	21.1	4	4.6	21.6	324.3	385.6	2866.5
32 - 1309 - HARVARD ST @ MARION ST	1.1	0.7	22.1	1	1.2	21	0.4	0.9	21.2	87.8	53.2	2901.8
33 - 1310 - HARVARD ST @ HARRIS ST	0.7	0.6	22.2	0.8	0.8	21	0.5	1.1	20.6	69.9	50.9	2920.7
34 - 1311 - HARVARD ST @ SCHOOL ST	0.7	1.3	21.5	0.6	1	20.6	0.3	0.5	20.4	75	91.8	2903.7
35 - 1313 - HARVARD ST @ WASHINGTON ST	2.2	1.8	21.9	1.2	2	19.8	1.2	1.6	20.1	128.4	225.9	2806.9
36 - 1555 - WASHINGTON ST @ WALNUT	1.5	0.9	22.6	2	1.3	20.5	2.4	1.5	21	145.1	107.1	2844.6
37 - 1314 - HUNTINGTON AVE @ S HUNTINGTON	0.8	4.1	19.3	0.7	3.3	18	0.7	3.6	18.1	107.6	278.5	2673.6
38 - 1315 - HUNTINGTON AVE @ PARKER HILL	1.1	1.2	19.3	0.9	1	17.8	0.7	1	17.9	157.5	134.1	2697.1
39 - 1317 - HUNTINGTON AVE OPP FENWOOD RD	0.5	1.2	18.5	0.8	1.4	17.2	0.5	0.9	17.4	165.5	520.4	2342.4
40 - 1319 - TREMONT ST OPP WIGGLESWORTH S	2.7	0.9	20.4	2.7	0.7	19.2	2.6	1.1	18.9	430.2	114.8	2657.5
41 - 1320 - TREMONT ST @ SAINT ALPHONSUS	0.7	0.9	20.3	0.4	0.7	18.9	0.3	0.7	18.5	51.7	88.1	2621.5
42 - 1322 - TREMONT ST @ SEWALL ST	0.2	0.8	19.7	0	0.6	18.3	0.2	0.8	17.9	23.6	102.2	2543.2
43 - 1323 - TREMONT ST @ COLUMBUS AVE	0.5	6.5	13.6	0.3	7.2	11.5	0.4	6.8	11.5	187.7	810	1921.6
44 - 11257 - MALCOLM X BLVD @ KING ST	0.3	2.8	11.1	0.5	2.3	9.7	0.5	2.4	9.6	70.6	264.1	1727.7
45 - 1259 - MALCOLM X BLVD OPP MADISON PA	0	0.1	11	0	0.1	9.6	0	0	9.5	3.7	48	1684.8
46 - 11323 - MALCOLM X BLVD OPP O'BRYANT H	0	0.2	10.8	0	0.2	9.4	0	0.1	9.4	8.4	207.8	1485.2
47 - 11259 - MALCOLM X BLVD @ SHAWMUT AVE	0	1	9.9	0	1.3	8.1	0	1	8.4	4.7	232.2	1259.4
48 - 64000 - DUDLEY STATION	0	9	0.9	0	7.9	0.2	0	8.4	0	0.3	1219.9	40.6
Maximum			29.3			29.7			28.5			2937.3
Total	63	62.9		61.1	61.6		61.2	61.1		6754.7	6762	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	06:00 (66.6)(B341) [33] {FA19}			06:10 (66.6)(B319) [42] {FA19}			06:17 (66.5)(B068) [12] {FA19}			06:18 (66.6)(B320) [11] {FA19}			06:22 (66.5)(B098) [7] {FA19}			06:26 (66.6)(B329) [35] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
8 - 64000 - DUDLEY STATION	25.3	0	25.3	15.5	0	15.5	19.6	0	19.6	11	0	11	14.7	0	14.7	14.8	0	14.8
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	2.7	0.1	27.9	1.2	0	17	1.8	0	21.3	0.2	0	11.2	1.1	0	15.9	1.8	0	16.6
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	1.8	0	29.7	1.9	0	18.8	0.8	0.1	22.1	1.4	0	12.8	0.7	0	16.6	1.3	0.1	17.9
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	3.5	0	33.2	1.5	0	20.3	0.5	0.1	22.5	0.2	0	13	0	0	16.6	0.1	0	18
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	1.2	0.2	34.2	1.1	0	21.3	0.3	0	22.8	0.4	0	13.4	0.3	0	16.9	0.7	0	18.7
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	7.6	0.5	41.4	6.9	0.5	27.3	5.6	0.4	28	3.4	0.2	16.5	6.4	0.3	23	6.2	0.7	24.2
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	0.9	0.2	42.1	0.5	0	27.7	0	0	28	1	0	17.5	0	0	23	0.1	0	24.3
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	0.5	0	42.6	0.5	0.1	28.1	0.3	0	28.3	0.2	0	17.7	0.3	0.1	23.1	0.2	0.1	24.5
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	0.9	14.2	29.4	1.1	10.4	18.8	0.4	8.3	20.3	0.3	6.1	11.9	0.3	6.6	16.9	0.3	8	16.7
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	0.2	0.1	29.5	0.2	1	18	0.1	1	19.4	0.3	0.4	11.8	0.1	0.3	16.7	0.6	0.7	16.7
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	0.8	0.1	30.3	0.5	0.1	18.4	0.5	0.2	19.8	0.8	0	12.6	1.4	0.3	17.9	2	0.3	18.3
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	3.8	1.3	32.8	2.8	0.8	20.4	1.2	0.8	20.2	3.3	0.3	15.6	1.9	0.3	19.4	2.1	0.3	20.1
20 - 1526 - WASHINGTON ST @ PEARL ST	0.6	3.7	29.8	0.3	2.5	18.2	0.1	1	19.3	0.9	2	14.5	0.3	3.4	16.3	0.9	3	18.1
21 - 1367 - HARVARD ST @ KENT ST	0.3	1	29.1	0.3	0.8	17.7	0.2	0.8	18.7	0.1	0.2	14.5	0.1	1.1	15.3	0.2	1.1	17.3
22 - 1369 - HARVARD ST @ ASPINWALL AVE	0.3	0.1	29.3	0.4	0.1	18	0	0.1	18.6	0.5	0.2	14.7	0.1	0	15.4	0.3	0.1	17.5
23 - 1371 - HARVARD ST OPP VERNON ST	1.1	1.2	29.2	0.5	0.9	17.7	0	0.1	18.5	0	0.3	14.5	0	0.4	15	0.5	0.5	17.4
24 - 1372 - HARVARD ST @ BEACON ST	2.5	1.1	30.6	3.1	2	18.8	1.1	2.5	17.1	1.5	0.8	15.1	0	2.4	12.6	1.8	1.3	17.9
25 - 1373 - HARVARD ST @ STEDMAN ST	0.2	0.9	29.9	0.1	0.6	18.3	0.1	0.1	17.1	0.3	0.1	15.3	0	0.3	12.3	0.2	0.2	18
26 - 1375 - HARVARD ST @ COOLIDGE ST	0.1	0.4	29.7	0.1	0.2	18.2	0	0	17.1	0.2	0.1	15.4	0	0	12.3	0.4	0.4	18
27 - 1376 - HARVARD ST OPP VERNDAL ST	0.1	0.1	29.7	0.9	0.2	18.8	0.1	0.4	16.8	1.3	0.3	16.4	0	0	12.3	0.7	0.1	18.6
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	5.8	2.9	32.6	3.7	1.9	20.7	0.3	1.5	15.5	2.7	0.7	18.4	0.6	0.9	12	3.2	1.2	20.7
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	0.8	0.4	33	0.3	0.7	20.3	0	1	14.5	0.7	1	18.1	0	1.4	10.6	0.8	1.5	19.9
30 - 964 - BRIGHTON AVE OPP QUINT AVE	1.8	6.8	27.9	1.1	3.5	17.9	0.7	3.6	11.6	0.5	2.5	16.1	0.1	2	8.7	1.9	2.6	19.2
52 - 1111 - CAMBRIDGE ST OPP HANO ST	1.7	3.4	26.2	1.8	3.8	16	.	.	.	1.5	3	14.5	.	.	.	2.2	3.5	17.9
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	0	0	26.2	0	0.1	16	.	.	.	0	0.2	14.4	.	.	.	0.1	0.1	17.8
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	2.6	0.2	28.6	1.5	0	17.5	.	.	.	1.9	0.4	15.9	.	.	.	2.4	1.4	18.8
55 - 2558 - N HARVARD ST @ EMPIRE ST	3.8	0.9	31.5	1.2	0.4	18.3	.	.	.	1.8	0	17.7	.	.	.	2.4	0.4	20.9
56 - 2559 - N HARVARD ST @ OXFORD ST	2	0.2	33.4	2.8	0	21	.	.	.	1	0	18.7	.	.	.	2.6	0.4	23.1
57 - 2560 - N HARVARD ST @ KINGSLEY ST	0.7	0.7	33.4	0.9	0.4	21.6	.	.	.	2.7	0.4	21.1	.	.	.	1.5	0.4	24.2
58 - 2561 - N HARVARD ST @ WESTERN AVE	1.5	11.3	23.6	1.3	3.8	19.1	.	.	.	0.4	0.8	20.6	.	.	.	1	1.2	24.1
59 - 2564 - N HARVARD ST OPP HARVARD STAD	0.1	1.2	22.4	0	0.7	18.4	.	.	.	0.2	0.5	20.3	.	.	.	0.5	0.6	24
60 - 25641 - JFK ST @ ELIOT ST	0.2	22.4	0.4	0.2	18.2	0.4	.	.	.	0.5	20.5	0.5	.	.	.	0.4	23.4	1.3
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	0	0.2	0.2	0	0.3	0.1	.	.	.	0	0.2	0.4	.	.	.	0	1	0.3
Maximum			42.6			28.1			28.3			21.1			23.1			24.5
Total	75.4	75.8		54.2	54		35	34.9		41.2	41.2		29	29.7		54.2	54.6	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	06:27 (66.5)(B021) [7] {FA19}			06:31 (66.5)(B061) [8] {FA19}			06:34 (66.6)(B331) [41] {FA19}			06:35 (66.5)(B023) [8] {FA19}			06:39 (66.5)(B073) [11] {FA19}			06:42 (66.6)(B333) [33] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
8 - 64000 - DUDLEY STATION	10.3	0	10.3	11.8	0	11.8	10	0	10	12.1	0	12.1	8.2	0	8.2	12.5	0	12.5
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	1.1	0	11.4	2.8	0	14.5	0.9	0	10.9	1.3	0	13.4	1.5	0	9.6	1.4	0.1	13.8
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	0.6	0	12	1.1	0.1	15.5	0.5	0.1	11.3	2.5	0	15.9	1.2	0	10.8	1.1	0.2	14.7
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	0	0	12	0	0	15.5	0.1	0.2	11.2	0	0	15.9	0	0	10.8	0.1	0.2	14.7
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	0.9	0.1	12.7	0.1	0	15.6	0.8	0	12	0.4	0	16.3	0.5	0	11.4	0.5	0.1	15.1
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	3.9	0.1	16.4	9.1	0.1	24.6	6.1	0.4	17.6	15.4	0.8	30.9	9.3	0.5	20.2	5.5	0.6	20.1
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	0	0	16.4	0.1	0	24.8	0.2	0.2	17.6	0.8	0.1	31.5	0	0.1	20.1	0.1	0.1	20.1
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	0	0	16.4	0	0.1	24.6	0.1	0	17.7	0	0.1	31.4	0	0.1	20	0.1	0.2	20
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	0.3	5.6	11.1	0.1	9.3	15.5	0.4	6.8	11.2	1	8.6	23.8	1.6	4	17.6	0.7	6.4	14.3
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	0	0.9	10.3	0.3	0.3	15.5	1.1	0.4	12	0.1	0.3	23.6	0.6	0.2	18.1	1	0.6	14.6
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	0.3	0	10.6	1	0.3	16.3	0.7	0	12.6	0.3	0	23.9	1.2	0	19.3	0.9	0.3	15.2
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	1.7	0	12.3	0.4	0	16.6	1.4	0.2	13.7	1	0.4	24.5	0.6	0	19.9	1.4	0.3	16.3
20 - 1526 - WASHINGTON ST @ PEARL ST	0	0.7	11.6	0.3	1.6	15.3	0.8	1.9	12.6	0.6	1	24.1	0.1	1.2	18.8	0.8	2.2	14.8
21 - 1367 - HARVARD ST @ KENT ST	0.1	0.4	11.3	0.1	1.4	14	0.4	0.6	12.4	0.1	0.4	23.9	0	0.3	18.5	0.5	0.6	14.8
22 - 1369 - HARVARD ST @ ASPINWALL AVE	0.1	0.4	11	0	0.1	13.9	0.3	0.1	12.5	0.1	0.1	23.9	0.2	0.1	18.6	0.4	0.1	15.2
23 - 1371 - HARVARD ST OPP VERNON ST	0.3	0.1	11.1	0.1	0.4	13.6	0.4	0.5	12.4	0.3	0.1	24	0.1	0.1	18.6	1	0.3	15.8
24 - 1372 - HARVARD ST @ BEACON ST	0.8	1.3	10.8	0.6	0.4	13.9	1.3	1.1	12.7	0.5	1.4	23.1	0.5	0.6	18.5	2.3	1.3	16.8
25 - 1373 - HARVARD ST @ STEDMAN ST	0	0	10.8	0	0.1	13.8	0.2	0.3	12.6	0	0.3	22.9	0	0.3	18.3	0.2	0.4	16.6
26 - 1375 - HARVARD ST @ COOLIDGE ST	0	0.2	10.7	0	0.5	13.3	0.8	0.2	13.1	0	0	22.9	0	0	18.3	0.4	0.4	16.6
27 - 1376 - HARVARD ST OPP VERNDAL ST	0	0.3	10.3	0	0.1	13.1	0.7	0.1	13.7	0	0	22.9	0.1	0	18.4	0.7	0.2	17.1
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	0	0.2	10.2	0.3	0.8	12.6	3.4	0.4	16.7	0	1.3	21.6	0.3	0.2	18.5	3.9	1.1	19.8
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	0	0.3	9.8	0.1	0.3	12.5	1	0.6	17.1	0.1	0.6	21.1	0	0.5	18	1.1	0.5	20.4
30 - 964 - BRIGHTON AVE OPP QUINT AVE	0.2	1.7	8.3	0.8	2.4	10.9	2	2.5	16.7	0.8	1.8	20.1	1.1	1.3	17.8	2	3.4	19
52 - 1111 - CAMBRIDGE ST OPP HANO ST	.	.	.	.	.	.	3.9	2	18.6	.	.	.	.	.	.	3.7	2.5	20.2
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	.	.	.	.	.	.	0.2	0.1	18.6	.	.	.	.	.	.	0	0.1	20.2
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	.	.	.	.	.	.	2.1	0.3	20.4	.	.	.	.	.	.	2.2	0.2	22.2
55 - 2558 - N HARVARD ST @ EMPIRE ST	.	.	.	.	.	.	2.3	0.2	22.5	.	.	.	.	.	.	3.2	0.4	24.9
56 - 2559 - N HARVARD ST @ OXFORD ST	.	.	.	.	.	.	3.1	0.9	24.7	.	.	.	.	.	.	3.2	0.2	27.8
57 - 2560 - N HARVARD ST @ KINGSLEY ST	.	.	.	.	.	.	1.9	0.4	26.2	.	.	.	.	.	.	1.8	0.3	29.4
58 - 2561 - N HARVARD ST @ WESTERN AVE	.	.	.	.	.	.	1.1	1.3	26.1	.	.	.	.	.	.	1.7	1.6	29.5
59 - 2564 - N HARVARD ST OPP HARVARD STAD	.	.	.	.	.	.	0.3	1	25.3	.	.	.	.	.	.	0.1	1	28.6
60 - 25641 - JFK ST @ ELIOT ST	.	.	.	.	.	.	0.3	25.5	0.4	.	.	.	.	.	.	1.7	29.7	2
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	.	.	.	.	.	.	0	0.2	0.2	.	.	.	.	.	.	0	0.3	1.7
Maximum			16.4			24.8			26.2			31.5			20.2			29.5
Total	21.8	22.4		30.2	30.4		48.8	48.5		38.7	38.7		28.1	28.4		56.2	55.9	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	06:43 (66.5)(B055) [7] {FA19}			06:47 (66.5)(B100) [5] {FA19}			06:50 (66.5)(B075) [9] {FA19}			06:50 (66.6)(B334) [34] {FA19}			06:58 (66.6)(B335) [21] {FA19}			07:00 (66.5)(B034) [11] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
8 - 64000 - DUDLEY STATION	5.6	0	5.6	9.2	0	9.2	11.3	0	11.3	11.1	0	11.1	9	0	9.3	24.5	0	24.5
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	0.6	0	6.1	0.4	0.4	9.2	2.1	0.1	13.3	1.4	0.1	12.5	1.2	0.2	10.5	4.3	0.2	28.6
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	0.4	0	6.6	0	0	9.2	0.6	0	13.9	0.6	0.1	12.9	1.6	3.8	9.1	1.8	0.1	30.4
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	0.1	0	6.7	0	0	9.2	0	0	13.9	0	0	12.9	0	0.2	9	0	0	30.4
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	0.6	0	7.3	0	0	9.2	0.1	0	14	0.6	0.3	13.2	0.6	0.2	9.4	0.9	0.1	31.2
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	8.1	0.3	15.1	9	0	18.2	15.2	0.1	29.1	8.2	0.4	21.1	11.7	1	20.2	16	1	46.2
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	0.4	0	15.6	0.2	0.2	18.2	0.7	0	29.8	0.2	0.1	21.2	2.1	0.5	21.9	0.5	0.1	46.5
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	0	0	15.6	0	0.2	18	0.4	0	30.2	0.3	0.2	21.3	1	0.2	22.7	0.1	0.3	46.4
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	0.9	5.1	11.3	0.4	2	16.4	0.2	5.3	25.1	0.7	5.6	16.4	0.9	7	16.6	1.9	8.9	39.4
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	1.4	0	12.7	0.6	0.6	16.4	2.3	0.4	27	1.4	1	16.7	1.7	2.7	16.1	1.5	1.4	39.5
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	0.9	0.3	13.3	2.4	0	18.8	1.1	0.4	27.7	0.8	0.2	17.3	1.9	0.1	17.8	1.5	0.5	40.5
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	1.1	0.1	14.3	0.8	0	19.6	2.2	0.3	29.6	2.3	0.5	19.1	3.2	0.7	20.3	3.3	0.9	42.8
20 - 1526 - WASHINGTON ST @ PEARL ST	0	1.7	12.6	0	1	18.6	0.1	1.9	27.8	0.6	3	16.7	0.8	3	18	1.5	3.8	40.5
21 - 1367 - HARVARD ST @ KENT ST	0.1	0.1	12.6	0	0.4	18.2	0.2	1	27	0.6	0.9	16.4	0.5	1.3	17.2	1	1.5	40
22 - 1369 - HARVARD ST @ ASPINWALL AVE	0.1	0	12.7	0.2	0.2	18.2	0	0.2	26.8	0.8	0.2	17	1.6	0.2	18.6	0.7	0.5	40.3
23 - 1371 - HARVARD ST OPP VERNON ST	0	0.4	12.3	0.2	0.2	18.2	0.6	0.3	27	1.1	0.2	17.9	1.3	0.4	19.5	0.5	0.7	40
24 - 1372 - HARVARD ST @ BEACON ST	0.1	1	11.4	0.4	1	17.6	0.6	1.1	26.4	2.6	1.7	18.8	3.1	2	20.7	1	2.6	38.4
25 - 1373 - HARVARD ST @ STEDMAN ST	0.1	0.4	11.1	0	0	17.6	0	0.4	26	0.4	0.4	18.9	0.5	0.8	20.4	0.4	1.5	37.3
26 - 1375 - HARVARD ST @ COOLIDGE ST	0	0.3	10.9	0	0	17.6	0.2	0.1	26.1	0.4	0.4	18.8	2.4	0.3	22.5	0.3	0.5	37.1
27 - 1376 - HARVARD ST OPP VERNDAL ST	0	0	10.9	0	0	17.6	0	0.2	25.9	1.1	0.2	19.7	1.6	0.3	23.7	0.1	0.5	36.6
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	0	0.4	10.4	0.2	0.4	17.4	0.3	0.9	25.3	4.1	1.1	22.7	4.8	1.4	27.1	0.5	1.5	35.7
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	0	0.3	10.1	0	0.4	17	0.4	1	24.8	1.2	0.5	23.4	1.2	0.7	27.7	0.2	0.8	35.1
30 - 964 - BRIGHTON AVE OPP QUINT AVE	1.4	0	11.6	2.2	2.4	16.8	1.8	2.7	23.9	3.7	3.8	23.3	3.6	7.6	23.8	3.6	3	35.7
52 - 1111 - CAMBRIDGE ST OPP HANO ST	.	.	.	.	.	.	.	.	.	4.4	2.2	25.5	5.5	2	27.7	.	.	.
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	.	.	.	.	.	.	.	.	.	0	0.1	25.5	0.4	0.3	27.8	.	.	.
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	.	.	.	.	.	.	.	.	.	3.2	0.3	28.4	3.6	0.3	30.5	.	.	.
55 - 2558 - N HARVARD ST @ EMPIRE ST	.	.	.	.	.	.	.	.	.	3.6	0.6	31.4	3.7	0.8	33.4	.	.	.
56 - 2559 - N HARVARD ST @ OXFORD ST	.	.	.	.	.	.	.	.	.	1.6	0.4	32.6	2	0.4	35	.	.	.
57 - 2560 - N HARVARD ST @ KINGSLEY ST	.	.	.	.	.	.	.	.	.	1.9	1.1	33.4	4	1.5	37.4	.	.	.
58 - 2561 - N HARVARD ST @ WESTERN AVE	.	.	.	.	.	.	.	.	.	1.6	1.3	33.7	1.7	1.3	37.8	.	.	.
59 - 2564 - N HARVARD ST OPP HARVARD STAD	.	.	.	.	.	.	.	.	.	0.1	0.8	33.1	0.2	1.7	36.2	.	.	.
60 - 25641 - JFK ST @ ELIOT ST	.	.	.	.	.	.	.	.	.	0.9	33.4	1.4	1.5	36	2.7	.	.	.
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	.	.	.	.	.	.	.	.	.	0	0.6	0.8	0	0	2.7	.	.	.
Maximum			15.6			19.6			30.2			33.7			37.8			46.5
Total	24.3	24.3		32.4	34.4		42.9	42.7		61.5	61.7		78.9	78.9		68.3	68.2	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name																				
	07:05 (66.6)(B337) [40] {FA19}			07:12 (66.6)(B338) [25] {FA19}			07:20 (66.6)(B339) [40] {FA19}			07:28 (66.6)(B340) [30] {FA19}			07:36 (66.6)(B326) [29] {FA19}			07:44 (66.6)(B341) [32] {FA19}			07:52 (66.6)(B319) [32] {FA19}	
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off
8 - 64000 - DUDLEY STATION	13.4	0	13.4	12.1	0	12.1	22.8	0	22.8	25	0	25	21.2	0	21.2	18.8	0	18.8	18	0
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	1.6	0.1	15	2.2	0	14.3	2.8	0.2	25.5	2.6	0.2	27.4	3.2	0.1	24.3	1.8	0	20.5	2.4	0.1
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	0.8	0.1	15.7	0.5	0.1	14.7	0.6	0.3	25.8	1.3	0.3	28.5	1	0.5	24.8	0.4	0.1	20.9	0.9	0.2
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	0	0	15.7	0	0.1	14.6	0.2	0	26	0.3	0.1	28.7	0.2	0	25	0.2	0.1	21	0.1	0
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	0.4	0.1	16	0.8	0	15.4	1.1	0	27.1	1	0.1	29.6	0.9	0.1	25.8	0.8	0.1	21.6	1.1	0.1
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	11.5	0.3	27.1	11.6	0.4	26.6	18.3	0.9	44.6	16.9	1.5	45	13	0.9	37.9	11	0.5	32.1	14.5	0.6
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	0.9	0.2	27.8	0.4	0.2	26.8	0.4	0.6	44.4	0.9	1.1	44.8	0.8	0.4	38.2	0.6	0.4	32.3	1	0.8
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	0.8	0.1	28.5	0.4	0.2	27	0.6	0.5	44.5	1.5	0.6	45.6	0.9	1.1	38	1.4	0.8	32.9	1.8	0.9
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	1.3	9.4	21.1	1	6.7	21.3	2.2	12.4	34.3	2.6	13.6	34.6	2.2	11.9	28.3	1.2	11	23.1	1.3	11.9
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	1.7	2	20.8	1.2	2.2	20.3	1.6	4.2	31.7	1.1	6.3	29.4	1.3	5.3	24.2	0.7	4.5	19.3	1.4	5.7
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	2.2	0.5	22.5	1.4	0.3	21.4	2.3	0.8	33.3	2.1	0.5	31	2	0.8	25.4	0.7	0.6	19.5	1.3	0.6
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	3	0.5	24.9	2.6	0.3	23.7	4	0.8	36.4	3.6	0.6	34	3.7	0.7	28.4	2.1	0.4	21.1	3.6	0.4
20 - 1526 - WASHINGTON ST @ PEARL ST	0.7	2.6	23	0.6	3.1	21.2	1.2	6.1	31.5	1.3	7.2	28.2	1.6	5.6	24.4	1	3.6	18.5	3.1	4.2
21 - 1367 - HARVARD ST @ KENT ST	1.1	1.3	22.8	0.6	1	20.8	1.7	2.2	31	1.2	2.1	27.3	1.6	1.6	24.4	0.3	1.6	17.2	1.5	1.3
22 - 1369 - HARVARD ST @ ASPINWALL AVE	1.8	0.4	23.7	1.4	0.1	22.2	2.7	0.7	33	3.3	0.7	29.8	3.9	0.7	27.7	1.9	0.5	18.6	3.2	0.9
23 - 1371 - HARVARD ST OPP VERNON ST	1	0.3	24.9	1.3	0.4	23	2.4	0.7	34.8	2.1	0.9	31	1.6	0.8	28.5	0.8	0.8	18.6	1.3	1.2
24 - 1372 - HARVARD ST @ BEACON ST	3.3	1.5	26.2	4.1	2.4	24.8	5.7	4	36.5	5	3.9	32.1	4.7	3.7	29.6	4.6	2.1	21.1	6.9	5.3
25 - 1373 - HARVARD ST @ STEDMAN ST	0.9	1	26.1	0.7	1.2	24.4	2.6	1.5	37.6	3.6	0.9	34.8	2.3	0.7	31.1	2.1	0.6	22.6	1.9	0.9
26 - 1375 - HARVARD ST @ COOLIDGE ST	0.8	0.4	26.5	0.9	0.4	24.9	1.2	0.5	38.4	1.2	0.4	35.6	0.8	0.2	31.7	0.9	0.3	23.2	1.6	0.4
27 - 1376 - HARVARD ST OPP VERNDALE ST	2.7	0.3	28.9	2	0.2	26.6	1.8	0.3	39.9	2.5	0.1	38	2.1	0.4	33.3	1.5	0.2	24.5	2	0.3
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	5.5	1.9	32.5	4.2	2.2	28.6	6.3	3.1	43.1	8.2	2.6	43.6	6.9	2.6	37.6	6.2	2.2	28.5	6.8	2.8
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	1.1	0.2	33.3	1.4	0.2	29.8	1.5	0.7	43.9	0.8	0.6	43.9	1.6	0.5	38.6	1.3	0.6	29.2	1.4	0.6
30 - 964 - BRIGHTON AVE OPP QUINT AVE	2.8	6.3	29.8	2.8	5.6	27	3.4	8.5	38.8	3.6	7.6	40	2.9	5	36.6	2.2	3.4	27.9	3.2	3.6
52 - 1111 - CAMBRIDGE ST OPP HANO ST	4.3	2.5	31.5	3.7	2.3	28.3	4.7	2.1	41.3	3.9	2.5	41.4	4.3	3	38.8	2.7	2.5	28.1	4.5	3
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	0.1	0.1	31.5	0.3	0	28.6	0.3	0.1	41.5	0.5	0	41.8	0.4	0	39.2	0	0	28.1	0.2	0.1
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	2.8	0.4	33.9	5	0.4	33.1	3.7	0.3	44.8	4.1	0.2	45.7	3.5	0.1	41.6	2.7	0.3	30.5	3.4	0.2
55 - 2558 - N HARVARD ST @ EMPIRE ST	3	0.4	36.5	3.6	0.4	36.3	3.5	0.4	47.9	2.1	0	47.8	3.3	0.3	44.6	2.8	0.1	33.2	3.4	0.2
56 - 2559 - N HARVARD ST @ OXFORD ST	2.2	0.2	38.6	2	0	38.3	3.7	0.1	51.6	2.1	0	49.8	1.9	0.1	46.4	3.1	0	36.3	1.8	0
57 - 2560 - N HARVARD ST @ KINGSLEY ST	2.7	2	39.3	2.6	1.4	39.5	2.7	1.3	53	2.8	1.5	51.2	2.3	1.1	47.5	1.7	0.8	37.2	1.7	0.7
58 - 2561 - N HARVARD ST @ WESTERN AVE	2	1.2	40.1	1.2	0.9	39.9	2	1.5	53.6	2	1.9	51.2	2.2	2	47.7	1.7	2.1	36.8	2.1	2.1
59 - 2564 - N HARVARD ST OPP HARVARD STAD	0.3	2.4	38	0.4	1.6	38.7	0.8	1.7	52.7	0.5	1.8	49.9	1	2.6	46.1	0.2	1.3	35.6	0.3	1.7
60 - 25641 - JFK ST @ ELIOT ST	1.3	38.9	1.6	2.1	40.5	2.3	1.3	53.8	1.3	0.9	50.7	0.9	1.8	46.9	2.3	0.6	36	0.6	1	47.7
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	0	0.4	1.3	0	0.3	2	0	0.1	1.2	0	0.1	0.8	0	0.7	1.6	0	0.2	0.5	0	0.3
Maximum			40.1			39.9			53.6			51.2			47.7			37.2		
Total	78	78		75.1	75.1		110.1	110.4		110.6	110.6		101.1	100.4		78	77.7		98.7	98.8

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	07:59 {FA19}	08:00 (66.6)(B320) [24] {FA19}			08:09 (66.6)(B321) [40] {FA19}			08:18 (66.6)(B328) [41] {FA19}			08:27 (66.6)(B329) [38] {FA19}			08:36 (66.6)(B331) [3] {FA19}			08:46 (66.6)(B333) [34] {FA19}		
	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
8 - 64000 - DUDLEY STATION	18	19.3	0	19.3	16.8	0	16.8	20.8	0	20.8	18.8	0	18.8	12.3	0	12.3	18.2	0	18.3
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	20.3	2.4	0.1	21.6	2.2	0.2	19.2	2.7	0.1	23.4	2.1	0.2	20.8	2	0.3	14	2.9	0.3	20.8
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	21	1.1	0	22.7	0.7	0.1	20.3	0.8	0.3	23.9	0.5	0.1	21.2	0.3	0	14.3	0.1	0.1	20.9
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	21.1	0.2	0	22.8	0.1	0	19.4	0.1	0	24	0.1	0	21.2	0	0	14.3	0	0.1	20.8
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	22	1.3	0.1	24	0.9	0.2	20.1	0.8	0.3	24.5	0.9	0.3	21.8	0.7	0	15	0.6	0.1	21.3
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	35.9	12.4	1.1	35.3	12.3	2.1	30.3	11.2	2	33.7	9.9	1.6	30.1	14.3	0.7	28.7	10	1.9	29.4
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	36.1	0.8	0.1	36	1.3	1.2	30.5	1	1	33.6	1.1	0.8	30.4	0.3	1	28	1.1	2	28.5
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	37.1	2.3	1.4	36.9	1.3	0.6	31.1	1.1	1	33.8	0.8	0.6	30.6	0.7	0.3	28.3	0.9	0.8	28.7
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	26.4	1.5	10.8	27.7	1.2	9.7	22.7	1.1	10	24.9	1	8.9	22.7	1.7	8.7	21.3	0.9	8.3	21.3
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	22.1	1.1	2.9	25.9	1.1	2.3	21.5	1.1	1.9	24.1	1.3	2	22	1	2.3	20	1	1.3	20.9
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	22.8	1.6	0.6	26.9	3.1	0.6	24	2.7	0.5	26.4	1.8	0.3	23.6	1.7	0.7	21	1.8	0.9	21.8
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	26.1	3.7	0.5	30.1	3.8	0.6	27.2	4.4	0.4	30.3	3.8	0.5	26.8	4.3	0.3	25	5.6	0.4	27
20 - 1526 - WASHINGTON ST @ PEARL ST	24.9	2.4	5.7	26.8	1.4	4.4	24.3	1.2	3	28.5	1.2	2.8	25.2	0.3	1.7	23.7	1.2	3.5	24.7
21 - 1367 - HARVARD ST @ KENT ST	25.2	1.2	2	26	1.4	1.5	24.1	1.9	2.1	28.3	1.8	1.5	25.5	1	0.7	24	2	2.1	24.6
22 - 1369 - HARVARD ST @ ASPINWALL AVE	27.5	1.9	0.9	27	2.2	0.9	25.4	1.8	1	29	1.9	0.9	26.5	1	0.7	24.3	1.7	0.6	25.8
23 - 1371 - HARVARD ST OPP VERNON ST	27.6	2.6	0.8	28.8	1.4	1	25.9	2.2	1.5	29.7	1.8	1.2	27.1	0	1.3	23	1.6	1	26.4
24 - 1372 - HARVARD ST @ BEACON ST	29.3	5.9	4	30.8	6.1	3.6	28.4	4.7	4.4	30	4.2	4.3	27	0.3	4.3	19	4	4.4	26.1
25 - 1373 - HARVARD ST @ STEDMAN ST	30.3	1.4	1	31.2	1.7	0.8	29.3	1.3	1	30.3	1.2	0.7	27.5	0	0.3	18.7	1.1	0.8	26.4
26 - 1375 - HARVARD ST @ COOLIDGE ST	31.5	0.9	0.2	31.9	1.5	0.2	30.6	1.9	0.3	31.9	1.8	0.4	28.9	0.7	0.3	19	2.3	0.5	28.2
27 - 1376 - HARVARD ST OPP VERNDAL ST	33.3	0.9	0.5	32.3	1.4	0.6	31.5	1.5	0.8	32.6	0.9	0.7	29.2	2.3	0.7	20.7	1.1	0.9	28.3
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	37.3	4.4	4.1	32.6	6.6	3.7	34.4	5.7	3.6	34.7	4.7	4.4	29.6	6.7	2	25.3	5.2	2.6	30.9
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	38.1	1.7	0.9	33.4	1.5	1.2	34.7	1.5	1.1	35.1	1.2	1.3	29.4	0.7	1.3	24.7	1.8	1.7	31
30 - 964 - BRIGHTON AVE OPP QUINT AVE	37.7	2.9	4.4	31.9	3.7	4.2	34.1	3.8	3.7	35.2	4.1	3.2	30.2	4.7	3.3	26	3.1	2.4	31.7
52 - 1111 - CAMBRIDGE ST OPP HANO ST	39.3	3.8	2.7	32.9	5.2	3.6	35.9	5	3.6	36.7	3.4	2.2	31.5	2	1.7	26.3	2.6	2.2	32.1
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	39.4	0.3	0.1	33.2	0.1	0.1	36	0.1	0.1	36.7	0.1	0.1	31.5	1	0.7	26.7	0.1	0.2	32.1
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	42.6	2.6	0.2	35.6	3.3	0.5	38.4	4	0.4	40.3	2.8	0.2	34.1	2	0.7	28	2.2	0.6	33.7
55 - 2558 - N HARVARD ST @ EMPIRE ST	45.7	2.5	0.1	38	2.1	0.2	40.3	2	0.5	41.9	2.3	0.6	35.8	2.7	0.3	30.3	1.6	0.3	35
56 - 2559 - N HARVARD ST @ OXFORD ST	47.5	1.8	0.1	39.7	1.9	0.1	42.1	1.5	0.1	43.2	1.8	0.2	37.4	1.7	0.3	31.7	1.2	0.1	36.1
57 - 2560 - N HARVARD ST @ KINGSLEY ST	48.5	2.5	1.4	40.8	1.6	0.8	42.9	1.4	0.8	43.8	1.8	0.9	38.3	0	0.3	31.3	0.8	0.8	36.1
58 - 2561 - N HARVARD ST @ WESTERN AVE	48.4	2.1	2	40.9	1.6	2.5	42	1.2	1.6	43.4	1.6	1.2	38.7	1.3	2.7	30	1.7	1.5	36.3
59 - 2564 - N HARVARD ST OPP HARVARD STAD	47	0.2	1.5	39.5	0.4	1.9	40.5	0.3	1.5	42.2	0.2	1.1	37.8	0	0.7	29.3	0.2	1.3	35.1
60 - 25641 - JFK ST @ ELIOT ST	1.1	0.8	39.9	1.1	0.5	40.3	1	0.9	42.8	1	0.9	38.1	1.4	0.3	29	1	0.8	35.7	1
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	0.8	0	0.4	0.7	0	0.4	0.6	0	0.2	0.8	0	0.6	0.8	0	0.7	0.3	0	0.2	0.8
Maximum	48.5			40.9			42.9			43.8			38.7			31.7			36.3
Total		90.5	90.5		90.4	90.1		91.7	91.6		81.8	81.9		68	68		79.4	79.6	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	Trip (RouteVar)(Block) [Observations]																	
	08:56 (66.6)(B334) [26] {FA19}			09:08 (66.6)(B335) [30] {FA19}			09:20 (66.6)(B337) [33] {FA19}			09:32 (66.6)(B339) [34] {FA19}			09:44 (66.6)(B326) [37] {FA19}			09:57 (66.6)(B319) [28] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
8 - 64000 - DUDLEY STATION	16.9	0	16.9	21.5	0	21.5	17.3	0	17.3	17.1	0	17.1	15.7	0	15.7	13.3	0	13.3
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	2.2	0.1	19	1.4	0.1	22.7	1.9	0.2	19	1.9	0.3	18.8	1.8	0.2	17.3	0.9	0.1	14.1
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	0.1	0.1	19	0.4	0	23.1	0.3	0.1	19.2	0.4	0.1	19.1	0.1	0.1	17.3	0.1	0	14.2
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	0	0	19	0.1	0	23.1	0.1	0	19.3	0	0	19.1	0	0	17.3	0	0	14.3
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	0.7	0.3	19.5	0.7	0.1	23.7	0.9	0.2	20	0.5	0.1	19.5	0.4	0.1	17.6	0.1	0.1	14.3
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	7.1	2.2	24.3	9.6	1.4	31.9	9.3	0.9	28.4	8.2	1.4	26.2	8.1	1.4	24.3	6.4	1.4	19.3
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	1.1	1.7	23.7	0.8	0.7	32	1.1	0.8	28.7	0.7	0.8	26.1	0.7	0.5	24.4	0.7	0.5	19.5
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	0.3	0.9	23.2	1	0.3	32.7	1.8	0.9	29.5	0.6	0.5	26.2	0.6	0.5	24.5	0.7	0.5	19.7
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	1.2	4.9	20.3	1.2	6.9	27	1.2	7.3	23.4	1.5	6.7	20.9	1.2	5.8	19.9	1	4.1	16.6
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	1.7	1.7	20.3	2.1	1.2	27.8	2.4	1	24.8	2.5	1	22.4	1.6	1.4	20.1	1.3	0.9	17
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	3	0.3	23	2.8	1.1	29.5	1.9	0.9	25.7	1.7	1.5	22.6	1.6	1.6	20.1	1.7	1.3	17.4
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	4	0.5	26.5	4.6	0.7	33.4	4.2	0.5	29.4	3	0.7	25	2.9	0.6	22.4	2.3	0.4	19.3
20 - 1526 - WASHINGTON ST @ PEARL ST	1	2.8	24.6	2.3	2.9	32.8	1.3	2.5	28.2	0.8	2.2	23.6	1.4	2.6	21.3	2.1	2.1	19.3
21 - 1367 - HARVARD ST @ KENT ST	1.5	1.8	24.4	2.4	2.4	32.8	1.9	1.8	28.3	1.4	1.9	23.1	2.3	1.8	21.8	3	1	21.3
22 - 1369 - HARVARD ST @ ASPINWALL AVE	1.3	0.3	25.3	2.9	0.6	35.1	1.6	0.3	29.6	1.4	0.4	24	2.1	0.5	23.4	1.4	0.7	22
23 - 1371 - HARVARD ST OPP VERNON ST	1.2	1	25.6	1.4	0.8	35.7	1.3	1.1	29.8	0.9	1.3	23.6	1	1	23.4	1.3	0.9	22.4
24 - 1372 - HARVARD ST @ BEACON ST	4.3	2.9	27	5.3	6.6	34.4	4.4	5.5	28.7	3.5	3.6	23.5	3.6	3.9	23.1	3.4	2.9	22.9
25 - 1373 - HARVARD ST @ STEDMAN ST	1.2	2.1	26.1	1.7	1.8	34.3	1.3	1.3	28.7	1.1	0.8	23.8	1	0.6	23.5	1.2	1	23.1
26 - 1375 - HARVARD ST @ COOLIDGE ST	1.1	0.6	26.6	1.5	0.8	35	1	0.7	28.9	0.7	0.6	23.9	0.5	0.5	23.5	0.7	0.9	23
27 - 1376 - HARVARD ST OPP VERNDAL ST	1.1	1	26.7	2	1.9	35.1	0.9	1.7	28.1	0.6	0.9	23.6	0.7	1.4	22.8	0.9	0.7	23.2
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	5	3	28.7	5.9	4.6	36.5	4.6	4	28.7	4.4	4.1	23.9	4.8	3.9	23.7	4.8	4	24
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	2.7	1.8	29.6	2.3	2.9	35.9	1.5	2.1	28.1	1.3	1.8	23.3	1.3	1.7	23.3	1	2.5	22.5
30 - 964 - BRIGHTON AVE OPP QUINT AVE	3.6	3	30.2	4.4	3.7	36.5	3.2	3.2	28.1	2.3	2.7	22.9	2.4	2.5	23.2	1.9	2.7	21.7
52 - 1111 - CAMBRIDGE ST OPP HANO ST	3.5	2.2	31.5	4.9	3	38.5	4.2	2.9	29.4	2.8	2.1	23.6	2.8	1.9	24	3.3	1.3	23.7
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	0.1	0	31.6	0.1	0.1	38.5	0.1	0.1	29.4	0.1	0.2	23.6	0.1	0.7	23.4	0.1	0.1	23.7
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	3.6	0.2	35	3.2	0.4	41.3	2.4	0.5	31.3	1.9	0.4	25.1	1.9	0.2	25	1.5	0.2	25
55 - 2558 - N HARVARD ST @ EMPIRE ST	2.5	0.3	34.9	2.9	0.6	43.6	2.1	0.3	33.1	1.7	0.4	26.4	1.7	0.5	26.2	1.6	0.6	26
56 - 2559 - N HARVARD ST @ OXFORD ST	1.6	0.1	37.7	1.2	0.5	44.3	1.3	0.4	34.1	0.8	0.3	26.9	1.4	0.5	27.1	0.6	0.3	26.4
57 - 2560 - N HARVARD ST @ KINGSLEY ST	1	0.6	38	1	1.3	44	1.1	0.6	34.6	0.9	0.9	26.9	0.7	1.1	26.7	1	1.2	26.1
58 - 2561 - N HARVARD ST @ WESTERN AVE	1.6	1.5	38.1	1.9	1	44.9	1.2	1.4	34.4	1.1	2	26	1.1	1.8	26	1	1.6	25.6
59 - 2564 - N HARVARD ST OPP HARVARD STAD	0.3	1.1	37.3	0.2	0.6	44.6	0.3	0.5	34.2	0.2	0.9	25.3	0.1	0.4	25.7	0.4	0.6	25.4
60 - 25641 - JFK ST @ ELIOT ST	0.6	37.6	0.7	0.9	45.2	1.2	1.2	35	1.5	0.4	25.4	0.7	1.5	26.4	2.1	0.7	25.6	1.1
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	0	0.2	0.5	0	0.3	0.9	0	0.2	1.2	0	0.3	0.4	0	0.8	1.3	0	0.5	0.6
Maximum			38.1			44.9			34.6			26.9			27.1			26.4
Total	77.1	76.8		94.6	94.5		79.3	78.9		66.4	66.3		67.1	66.9		60.4	60.7	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	14:00 (66.6)(B322) [40] {FA19}			14:10 (66.6)(B321) [28] {FA19}			14:20 (66.6)(B324) [41] {FA19}			14:30 (66.6)(B327) [32] {FA19}			14:40 (66.6)(B328) [26] {FA19}			14:50 (66.6)(B330) [24] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
8 - 64000 - DUDLEY STATION	12.5	0	12.5	13.6	0	13.6	16.2	0	16.2	17.4	0	17.5	13.3	0	13.3	12.1	0	12.1
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	2.8	0	15.3	1.8	0	15.4	1.3	0	17.8	1.1	0	18.6	0.8	0	14.2	0.8	0	12.8
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	7.9	0.3	23.5	3.3	0.1	18.6	4.3	0.1	22	4.1	0.2	22.4	2.8	0.2	16.8	1.5	0	14.3
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	0.5	0.1	23	0.2	0.1	18.6	0.3	0	22.2	3.1	0.1	25.4	3.6	0.1	20.4	1	0	15.2
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	0.7	0.6	24.2	0.5	0.1	19	1.4	0.4	22.6	1.7	0.8	26.3	1.9	0.4	21.9	0.6	0.2	15.6
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	4.2	3.4	25	5.5	2.2	22.4	7.2	3	26.9	10.7	2.6	34.5	8.5	2.3	28.1	8.1	2	21.8
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	1	0.7	25.4	0.2	0.7	21.8	1.2	1	27.1	1.2	1.2	34.4	0.5	0.6	28	0.6	1.3	21
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	0.3	0.6	25	0.5	0.8	21.6	0.4	0.8	26.8	0.8	0.8	34.5	0.9	0.7	28.2	1	1.1	20.9
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	1.5	4	22.6	1.9	4.9	18.6	3	5.7	24	2.9	7.3	30.2	2.5	5.2	25.6	2.6	3.2	20.3
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	2.7	1.4	23.9	2.6	1	20.3	5.4	1.9	27.5	6.5	1.7	35	4.6	1.8	28.5	5	1.4	23.9
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	1.3	2	23.1	0.4	1.8	18.9	1.6	2.3	26.8	1.8	2.5	34.3	1.5	2	27.9	2.3	2	24.1
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	1.7	0.4	24.5	1.3	0.5	19.7	1.6	1	27.5	2.5	1.1	35.6	2.2	0.6	29.5	2.6	0.6	26.1
20 - 1526 - WASHINGTON ST @ PEARL ST	0.8	2.1	23.2	0.9	2.1	18.6	1.7	1.4	27.8	1.8	2	35.5	1.6	1.7	29.4	1.8	1.5	26.4
21 - 1367 - HARVARD ST @ KENT ST	1.4	0.9	23.6	1.6	1	19.1	2	1.3	28.6	2.5	1.4	36.6	3.3	0.7	32	3.2	1.3	28.4
22 - 1369 - HARVARD ST @ ASPINWALL AVE	2.1	0.5	25.2	2	0.4	20.8	3.6	0.7	31.6	3.3	0.8	39.2	2.4	0.3	34.1	1.6	0.7	29.3
23 - 1371 - HARVARD ST OPP VERNON ST	0.4	0.6	25.1	0.4	0.8	20.4	0.9	1	31.4	1.2	1.3	39.1	0.7	0.6	34.2	1	0.6	29.7
24 - 1372 - HARVARD ST @ BEACON ST	2.4	3	24.5	2.9	2.6	20.7	3.5	4.2	30.7	4.5	4.7	38.8	3.4	5.8	31.8	3.4	4.1	29
25 - 1373 - HARVARD ST @ STEDMAN ST	0.6	0.5	24.6	1	0.6	21.1	0.9	1	30.5	2.3	1.4	39.7	2.5	1.1	33.2	1.1	0.5	29.7
26 - 1375 - HARVARD ST @ COOLIDGE ST	0.3	0.6	24.2	0.3	1.1	20.3	0.6	1.1	30	1.4	1.1	40	0.7	0.7	33.2	0.5	0.6	29.5
27 - 1376 - HARVARD ST OPP VERNDAL ST	0.2	1.4	23	0.5	1.4	19.4	0.8	1.2	29.6	0.7	2.4	38.3	0.5	2.3	31.4	0.4	1.5	28.4
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	1.5	5.1	19.4	1.8	3.3	17.8	2.5	4.9	27.1	2.5	5.7	35.1	2.5	5.9	28	3	6	25.4
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	0.9	2.1	18.2	1.1	1.9	17	1.3	2.5	26	1.4	4.9	31.7	1.6	3.8	25.8	1.2	2.9	23.7
30 - 964 - BRIGHTON AVE OPP QUINT AVE	1.7	3.3	16.7	1.8	3.3	15.5	2.1	3.6	24.5	2	3.9	29.8	2.2	3.8	24.3	2	3.4	22.3
52 - 1111 - CAMBRIDGE ST OPP HANO ST	2.9	3.3	16.3	2.8	3.3	15	3.1	3.6	24	3	4	28.8	3.2	3.6	23.8	3.4	2.9	22.8
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	0.1	0.3	16.1	0.1	0	15.1	0.1	0.1	24	0.1	0.6	28.3	0.1	0.3	23.7	0.1	0.1	22.8
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	1.3	0.6	16.8	1.1	0.4	15.8	1.5	0.6	24.9	1.4	0.7	29	1.7	0.2	25.2	1	0.3	23.5
55 - 2558 - N HARVARD ST @ EMPIRE ST	0.8	1.3	16.3	0.7	1.4	15.1	0.8	1.1	24.6	1.2	1.5	28.7	1.1	1.5	24.8	1.7	1.5	23.7
56 - 2559 - N HARVARD ST @ OXFORD ST	0.6	1.1	15.7	0.5	1.1	14.5	0.4	2.3	22.7	0.3	1.7	27.4	0.7	1.2	24.3	0.5	0.8	23.5
57 - 2560 - N HARVARD ST @ KINGSLEY ST	0.4	2.5	13.6	0.1	1.8	12.9	0.3	2	21	0.5	3.1	24.8	0.5	1.6	23.2	0.5	0.8	23.2
58 - 2561 - N HARVARD ST @ WESTERN AVE	0.9	1.9	12.7	1.2	2	12.1	1.2	3.4	18.8	1.8	3	23.6	1.9	3	22.1	1.7	3.2	21.7
59 - 2564 - N HARVARD ST OPP HARVARD STAD	0.4	0.7	12.4	0.4	0.3	12.2	0.6	0.5	19	0.5	0.5	23.6	0.7	0.6	22.2	0.6	0.1	22.2
60 - 25641 - JFK ST @ ELIOT ST	0.3	12.2	0.9	0.3	12.3	0.5	1.4	19.7	1.9	0.4	23.5	0.8	0.5	22.3	0.8	0.3	22	0.6
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	0	0.5	0.4	0	0.1	0.3	0	0.4	1.4	0	0.4	0.4	0	0.4	0.3	0	0.5	0.2
Maximum			25.4			22.4			31.6			40			34.2			29.7
Total	57.1	58		53.3	53.4		73.2	72.8		86.6	86.9		74.9	75.3		67.2	67.1	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	15:00 (66.6)(B333) [30] {FA19}			15:10 (66.6)(B332) [34] {FA19}			15:20 (66.6)(B334) [33] {FA19}			15:30 (66.6)(B335) [24] {FA19}			15:40 (66.6)(B336) [26] {FA19}			15:50 (66.6)(B339) [27] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
8 - 64000 - DUDLEY STATION	15.6	0	15.6	12.4	0	12.4	14.2	0	14.2	10	0	10	13.5	0	13.6	16.1	0	16.1
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	1.4	0.2	16.8	0.7	0.1	13.1	1.2	0	15.4	1.3	0.1	11.2	2.1	0	15.6	1.6	0	17.7
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	3.2	0.1	19.9	2.5	0.1	15.4	2.3	0.2	17.5	2.8	0.2	13.7	2	0.2	17.5	1.4	0	19
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	0.4	0	20.2	0.1	0.1	15.4	0.4	0	17.8	0.4	0	14.1	0.1	0	17.5	0.1	0	19.2
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	0.4	0.5	20.1	1.5	0.6	16.2	1.3	0.2	18.9	0.6	0.2	14.5	0.3	0.2	17.7	0.6	0.3	19.5
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	11.9	2.5	29.5	7.4	1.6	22	8	2.3	24.7	8.2	3.2	19.5	7.4	2	23	9.7	2.8	26.4
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	0.7	0.9	29.4	0.4	1	21.4	0.7	0.6	24.7	1.5	1	20.1	1.2	1.2	23	1.9	1.7	26.6
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	1	1.2	29.2	0.8	1.1	21.1	1	0.8	24.8	1.1	0.7	20.5	1	0.4	23.5	0.9	0.7	26.7
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	3.8	5.3	27.7	2.4	3.4	20.1	4.2	5.2	23.9	3.5	4.9	19.1	3.4	4.1	22.8	5.5	4.3	28
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	7.2	1.9	32.9	5.3	1.3	24.2	6.8	1.1	29.5	7.1	1	25.2	5.3	1	27.1	8.9	1	35.8
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	1.8	2.8	31.9	1.4	2.1	23.4	1.6	2.5	28.6	1.8	1.5	25.4	1.4	2.2	26.3	1.7	1.9	35.6
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	2.7	1.2	33.4	2.9	0.5	25.8	2.7	0.7	30.8	3.3	0.7	28	2	0.8	27.5	3.9	0.6	38.8
20 - 1526 - WASHINGTON ST @ PEARL ST	1.9	2.3	32.9	3.1	1.8	27.2	2.9	1.8	31.8	2.9	2.5	28.4	2	1.2	28.3	5	2.5	41.3
21 - 1367 - HARVARD ST @ KENT ST	2.2	1.2	34	3.3	0.7	29.8	2.6	0.7	33.7	2.5	1.2	29.7	1.7	0.9	29.2	3.6	1	43.8
22 - 1369 - HARVARD ST @ ASPINWALL AVE	2	0.9	35.1	1.7	0.4	31.1	1.9	0.7	35	1.4	0.2	31	1.9	0.5	30.6	2.7	0.6	45.9
23 - 1371 - HARVARD ST OPP VERNON ST	0.8	1.1	34.8	1.3	1	31.4	1	0.9	35.1	1.3	1.2	31.1	0.7	0.5	30.8	1.7	1.1	46.5
24 - 1372 - HARVARD ST @ BEACON ST	3.7	5.2	33.3	4.8	4.8	31.4	4.6	5.2	34.2	4.5	5.2	30.5	4.2	4.7	30.4	7.1	5.9	47.6
25 - 1373 - HARVARD ST @ STEDMAN ST	1.7	1	34	1.4	0.9	31.9	2.2	1.4	35	1.3	1	30.8	1.5	1.2	30.7	1.9	1.6	47.9
26 - 1375 - HARVARD ST @ COOLIDGE ST	0.5	0.6	33.9	0.8	1.5	31.1	0.4	1	34.4	0.7	1.3	30.3	1	1.2	30.5	1.1	1	47.9
27 - 1376 - HARVARD ST OPP VERNDAL ST	0.9	2.4	32.4	0.9	2.1	29.9	0.7	2.6	32.6	0.8	2.4	28.6	0.4	2.1	28.8	0.9	4.2	44.6
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	3.4	5.8	30	3.6	6.1	27.4	2.5	7.2	27.9	3	5.7	25.9	2.3	5.7	25.4	3	7.6	40
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	1.4	3.5	27.9	1.2	3.4	25.1	1.5	2.9	26.5	1.4	2.3	25	1.3	2.8	24	2.1	4.2	37.9
30 - 964 - BRIGHTON AVE OPP QUINT AVE	2.3	3.4	26.8	2.5	2.6	25	1.8	3.5	24.8	1.8	3.2	23.7	1.9	3.8	22	3.7	5.7	35.9
52 - 1111 - CAMBRIDGE ST OPP HANO ST	4.3	4.5	27.2	3.2	3.4	24.8	2.7	3.5	24	2.4	3.5	22.6	2.3	2.4	21.9	4.1	4.7	36.6
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	0.3	1.2	26.4	0.1	0.4	24.5	0.1	0.5	23.6	0.4	0.7	22.4	0.1	0.3	21.7	0.1	0.3	36.4
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	1.3	0.4	26.7	2.1	0.5	26.1	2.8	0.3	26.1	1.3	0.8	22.9	1.7	0.9	22.4	2.2	0.5	36.8
55 - 2558 - N HARVARD ST @ EMPIRE ST	0.9	1.5	26.2	1	1.7	25.5	1	2.2	24.9	1.2	2.7	21.4	1	2.3	21.1	1.6	2.1	36.3
56 - 2559 - N HARVARD ST @ OXFORD ST	0.5	1.3	25.3	0.6	0.9	25.1	0.4	0.8	24.5	0.4	1.3	20.5	0.2	0.5	20.8	0.4	1.9	34.9
57 - 2560 - N HARVARD ST @ KINGSLEY ST	0.4	2.2	23.5	0.7	2	23.8	0.6	2.3	22.8	0.3	2.1	19	0.5	2.2	19	0.4	2.6	32.8
58 - 2561 - N HARVARD ST @ WESTERN AVE	1.5	4	21.1	2	4.4	21.5	1.9	4.2	20.5	2	2.5	18.8	1.2	2.2	18.1	0.9	3.6	30.1
59 - 2564 - N HARVARD ST OPP HARVARD STAD	0.8	0.5	21.4	2.7	0.6	23.6	1.8	0.7	21.5	1	0.6	19.4	0.8	0.5	18.4	0.7	0.5	30.3
60 - 25641 - JFK ST @ ELIOT ST	0.3	21.2	0.7	1.3	24.6	1.5	0.6	21.7	0.9	1.9	20.3	2.2	0.3	18.2	0.9	0.4	30.1	1
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	0	0.4	0.2	0	0.2	1.3	0	0.4	0.5	0	0.2	2	0	0.5	0.3	0	0.7	0.4
Maximum			35.1			31.9			35.1			31.1			30.8			47.9
Total	81.2	81.2		76.1	75.9		78.4	78.1		74.1	74.4		66.7	66.7		95.9	95.7	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	16:00 (66.6)(B326) [32] {FA19}			16:10 (66.6)(B323) [39] {FA19}			16:20 (66.6)(B322) [33] {FA19}			16:30 (66.6)(B321) [16] {FA19}			16:40 (66.6)(B324) [35] {FA19}			16:50 (66.6)(B327) [38] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
8 - 64000 - DUDLEY STATION	14.8	0	14.8	14.6	0	14.6	11.3	0	11.3	17.4	0	17.4	12.5	0	12.5	14.8	0	14.8
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	1.1	0	15.9	1.4	0.1	16	0.6	0	11.8	1.4	0.1	18.7	1.1	0	13.5	1.4	0.1	16.1
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	1.7	0.1	17.6	1.2	0	17.2	1	0	12.8	1.4	0.2	19.9	0.4	0	13.9	0.3	0	16.4
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	0.3	0	17.8	0.2	0	17.4	0.1	0.1	12.8	0.9	0	20.8	0.4	0	14.3	0.3	0.1	16.6
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	0.8	0.2	18.5	0.4	0.4	17.5	0.8	0.3	13.3	1.1	0.1	21.8	0.8	0.2	14.9	1	0.5	17.1
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	8.8	2.2	25.1	10.7	1.8	26.4	7.6	1.1	19.8	7	2.3	26.6	7	2	19.9	8.6	2.2	23.5
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	2.8	0.9	27	1.8	1	27.3	1.4	1	20.2	1	1	26.6	1.9	0.7	21.1	2.2	0.7	25
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	2	1	28	1.2	0.6	27.9	1.2	0.5	20.9	1.3	0.7	27.2	2	0.6	22.5	2.7	0.9	26.7
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	5.5	3.9	30	4.8	3.5	29.3	3	2.7	21.2	4.1	3.1	28.3	5.1	3.3	24.3	8	3.3	31.4
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	8.9	0.9	38	7.6	1.4	35.5	7.7	1	27.9	7.5	1.4	34.3	9.3	1.2	32.3	13.4	1.9	43
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	2	2.7	37.3	1.6	2.5	34.7	1.5	1.7	27.6	1.6	3.8	32.1	1.5	2.3	31.5	1.6	1.9	42.7
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	4.1	1	40.5	3.9	0.6	38	4.5	0.5	31.7	3.3	0.4	35.1	2.9	0.3	34	3.9	0.7	45.9
20 - 1526 - WASHINGTON ST @ PEARL ST	3.3	2.1	41.6	3.8	2.2	39.7	4.4	1.7	34.4	2.4	1.8	35.7	3.3	2.5	34.8	3.5	2.7	46.7
21 - 1367 - HARVARD ST @ KENT ST	3.1	1.5	43.2	2.1	1.1	40.6	3.3	1	36.7	2.8	1	37.4	4.6	1.3	38.1	5.2	0.9	51
22 - 1369 - HARVARD ST @ ASPINWALL AVE	2.2	0.5	44.8	1.8	0.6	41.8	1.9	0.4	38.2	2	1.4	38	2.1	0.5	39.7	2.4	0.7	52.7
23 - 1371 - HARVARD ST OPP VERNON ST	0.9	1.2	43.6	1.2	1.3	41.7	1.2	0.7	38.7	1.2	0.9	38.3	1.5	1.3	39.9	1.3	1.4	52.7
24 - 1372 - HARVARD ST @ BEACON ST	6.6	5	45.3	5.7	5.1	42.4	5.9	5.2	39.4	4.1	5.5	36.8	5.8	5.7	39.9	8.2	6.3	54.5
25 - 1373 - HARVARD ST @ STEDMAN ST	2.3	0.9	46.7	1.2	0.9	42.7	1.9	0.9	40.4	1.8	1.3	37.3	1.1	1.2	39.9	1.3	1.5	54.2
26 - 1375 - HARVARD ST @ COOLIDGE ST	0.7	0.7	46.7	0.4	1.1	42	0.8	0.6	40.5	0.6	0.8	37.2	0.9	0.8	39.9	1	1.2	54.1
27 - 1376 - HARVARD ST OPP VERNDAL ST	1	3.1	44.6	0.6	3.4	39.3	0.8	4.1	37.2	0.6	4.4	33.4	1.1	3.2	37.9	1.2	3.7	51.6
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	3.6	9.6	38.5	2.7	7.1	34.9	1.8	7.2	31.8	2.4	6.8	29.1	2.7	7.3	33.3	4.6	10.1	46.1
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	1.1	4.3	35.7	1.7	3.3	33.3	1.5	3.5	29.8	1.5	4	26.6	2.3	4.9	30.7	2.9	4.4	44.5
30 - 964 - BRIGHTON AVE OPP QUINT AVE	2.2	4	33.9	1.8	4.9	30.2	2.5	4.7	27.5	1.4	4.3	23.7	2.3	3.4	29.6	3.7	4.4	43.8
52 - 1111 - CAMBRIDGE ST OPP HANO ST	3.3	6.3	30.9	2.3	5.3	27.2	2.6	4.5	25.7	2.6	3.9	22.4	2.5	4.7	27.5	4.7	4.8	43.6
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	0.1	0.1	30.9	0.1	0.4	26.9	0.3	0.8	25.2	0	0.1	22.3	0.1	0.3	27.3	0.1	0.4	43.3
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	1.8	1	31.7	1.6	0.6	28	1.3	0.6	25.8	1.4	0.4	23.4	1.6	0.5	28.4	1.9	0.6	44.6
55 - 2558 - N HARVARD ST @ EMPIRE ST	0.8	2.6	29.8	0.8	2.4	26.4	1	2.2	24.7	0.6	1.9	22.1	0.6	1.9	27.1	1.1	2.9	42.8
56 - 2559 - N HARVARD ST @ OXFORD ST	0.7	2.4	28.1	0.5	1	25.9	0.7	1.2	24.2	0.3	0.6	21.8	0.5	1.1	26.5	0.7	2.1	41.3
57 - 2560 - N HARVARD ST @ KINGSLEY ST	0.7	2.3	26.4	0.4	2.2	24.2	0.4	1.5	23.2	0.4	1.7	20.5	0.7	1.5	25.7	0.6	2.6	39.3
58 - 2561 - N HARVARD ST @ WESTERN AVE	1.3	4	23.8	1.8	4.1	21.9	2.4	2.8	22.8	2.2	2.9	19.8	1.9	2.9	24.7	1.5	4.8	36.1
59 - 2564 - N HARVARD ST OPP HARVARD STAD	1.9	0.2	25.5	1	0.7	22.1	1.2	0.7	23.3	0.2	0.3	19.7	0.5	0.3	24.8	0.5	0.8	35.7
60 - 25641 - JFK ST @ ELIOT ST	0.7	25.8	0.8	0.5	20.9	2.1	1.8	24.1	2.6	0.9	20.3	1.1	1.3	25.6	1.7	2.2	36.9	2.6
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	0	0.3	0.6	0	1.7	0.4	0	1	1.6	0	0.4	0.7	0	0.5	1.1	0	0.4	2.1
Maximum			46.7			42.7			40.5			38.3			39.9			54.5
Total	91.1	90.8		81.4	82.2		78.4	78.3		77.4	77.8		82.3	82		106.8	105.9	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	17:00 (66.6)(B328) [31] {FA19}			17:10 (66.6)(B330) [19] {FA19}			17:20 (66.6)(B333) [2] {FA19}			17:30 (66.6)(B332) [43] {FA19}			17:40 (66.6)(B334) [32] {FA19}			17:50 (66.6)(B335) [1] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
8 - 64000 - DUDLEY STATION	14.3	0	14.3	11.7	0	11.7	5	0	5	11.9	0	11.9	10.8	0	10.8	8	0	8
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	0.6	0	14.9	0.7	0	12.5	0	0	5	0.8	0	12.7	0.9	0	11.7	5	0	13
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	0.6	0	15.5	0.1	0	12.6	3	0	8	0.8	0.1	13.8	0.4	0.1	12	0	0	13
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	0.5	0	16	0.4	0	12.9	0	0	8	0.3	0	14.1	0.3	0	12.3	2	0	15
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	1	0.4	16.6	0.9	0.1	13.7	0	0.5	7.5	0.5	0.3	14.3	0.4	0.2	12.4	0	0	15
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	8.6	1.4	23.8	7.9	1.4	20.3	3.5	1.5	9.5	7.2	1.6	19.8	6.5	1.7	17.3	5	3	17
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	1.2	1.2	23.8	1.1	0.4	20.9	0.5	0	10	1.2	0.8	20.3	1.4	0.7	18	2	2	17
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	2.1	0.4	25.5	1.9	0.6	22.2	1	0	11	2	0.7	21.7	1.1	0.3	18.8	0	0	17
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	8.7	3.5	30.8	4.6	3.2	23.6	1.5	2	10.5	5.8	3.1	24.4	4.2	2.8	20.2	4	4	17
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	12.5	1	42.2	10.5	1.3	32.8	3.5	0.5	13.5	8.9	1.2	32.1	7.4	1.6	26	6	2	21
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	1.8	2.1	41.9	1.1	1.6	32.3	0.5	0.5	13.5	1.4	2	31.6	1.4	1.6	25.8	0	2	19
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	3.9	0.9	44.9	2.3	0.5	34	3.5	0	17	3.4	0.7	34.3	2.8	0.9	27.7	4	0	23
20 - 1526 - WASHINGTON ST @ PEARL ST	3	2.2	45.8	2.3	1	35.3	2.5	1.5	18	3.3	1.2	36.3	3.4	2	29.1	4	1	26
21 - 1367 - HARVARD ST @ KENT ST	3.8	1.4	48.2	3.2	1.5	36.9	4	1.5	20.5	3.3	0.9	38.7	3.4	0.7	31.8	4	1	29
22 - 1369 - HARVARD ST @ ASPINWALL AVE	1.6	0.3	49.5	1.7	0.2	38.4	0	0	20.5	1.6	0.8	39.5	1.8	0.4	33.2	2	0	31
23 - 1371 - HARVARD ST OPP VERNON ST	1.6	1.2	49.9	1	1.1	38.4	0.5	1	20	1.2	1	39.7	1.4	0.8	33.8	3	0	34
24 - 1372 - HARVARD ST @ BEACON ST	5.7	5.7	49.9	4.9	6.3	37	2	5.5	16.5	6.7	5.6	40.8	5.3	4.8	34.3	9	5	38
25 - 1373 - HARVARD ST @ STEDMAN ST	1.7	1.2	50.4	1.9	1.3	37.6	0	0.5	16	1.6	1.3	41.2	1.5	1.4	34.5	0	4	34
26 - 1375 - HARVARD ST @ COOLIDGE ST	0.7	1.8	49.3	1	1.4	37.2	0	0	16	0.6	1.4	40.4	0.8	1.5	33.8	0	0	34
27 - 1376 - HARVARD ST OPP VERNDAL ST	1.1	3.1	47.3	0.3	3.2	34.3	0.5	2	14.5	0.8	2.5	38.7	0.4	3	31.1	0	3	31
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	3.8	11.3	39.7	1.4	8.3	27.4	1.5	4.5	11.5	2.6	7.6	33.8	1.7	7.6	25.2	3	9	25
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	1.9	4.2	37.4	1.4	3.7	25	2	3	10.5	1.4	3.7	31.4	1.2	3.2	23.2	0	3	22
30 - 964 - BRIGHTON AVE OPP QUINT AVE	2.8	4.5	35.7	0.9	3.4	22.6	0.5	1.5	9.5	2.4	3.8	30.1	1.4	2.9	21.6	0	7	15
52 - 1111 - CAMBRIDGE ST OPP HANO ST	3.5	4.6	34.6	1.4	3.4	20.5	2	0.5	11	2.8	4.2	29.1	2.4	3.4	20.6	1	3	13
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	0.4	0.4	34.5	0	0.1	20.5	0.5	0	11.5	0.3	0.3	29	0.3	0.3	20.5	0	0	13
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	1.3	0.5	35.4	0.6	0.9	20.2	1.5	1.5	11.5	1	0.6	29.1	1.1	0.7	20.9	0	1	12
55 - 2558 - N HARVARD ST @ EMPIRE ST	0.5	2.6	33.2	1.4	2.6	19	1	2.5	10	0.7	3	26.8	0.6	2.5	19	1	0	13
56 - 2559 - N HARVARD ST @ OXFORD ST	0.4	1.2	32.5	0.5	0.4	19.1	0	0.5	9.5	0.7	1	26.5	0.2	0.9	18.3	0	0	13
57 - 2560 - N HARVARD ST @ KINGSLEY ST	0.8	2.5	30.7	0.3	1.5	17.9	0	0.5	9	0.5	2.8	24.2	0.3	2.3	16.3	0	3	10
58 - 2561 - N HARVARD ST @ WESTERN AVE	2	4	28.7	0.7	3	15.6	1	1	9	1.6	2.5	23.3	0.7	2.3	14.6	0	2	8
59 - 2564 - N HARVARD ST OPP HARVARD STAD	0.2	0.6	28.2	0.3	0.4	15.5	1	0.5	9.5	0.4	0.3	23.4	0.4	0.6	14.5	1	0	9
60 - 25641 - JFK ST @ ELIOT ST	0.6	28.1	1.4	0.7	15.1	1.6	0	9.5	0	0.3	23.1	0.8	2.5	16	2.8	0	9	0
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	0	0.8	0.6	0	1.2	0.5	0	0	0	0	0.2	0.6	0	0.3	2.5	0	0	0
Maximum			50.4			38.4			20.5			41.2			34.5			38
Total	93.2	93.1		69.1	69.1		42.5	42.5		78	78.3		68.4	67.5		64	64	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	18:01 (66.6)(B336) [22] {FA19}			18:11 (66.6)(B339) [41] {FA19}			18:21 (66.6)(B326) [27] {FA19}			18:31 (66.6)(B325) [46] {FA19}			18:42 (66.6)(B323) [8] {FA19}			18:53 (66.6)(B322) [46] {FA19}		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
8 - 64000 - DUDLEY STATION	10.9	0	10.9	6.4	0	7.4	11.1	0	11.1	7.6	0	7.6	8.4	0	8.4	7.4	0	7.4
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	1.2	0.2	12	0.7	0.1	8.7	0.9	0	12	0.7	0	8.3	0.5	0	8.9	0.5	0	7.9
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	0.6	0	12.5	0.5	0.3	8.5	0.7	0	12.7	0.7	0.1	8.8	0.1	0	9	0.5	0.1	8.3
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	0.1	0	12.7	0.2	0	8.4	0.1	0	12.8	0.1	0	9	0.1	0	9.1	0.1	0	8.4
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	1	0.1	13.6	0.6	0	8.9	0.7	0.1	13.3	0.7	0.2	9.4	0.3	0	9.4	0.3	0.2	8.5
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	8.9	1	21.5	4.8	1	12.7	6.6	1.3	18.7	4.2	1	12.7	7.8	1.5	15.6	4.2	1	11.7
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	1	0.7	21.8	0.4	0.2	12.9	0.9	0.7	18.9	0.6	0.4	12.8	0.5	0.5	15.6	1.1	0.3	12.4
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	1.7	0.5	23	1.1	0.2	13.8	1.4	0.3	20	1.3	0.3	13.9	1	0	16.6	1	0.3	13.2
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	6	3.7	25.3	3.5	1.9	15.4	4.9	2.6	22.2	2.4	1.7	14.6	3.5	3.6	16.5	3	1.7	14.5
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	8.9	0.8	33.4	8.5	0.8	23.1	8.5	1	29.7	6.1	0.6	20.1	6.8	0.8	22.5	8.4	0.9	22
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	1.9	2.1	33.2	1.5	0.8	23.9	1.4	1.3	29.9	1.2	1.2	20.1	1.3	2.3	21.5	1.2	1.6	21.7
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	1.6	0.8	34	3.5	0.9	26	4.3	0.8	33.3	2	0.4	21.7	3	0.8	23.8	2.5	0.6	23.6
20 - 1526 - WASHINGTON ST @ PEARL ST	2.5	2.5	33.9	2.1	1.5	27.2	2.2	1.3	34.2	1.4	1.2	21.9	2.9	1.4	25.3	1.6	1.4	23.8
21 - 1367 - HARVARD ST @ KENT ST	3.4	0.2	37	2.4	0.8	28.8	2.4	1.2	35.4	1.9	0.6	23.2	2.6	1.1	26.8	2	0.8	25
22 - 1369 - HARVARD ST @ ASPINWALL AVE	1.2	0.5	37.8	1.4	0.6	29.6	1.7	0.9	36.2	1.1	0.6	23.7	1.3	0.9	27.1	1.2	0.6	25.6
23 - 1371 - HARVARD ST OPP VERNON ST	1	1.3	37.4	1.3	0.8	30.2	1.3	0.9	36.6	1	0.8	23.9	1.8	0.4	28.5	1	0.6	26
24 - 1372 - HARVARD ST @ BEACON ST	7	5.6	38.8	5.5	3.8	31.9	7.1	5.3	38.4	4.6	3.5	25	6.3	5.3	29.5	6	3.7	28.3
25 - 1373 - HARVARD ST @ STEDMAN ST	1.5	0.5	39.8	1.3	0.9	32.3	2	0.8	39.6	1.4	0.8	25.6	2.3	0.6	31.1	1.4	0.5	29.2
26 - 1375 - HARVARD ST @ COOLIDGE ST	0.7	1.1	39.4	0.5	1.3	31.5	0.7	1.2	39.2	0.5	0.9	25.1	0.5	0.9	30.8	0.6	0.8	29
27 - 1376 - HARVARD ST OPP VERNDAL ST	1.1	2.3	38.2	0.5	2.5	29.5	0.3	3	36.5	0.6	2.5	23.3	0.5	1.8	29.5	0.6	2.3	27.4
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	3.2	10.1	31.3	2.1	7.7	23.9	2.5	9	30	1.8	6.3	18.8	3	5.6	26.9	1.8	7.4	21.7
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	1	3.7	28.5	1.4	3.6	21.7	1.2	3.6	27.6	1	2.8	17	1.4	4.1	24.1	1.5	3.1	20.1
30 - 964 - BRIGHTON AVE OPP QUINT AVE	2.4	3.9	27	1.8	3.1	20.3	1.7	4	25.4	1.5	2.7	15.8	3.1	2.5	24.8	1.7	2.9	19
52 - 1111 - CAMBRIDGE ST OPP HANO ST	1.8	4.2	24.6	1.3	2.9	18.8	1.6	4.1	22.9	1.5	2.6	14.7	3.3	2.9	25.1	1.5	3.3	17.2
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	0	0.1	24.5	0.3	0.2	18.9	0.6	0.7	22.7	0.2	0.2	14.7	0	0.6	24.5	0.2	0.3	17.2
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	1	0.6	24.8	1.2	0.3	19.8	1.9	0.6	24	0.8	0.2	15.3	0.9	0.3	25.1	0.7	0.4	17.5
55 - 2558 - N HARVARD ST @ EMPIRE ST	0.3	2.4	22.7	0.6	2.1	18.3	0.4	2.4	22	0.4	1.3	14.5	1.4	3.6	22.9	0.3	1.4	16.4
56 - 2559 - N HARVARD ST @ OXFORD ST	0.2	1	21.9	0.5	0.9	17.8	0.5	1.8	20.7	0.2	0.8	13.8	0.5	0.5	22.9	0.3	1.4	15.3
57 - 2560 - N HARVARD ST @ KINGSLEY ST	0.2	4	18	0.4	2.4	15.8	0.7	2.1	19.3	0.2	1.5	12.5	0.1	2.3	20.8	0.3	1.6	14
58 - 2561 - N HARVARD ST @ WESTERN AVE	1.4	3.4	16.3	0.9	1.9	14.8	1	2.9	17.4	0.6	1.8	11.3	1.6	3.8	18.6	0.4	1.9	12.5
59 - 2564 - N HARVARD ST OPP HARVARD STAD	0.3	0.5	16.1	0.5	0.6	14.8	0.4	0.6	17.2	0.1	0.5	10.9	0	0	18.6	0.2	0.5	12.2
60 - 25641 - JFK ST @ ELIOT ST	1.6	16.6	2.5	0.4	14.1	1.4	0.8	17.6	1.1	1	11.2	1.5	0	17.8	0.9	0.5	12.4	0.8
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	0	0.9	1.6	0	0.7	0.7	0	0.3	0.8	0	0.6	0.9	0	0.9	0	0	0.3	0.5
Maximum			39.8			32.3			39.6			25.6			31.1			29.2
Total	75.6	75.3		58.1	58.9		72.5	72.4		49.4	49.3		66.8	66.8		54	54.3	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

Seq - StopID - Stop Name	19:07 (66.6)(B324) [45] {FA19}			19:21 (66.6)(B327) [42] {FA19}			19:35 (66.6)(B330) [31] {FA19}			19:50 (66.6)(B334) [41] {FA19}			Total		
	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
8 - 64000 - DUDLEY STATION	7.9	0	7.9	8.5	0	8.6	7.3	0	7.3	6.7	0	6.7	1374.5	5.2	1410.4
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	0.4	0	8.4	0.4	0	9	0.5	0	7.7	0.4	0.1	7.1	152.9	6.1	1559.8
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	0.6	0	9	0.5	0.1	9.4	0.4	0	8.1	0.2	0	7.2	122.3	10.8	1674.1
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	0.2	0	9.1	0	0	9.4	0.2	0	8.2	0	0	7.2	32.9	2.1	1701.4
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	0.4	0.1	9.4	0.3	0.2	9.5	0.7	0.1	8.8	0.6	0.1	7.7	71.9	19.6	1753.4
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	4.4	0.8	12.9	4.9	0.7	13.7	3.6	0.7	11.7	4.8	0.5	12	808.9	139.1	2424.3
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	0.8	0.2	13.6	1.9	0.5	15.2	1	0.2	12.5	1.2	0.1	13.1	82.9	54.5	2453
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	1.2	0.3	14.4	1.2	0.6	15.9	0.8	0.4	12.9	1	0.4	13.7	86.5	53.1	2486.8
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	3.3	1.3	16.4	3.8	2.3	17.3	2	1.6	13.3	3.1	1.5	15.2	224.7	562.2	2151.6
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	7.9	0.7	23.7	9.2	0.9	25.6	6.1	0.8	18.5	7.4	0.8	21.9	408	132.7	2427.3
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	1.4	1.2	23.9	1.8	1	26.3	1.2	1.5	18.3	1.3	0.9	22.2	153	123.3	2457.4
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	2.5	0.4	26	2.3	0.6	28.1	1.5	0.3	19.5	2.6	0.6	24.2	288.6	59.2	2685.9
20 - 1526 - WASHINGTON ST @ PEARL ST	1.4	1.2	26.2	1.9	1.1	28.9	0.7	0.8	19.4	1.4	1	24.6	165.4	229.4	2622.4
21 - 1367 - HARVARD ST @ KENT ST	2.1	0.5	27.8	2.7	0.5	31.1	1.7	0.2	20.9	2.4	0.5	26.5	210.1	107.4	2725.3
22 - 1369 - HARVARD ST @ ASPINWALL AVE	0.9	0.6	28.1	1.4	0.4	32.1	1.2	0.5	21.5	1.4	0.8	27.1	146	50.2	2820.8
23 - 1371 - HARVARD ST OPP VERNON ST	1.1	0.9	28.3	1.4	0.6	32.9	0.4	0.4	21.5	1.3	0.8	27.6	101.4	82.2	2839.8
24 - 1372 - HARVARD ST @ BEACON ST	5.3	3.7	29.8	6.1	3.6	35.3	3.4	2.4	22.6	6.2	4.1	29.7	425.2	370.5	2894.9
25 - 1373 - HARVARD ST @ STEDMAN ST	1.9	0.9	30.9	2.3	0.5	37.1	1.2	0.8	23.1	1.7	0.4	31	125.4	86.9	2933.8
26 - 1375 - HARVARD ST @ COOLIDGE ST	0.2	1	30.1	0.3	0.9	36.5	0.4	0.7	22.7	0.5	0.8	30.7	64.4	67	2930.2
27 - 1376 - HARVARD ST OPP VERNDAL ST	0.6	2.8	28	0.5	3	34	0.4	2.1	21.1	0.6	2.7	28.7	74.3	155.8	2849.1
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	1.9	7.6	22.3	2.5	7.5	29.1	2.1	5.7	17.5	2.5	8.3	22.9	318.7	480.2	2687.7
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	1.4	2.8	20.9	1.7	4.8	26.1	1.4	2.4	16.5	1.7	3.2	21.4	124.3	238.8	2572.9
30 - 964 - BRIGHTON AVE OPP QUINT AVE	1.2	3.4	18.6	2	4.5	23.6	1.3	3	14.8	1.4	3.6	19.1	224.8	374.2	2423.4
52 - 1111 - CAMBRIDGE ST OPP HANO ST	1.5	3.6	16.5	2.2	4.5	21.3	1.3	2.4	13.7	1.4	3.4	17.1	264.5	283.4	2216.8
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	0.1	0.2	16.4	0.1	0.2	21.1	0	0	13.7	0.1	0.3	16.9	15.7	23.5	2209.1
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	0.9	0.4	16.9	1.5	0.6	22	0.9	0.4	14.3	0.9	0.7	17.1	166	46.3	2324
55 - 2558 - N HARVARD ST @ EMPIRE ST	0.2	1.6	15.5	0.5	1.7	20.7	0.3	0.8	13.8	0.3	1.3	16.1	123.6	125.7	2319.4
56 - 2559 - N HARVARD ST @ OXFORD ST	0.3	0.7	15.1	0.5	1.2	20	0.2	0.8	13.2	0.1	0.8	15.4	90.3	65.9	2345.2
57 - 2560 - N HARVARD ST @ KINGSLEY ST	0.3	2	13.4	0.4	2.2	18.2	0.2	1.9	11.5	0.2	1.7	13.9	74.4	135.9	2284.1
58 - 2561 - N HARVARD ST @ WESTERN AVE	0.6	1.6	12.4	1.1	1.7	17.6	0.7	1.8	10.4	0.6	2.1	12.4	120.7	221.9	2184.6
59 - 2564 - N HARVARD ST OPP HARVARD STAD	0.2	0.1	12.4	0	0.2	17.4	0	0.1	10.4	0.2	0.2	12.3	38.1	65	2157.6
60 - 25641 - JFK ST @ ELIOT ST	0.3	11.5	1.4	1.4	18.4	1.7	0.3	10.4	0.5	1.2	13.3	1.5	76.7	2164.5	131.7
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	0	1.2	0.2	0	0.2	1.5	0	0.2	0.3	0	0.3	1.2	0	58.3	73
Maximum			30.9			37.1			23.1			31			2933.8
Total	53.4	53.3		65.3	65.2		43.4	43.4		55.4	55.3		6821.2	6822.1	





Lane Group	EBL	EBT	WBT	NET	SWL	SWT	SWR
Lane Group Flow (vph)	975	948	1067	84	114	119	606
v/c Ratio	1.28	0.58	1.25	0.74	0.58	0.61	0.62
Control Delay	168.2	3.1	164.8	93.8	67.2	68.3	8.7
Queue Delay	0.2	2.4	0.0	25.4	0.0	0.0	54.6
Total Delay	168.4	5.5	164.9	119.1	67.2	68.3	63.2
Queue Length 50th (ft)	~526	46	~411	70	96	102	59
Queue Length 95th (ft)	m#406	m36	#508	#116	153	158	127
Internal Link Dist (ft)		326	152	279		121	
Turn Bay Length (ft)							
Base Capacity (vph)	759	1637	853	114	195	196	975
Starvation Cap Reductn	19	534	0	0	0	0	0
Spillback Cap Reductn	0	0	1	24	0	0	514
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.32	0.86	1.25	0.93	0.58	0.61	1.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

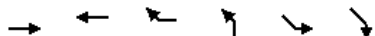
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	936	892	18	2	976	57	28	33	3	187	8	509
Future Volume (vph)	936	892	18	2	976	57	28	33	3	187	8	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	11	11	14
Total Lost time (s)	5.5	5.0			8.0			7.0		6.5	6.5	6.5
Lane Util. Factor	0.97	0.95			0.91			1.00		0.95	0.95	1.00
Frt	1.00	1.00			0.99			0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00			0.98		0.95	0.96	1.00
Satd. Flow (prot)	3236	3326			4706			1847		1641	1652	1706
Flt Permitted	0.95	1.00			0.94			0.98		0.95	0.96	1.00
Satd. Flow (perm)	3236	3326			4411			1847		1641	1652	1706
Peak-hour factor, PHF	0.96	0.96	0.96	0.97	0.97	0.97	0.76	0.76	0.76	0.84	0.84	0.84
Adj. Flow (vph)	975	929	19	2	1006	59	37	43	4	223	10	606
RTOR Reduction (vph)	0	0	0	0	5	0	0	1	0	0	0	296
Lane Group Flow (vph)	975	948	0	0	1062	0	0	83	0	114	119	310
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Perm	NA		Split	NA		Split	NA	pt+ov
Protected Phases	1	6			2		3	3		4	4	4 1
Permitted Phases				2								
Actuated Green, G (s)	29.5	63.0			24.0			7.0		14.5	14.5	51.5
Effective Green, g (s)	30.5	64.0			25.0			8.0		15.5	15.5	52.5
Actuated g/C Ratio	0.23	0.49			0.19			0.06		0.12	0.12	0.40
Clearance Time (s)	6.5	6.0			9.0			8.0		7.5	7.5	
Lane Grp Cap (vph)	759	1637			848			113		195	196	688
v/s Ratio Prot	c0.30	0.29						c0.04		0.07	c0.07	0.18
v/s Ratio Perm					c0.24							
v/c Ratio	1.28	0.58			1.25			0.74		0.58	0.61	0.45
Uniform Delay, d1	49.8	23.4			52.5			60.0		54.2	54.4	28.2
Progression Factor	0.96	0.12			0.98			1.00		1.00	1.00	1.00
Incremental Delay, d2	129.0	0.1			123.3			34.3		12.2	13.2	2.1
Delay (s)	176.6	3.1			174.8			94.3		66.4	67.6	30.4
Level of Service	F	A			F			F		E	E	C
Approach Delay (s)		91.1			174.8			94.3			40.5	
Approach LOS		F			F			F			D	
Intersection Summary												
HCM 2000 Control Delay		103.1			HCM 2000 Level of Service			F				
HCM 2000 Volume to Capacity ratio		0.87										
Actuated Cycle Length (s)		130.0			Sum of lost time (s)			31.0				
Intersection Capacity Utilization		74.6%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												



Lane Group	EBT	WBT	WBR	NBL	SEL	SER
Lane Group Flow (vph)	1499	1055	515	828	492	300
v/c Ratio	1.14	0.85	1.10	1.23	0.85	1.08
Control Delay	110.1	19.9	103.9	164.0	66.3	126.3
Queue Delay	0.5	1.0	0.0	7.2	1.9	30.6
Total Delay	110.6	20.9	103.9	171.2	68.2	156.9
Queue Length 50th (ft)	~774	108	~286	~453	209	~281
Queue Length 95th (ft)	#914	144	m#405	#581	#294	#465
Internal Link Dist (ft)	749	309		64	174	
Turn Bay Length (ft)			260		160	
Base Capacity (vph)	1316	1244	470	673	579	278
Starvation Cap Reductn	0	54	0	369	0	0
Spillback Cap Reductn	158	0	0	196	25	196
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.29	0.89	1.10	2.72	0.89	3.66

Intersection Summary

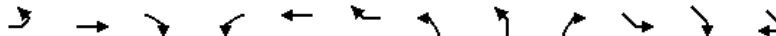
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

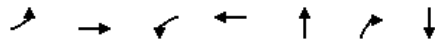
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations		↑↑			↑↑	↑↑		↑↑		↑↑	↑	↑
Traffic Volume (vph)	0	1358	21	0	960	469	135	587	32	467	148	137
Future Volume (vph)	0	1358	21	0	960	469	135	587	32	467	148	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	10	10
Total Lost time (s)		5.5			5.0	13.5		6.0		13.5	13.5	
Lane Util. Factor		0.95			0.95	0.88		0.97		0.97	1.00	
Flt		1.00			1.00	0.85		0.99		1.00	0.89	
Flt Protected		1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		3529			3303	2601		3500		3204	1542	
Flt Permitted		1.00			1.00	1.00		0.78		0.34	1.00	
Satd. Flow (perm)		3529			3303	2601		2738		1140	1542	
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95
Adj. Flow (vph)	0	1476	23	0	1055	515	148	645	35	492	156	144
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1499	0	0	1055	515	0	828	0	492	300	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Turn Type		NA			NA	Over	Prot	Prot		Prot	Prot	
Protected Phases		6			2	3	4	4		3	3	
Permitted Phases												
Actuated Green, G (s)		47.5			48.0	22.5		24.0		22.5	22.5	
Effective Green, g (s)		48.5			49.0	23.5		25.0		23.5	23.5	
Actuated g/C Ratio		0.37			0.38	0.18		0.19		0.18	0.18	
Clearance Time (s)		6.5			6.0	14.5		7.0		14.5	14.5	
Lane Grp Cap (vph)		1316			1244	470		673		579	278	
v/s Ratio Prot		c0.42			0.32	c0.20		c0.24		0.15	0.19	
v/s Ratio Perm												
v/c Ratio		1.14			0.85	1.10		1.23		0.85	1.08	
Uniform Delay, d1		40.8			37.1	53.2		52.5		51.5	53.2	
Progression Factor		1.00			0.39	0.79		1.19		1.00	1.00	
Incremental Delay, d2		72.3			5.2	63.5		113.8		14.5	76.6	
Delay (s)		113.0			19.5	105.7		176.2		66.0	129.9	
Level of Service		F			B	F		F		E	F	
Approach Delay (s)		113.0			47.8			176.2		90.2		
Approach LOS		F			D			F		F		

Intersection Summary

HCM 2000 Control Delay	98.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	142	1813	71	1479	32	287	119
v/c Ratio	0.75	1.23	0.81	0.82	0.10	0.81	0.33
Control Delay	72.4	130.3	67.3	57.2	39.3	25.6	21.0
Queue Delay	0.0	0.6	0.0	41.8	0.0	2.7	0.0
Total Delay	72.4	130.9	67.3	99.0	39.3	28.3	21.0
Queue Length 50th (ft)	128	~971	63	406	15	77	30
Queue Length 95th (ft)	m121	m#398	m70	m366	m28	#127	87
Internal Link Dist (ft)		309		326	479		237
Turn Bay Length (ft)	110		95			60	
Base Capacity (vph)	190	1470	88	1807	323	353	362
Starvation Cap Reductn	0	32	0	445	0	0	0
Spillback Cap Reductn	0	230	0	35	0	20	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	1.46	0.81	1.09	0.10	0.86	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	1554	168	67	1269	136	10	20	273	15	20	78
Future Volume (vph)	135	1554	168	67	1269	136	10	20	273	15	20	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	11	11	11	11	11	11
Total Lost time (s)	6.0	4.5		5.0	4.0			6.0	5.0		7.0	
Lane Util. Factor	1.00	0.95		1.00	0.91			1.00	1.00		1.00	
Flt	1.00	0.99		1.00	0.99			1.00	0.85		0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)	1652	3255		1652	4677			1770	1531		1622	
Flt Permitted	0.95	1.00		0.95	1.00			0.90	1.00		0.96	
Satd. Flow (perm)	1652	3255		1652	4677			1615	1531		1567	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	1636	177	71	1336	143	11	21	287	16	21	82
RTOR Reduction (vph)	0	6	0	0	10	0	0	0	272	0	61	0
Lane Group Flow (vph)	142	1807	0	71	1469	0	0	32	15	0	58	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Over	Perm	NA	
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases							8			4		
Actuated Green, G (s)	14.0	57.5		6.0	49.0			25.0	6.0		24.0	
Effective Green, g (s)	15.0	58.5		7.0	50.0			26.0	7.0		25.0	
Actuated g/C Ratio	0.12	0.45		0.05	0.38			0.20	0.05		0.19	
Clearance Time (s)	7.0	5.5		6.0	5.0			7.0	6.0		8.0	
Lane Grp Cap (vph)	190	1464		88	1798			323	82		301	
v/s Ratio Prot	c0.09	c0.56		0.04	0.31				0.01			
v/s Ratio Perm								0.02			c0.04	
v/c Ratio	0.75	1.23		0.81	0.82			0.10	0.19		0.19	
Uniform Delay, d1	55.7	35.8		60.8	35.9			42.4	58.8		44.0	
Progression Factor	1.26	0.67		0.99	1.58			0.91	2.03		1.00	
Incremental Delay, d2	2.5	106.0		7.1	0.4			0.4	3.7		1.4	
Delay (s)	72.4	129.8		67.3	57.3			38.9	123.1		45.4	
Level of Service	E	F		E	E			D	F		D	
Approach Delay (s)		125.6			57.7			114.7			45.4	
Approach LOS		F			E			F			D	
Intersection Summary												
HCM 2000 Control Delay			95.6		HCM 2000 Level of Service					F		
HCM 2000 Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			130.0		Sum of lost time (s)					21.0		
Intersection Capacity Utilization			85.6%		ICU Level of Service					E		
Analysis Period (min)			15									

c Critical Lane Group



Lane Group	EBL	EBT	WBT	NET	SWL	SWT	SWR
Lane Group Flow (vph)	409	1118	1378	67	335	349	659
v/c Ratio	0.92	0.78	1.37	0.53	1.40	1.45	0.74
Control Delay	74.0	35.3	210.0	63.9	242.4	263.2	14.2
Queue Delay	0.0	5.0	1.7	0.0	0.0	0.0	0.3
Total Delay	74.0	40.3	211.6	63.9	242.4	263.2	14.5
Queue Length 50th (ft)	173	277	~520	46	~365	~388	106
Queue Length 95th (ft)	m156	m235	#586	80	#561	#585	261
Internal Link Dist (ft)		331	172	268		128	
Turn Bay Length (ft)							
Base Capacity (vph)	444	1441	1003	127	239	240	892
Starvation Cap Reductn	0	258	0	0	0	0	0
Spillback Cap Reductn	0	0	266	0	0	0	29
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.95	1.87	0.53	1.40	1.45	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

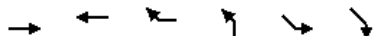
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	397	1063	21	4	1173	35	23	20	9	631	12	619
Future Volume (vph)	397	1063	21	4	1173	35	23	20	9	631	12	619
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	11	11	14
Total Lost time (s)	5.5	5.0			8.0			7.0		6.5	6.5	6.5
Lane Util. Factor	0.97	0.95			0.91			1.00		0.95	0.95	1.00
Frt	1.00	1.00			1.00			0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00			0.98		0.95	0.95	1.00
Satd. Flow (prot)	3236	3326			4772			1815		1641	1648	1706
Flt Permitted	0.95	1.00			0.93			0.98		0.95	0.95	1.00
Satd. Flow (perm)	3236	3326			4448			1815		1641	1648	1706
Peak-hour factor, PHF	0.97	0.97	0.97	0.88	0.88	0.88	0.78	0.78	0.78	0.94	0.94	0.94
Adj. Flow (vph)	409	1096	22	5	1333	40	29	26	12	671	13	659
RTOR Reduction (vph)	0	0	0	0	2	0	0	7	0	0	0	327
Lane Group Flow (vph)	409	1118	0	0	1376	0	0	60	0	335	349	332
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Perm	NA		Split	NA		Split	NA	pt+ov
Protected Phases	1	6			2		3	3		4	4	4 1
Permitted Phases				2								
Actuated Green, G (s)	15.5	51.0			26.0			7.0		16.5	16.5	39.5
Effective Green, g (s)	16.5	52.0			27.0			8.0		17.5	17.5	40.5
Actuated g/C Ratio	0.14	0.43			0.22			0.07		0.15	0.15	0.34
Clearance Time (s)	6.5	6.0			9.0			8.0		7.5	7.5	
Lane Grp Cap (vph)	444	1441			1000			121		239	240	575
v/s Ratio Prot	c0.13	0.34						c0.03		0.20	c0.21	0.19
v/s Ratio Perm					c0.31							
v/c Ratio	0.92	0.78			1.38			0.50		1.40	1.45	0.58
Uniform Delay, d1	51.1	29.0			46.5			54.1		51.2	51.2	32.7
Progression Factor	1.39	1.19			0.96			1.00		1.00	1.00	1.00
Incremental Delay, d2	3.8	0.4			175.2			14.0		204.0	226.1	4.2
Delay (s)	75.1	34.8			220.0			68.1		255.3	277.3	36.9
Level of Service	E	C			F			E		F	F	D
Approach Delay (s)		45.6			220.0			68.1			153.8	
Approach LOS		D			F			E			F	
Intersection Summary												
HCM 2000 Control Delay		135.3			HCM 2000 Level of Service			F				
HCM 2000 Volume to Capacity ratio		0.92										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)			31.0				
Intersection Capacity Utilization		94.3%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												



Lane Group	EBT	WBT	WBR	NBL	SEL	SER
Lane Group Flow (vph)	1133	1346	506	429	553	470
v/c Ratio	0.83	0.97	0.85	0.98	0.76	1.28
Control Delay	39.8	23.0	44.1	97.3	52.0	183.4
Queue Delay	0.0	16.7	0.0	46.4	0.8	31.5
Total Delay	39.8	39.8	44.1	143.6	52.8	214.9
Queue Length 50th (ft)	412	133	237	186	208	~461
Queue Length 95th (ft)	504	m138	m240	#272	261	#637
Internal Link Dist (ft)	749	314		73	133	
Turn Bay Length (ft)			260		160	
Base Capacity (vph)	1361	1386	592	437	729	368
Starvation Cap Reductn	0	89	0	244	0	0
Spillback Cap Reductn	5	0	0	0	38	300
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	1.04	0.85	2.22	0.80	6.91

Intersection Summary

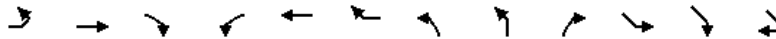
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

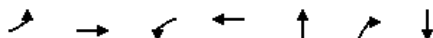
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations		↑↑			↑↑	↑↑		↑↑		↑↑	↑	↑
Traffic Volume (vph)	0	1022	43	0	1292	486	94	269	6	481	276	133
Future Volume (vph)	0	1022	43	0	1292	486	94	269	6	481	276	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	10	10
Total Lost time (s)		5.5			5.0	13.5		6.0		13.5	13.5	
Lane Util. Factor		*0.95			0.95	0.88		*0.95		0.97	1.00	
Flt		0.99			1.00	0.85		1.00		1.00	0.95	
Flt Protected		1.00			1.00	1.00		0.99		0.95	1.00	
Satd. Flow (prot)		3514			3539	2787		3500		3433	1733	
Flt Permitted		1.00			1.00	1.00		0.86		0.55	1.00	
Satd. Flow (perm)		3514			3539	2787		3038		1984	1733	
Peak-hour factor, PHF	0.94	0.94	0.94	0.96	0.96	0.96	0.86	0.86	0.86	0.87	0.87	0.87
Adj. Flow (vph)	0	1087	46	0	1346	506	109	313	7	553	317	153
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1133	0	0	1346	506	0	429	0	553	470	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type		NA			NA	Over	Prot	Prot		Prot	Prot	
Protected Phases		6			2	3	4	4		3	3	
Permitted Phases												
Actuated Green, G (s)		45.5			46.0	24.5		14.0		24.5	24.5	
Effective Green, g (s)		46.5			47.0	25.5		15.0		25.5	25.5	
Actuated g/C Ratio		0.39			0.39	0.21		0.12		0.21	0.21	
Clearance Time (s)		6.5			6.0	14.5		7.0		14.5	14.5	
Lane Grp Cap (vph)		1361			1386	592		437		729	368	
v/s Ratio Prot		0.32			c0.38	0.18		c0.12		0.16	c0.27	
v/s Ratio Perm												
v/c Ratio		0.83			0.97	0.85		0.98		0.76	1.28	
Uniform Delay, d1		33.2			35.8	45.5		52.4		44.4	47.2	
Progression Factor		1.00			0.37	0.85		1.14		1.00	1.00	
Incremental Delay, d2		6.1			7.9	4.9		37.9		7.3	144.2	
Delay (s)		39.3			21.3	43.5		97.8		51.6	191.5	
Level of Service		D			C	D		F		D	F	
Approach Delay (s)		39.3			27.4			97.8		115.9		
Approach LOS		D			C			F		F		
Intersection Summary												
HCM 2000 Control Delay		57.6			HCM 2000 Level of Service					E		
HCM 2000 Volume to Capacity ratio		1.02										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)					29.0		
Intersection Capacity Utilization		80.4%			ICU Level of Service					D		
Analysis Period (min)		15										
c Critical Lane Group												



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	60	1488	171	1958	22	114	268
v/c Ratio	0.62	1.19	1.25	1.02	0.07	0.46	0.53
Control Delay	78.4	117.6	172.6	29.4	32.2	15.4	12.6
Queue Delay	0.0	0.1	0.0	30.5	0.0	0.3	0.0
Total Delay	78.4	117.8	172.6	59.9	32.2	15.7	12.6
Queue Length 50th (ft)	50	~358	~169	~605	11	5	25
Queue Length 95th (ft)	m63	#523	m#159	m146	m29	50	105
Internal Link Dist (ft)		314		331	476		229
Turn Bay Length (ft)	110		95			60	
Base Capacity (vph)	97	1252	137	1912	320	248	504
Starvation Cap Reductn	0	41	0	364	0	0	0
Spillback Cap Reductn	0	0	0	122	0	11	5
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	1.23	1.25	1.26	0.07	0.48	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	1322	128	157	1620	44	10	10	105	20	10	168
Future Volume (vph)	59	1322	128	157	1620	44	10	10	105	20	10	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	11	11	11	11	11	11
Total Lost time (s)	6.0	4.5		5.0	4.0			6.0	5.0		7.0	
Lane Util. Factor	1.00	0.95		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.88	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)	1668	3286		1652	4774			1757	1531		1599	
Flt Permitted	0.95	1.00		0.95	1.00			0.82	1.00		0.97	
Satd. Flow (perm)	1668	3286		1652	4774			1479	1531		1553	
Peak-hour factor, PHF	0.98	0.98	0.92	0.92	0.85	0.85	0.92	0.92	0.92	0.73	0.92	0.73
Adj. Flow (vph)	60	1349	139	171	1906	52	11	11	114	27	11	230
RTOR Reduction (vph)	0	6	0	0	2	0	0	0	105	0	181	0
Lane Group Flow (vph)	60	1482	0	171	1956	0	0	22	10	0	87	0
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	2%	2%	2%	1%	2%	1%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Over	Perm	NA	
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases							8			4		
Actuated Green, G (s)	6.0	44.5		9.0	47.0			25.0	9.0		24.0	
Effective Green, g (s)	7.0	45.5		10.0	48.0			26.0	10.0		25.0	
Actuated g/C Ratio	0.06	0.38		0.08	0.40			0.22	0.08		0.21	
Clearance Time (s)	7.0	5.5		6.0	5.0			7.0	6.0		8.0	
Lane Grp Cap (vph)	97	1245		137	1909			320	127		323	
v/s Ratio Prot	0.04	c0.45		c0.10	0.41				0.01			
v/s Ratio Perm								0.01			c0.06	
v/c Ratio	0.62	1.19		1.25	1.02			0.07	0.07		0.27	
Uniform Delay, d1	55.2	37.2		55.0	36.0			37.4	50.7		39.8	
Progression Factor	1.13	0.76		1.32	0.38			0.84	1.47		1.00	
Incremental Delay, d2	15.7	90.5		117.3	13.8			0.4	1.1		2.0	
Delay (s)	78.0	118.8		190.1	27.4			31.9	75.7		41.9	
Level of Service	E	F		F	C			C	E		D	
Approach Delay (s)		117.2			40.5			68.6			41.9	
Approach LOS		F			D			E			D	
Intersection Summary												
HCM 2000 Control Delay		70.6			HCM 2000 Level of Service			E				
HCM 2000 Volume to Capacity ratio		0.74										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)			21.0				
Intersection Capacity Utilization		81.7%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	936	892	18	2	976	57	28	33	3	187	8	509
Future Volume (vph)	936	892	18	2	976	57	28	33	3	187	8	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	11	11	14
Storage Length (ft)	140		0	0		0	0		0	0		0
Storage Lanes	2		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			Yes		Yes			Yes	Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		406			232			359			201	
Travel Time (s)		9.2			5.3			8.2			4.6	
Peak Hour Factor	0.96	0.96	0.96	0.97	0.97	0.97	0.76	0.76	0.76	0.84	0.84	0.84
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	1%	1%	1%
Shared Lane Traffic (%)										49%		
Lane Group Flow (vph)	975	948	0	0	1067	0	0	84	0	114	119	606
v/c Ratio	1.17	0.89			1.16			0.47		0.43	0.45	0.65
Control Delay	130.6	28.1			129.2			67.6		58.1	58.6	18.7
Queue Delay	0.5	48.7			2.6			0.0		0.0	0.0	0.1
Total Delay	131.1	76.8			131.8			67.6		58.1	58.6	18.8
Queue Length 50th (ft)	~598	499			~605			73		96	101	225
Queue Length 95th (ft)	m318	m330			#744			105		155	161	318
Internal Link Dist (ft)		326			152			279			121	
Turn Bay Length (ft)	140											
Base Capacity (vph)	836	1071			917			177		263	264	935
Starvation Cap Reductn	64	374			0			0		0	0	0
Spillback Cap Reductn	0	0			316			0		0	0	28
Storage Cap Reductn	0	0			0			0		0	0	0
Reduced v/c Ratio	1.26	1.36			1.78			0.47		0.43	0.45	0.67

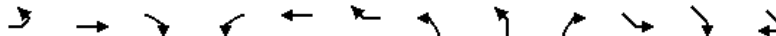
Intersection Summary

- Area Type: Other
- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	936	892	18	2	976	57	28	33	3	187	8	509
Future Volume (vph)	936	892	18	2	976	57	28	33	3	187	8	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	11	11	14
Total Lost time (s)	5.5	5.0			8.0			7.0		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00			0.95			1.00		0.95	0.95	1.00
Frt	1.00	1.00			0.99			0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00			0.98		0.95	0.96	1.00
Satd. Flow (prot)	3236	1750			3276			1847		1641	1652	1706
Flt Permitted	0.95	1.00			0.95			0.98		0.95	0.96	1.00
Satd. Flow (perm)	3236	1750			3123			1847		1641	1652	1706
Peak-hour factor, PHF	0.96	0.96	0.96	0.97	0.97	0.97	0.76	0.76	0.76	0.84	0.84	0.84
Adj. Flow (vph)	975	929	19	2	1006	59	37	43	4	223	10	606
RTOR Reduction (vph)	0	0	0	0	3	0	0	1	0	0	0	152
Lane Group Flow (vph)	975	948	0	0	1064	0	0	83	0	114	119	454
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Perm	NA		Split	NA		Split	NA	pt+ov
Protected Phases	1	6			2		3	3		4	4	4 1
Permitted Phases				2								
Actuated Green, G (s)	35.2	84.7			40.0			12.3		21.5	21.5	64.2
Effective Green, g (s)	36.2	85.7			41.0			13.3		22.5	22.5	65.2
Actuated g/C Ratio	0.26	0.61			0.29			0.10		0.16	0.16	0.47
Clearance Time (s)	6.5	6.0			9.0			8.0		7.5	7.5	
Vehicle Extension (s)	3.0	3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	836	1071			914			175		263	265	794
v/s Ratio Prot	c0.30	0.54						c0.04		0.07	0.07	c0.27
v/s Ratio Perm					c0.34							
v/c Ratio	1.17	0.89			1.16			0.47		0.43	0.45	0.57
Uniform Delay, d1	51.9	23.0			49.5			60.0		53.0	53.1	27.2
Progression Factor	1.28	1.08			1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	76.2	1.1			85.9			2.0		1.1	1.2	1.0
Delay (s)	142.5	26.0			135.4			62.1		54.1	54.4	28.2
Level of Service	F	C			F			E		D	D	C
Approach Delay (s)		85.1			135.4			62.1			35.5	
Approach LOS		F			F			E			D	
Intersection Summary												
HCM 2000 Control Delay		87.7			HCM 2000 Level of Service			F				
HCM 2000 Volume to Capacity ratio		1.02										
Actuated Cycle Length (s)		140.0			Sum of lost time (s)			31.0				
Intersection Capacity Utilization		103.7%			ICU Level of Service			G				
Analysis Period (min)		15										

c Critical Lane Group

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations												
Traffic Volume (vph)	0	1358	21	0	960	469	135	587	32	467	148	137
Future Volume (vph)	0	1358	21	0	960	469	135	587	32	467	148	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	10	10
Storage Length (ft)	0		0	0		260		0	0	160	0	
Storage Lanes	0		1	0		1		2	0	1	1	
Taper Length (ft)	25			25				25		25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		30			30			30		30		
Link Distance (ft)		829			389			144		254		
Travel Time (s)		18.8			8.8			3.3		5.8		
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1476	23	0	1055	515	0	828	0	492	300	0
v/c Ratio		1.18	0.04		0.89	1.24		1.27		1.06	0.69	
Control Delay		131.2	30.8		41.1	153.3		180.2		105.0	54.3	
Queue Delay		2.4	0.0		37.8	2.6		9.8		21.3	0.0	
Total Delay		133.5	30.8		78.9	155.9		190.1		126.3	54.3	
Queue Length 50th (ft)		~1610	14		300	~592		~489		~489	245	
Queue Length 95th (ft)		#1875	35		#517	#817		#619		#710	355	
Internal Link Dist (ft)		749			309			64		174		
Turn Bay Length (ft)						260				160		
Base Capacity (vph)		1247	535		1179	417		650		466	435	
Starvation Cap Reductn		0	0		200	92		408		0	0	
Spillback Cap Reductn		475	0		0	0		146		180	0	
Storage Cap Reductn		0	0		0	0		0		0	0	
Reduced v/c Ratio		1.91	0.04		1.08	1.58		3.42		1.72	0.69	
Intersection Summary												
Area Type:	Other											
~	Volume exceeds capacity, queue is theoretically infinite.											
	Queue shown is maximum after two cycles.											
#	95th percentile volume exceeds capacity, queue may be longer.											
	Queue shown is maximum after two cycles.											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations		↑	↑		↑↑	↑		↑↑		↑	↑	
Traffic Volume (vph)	0	1358	21	0	960	469	135	587	32	467	148	137
Future Volume (vph)	0	1358	21	0	960	469	135	587	32	467	148	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	10	10
Total Lost time (s)		5.5	6.5		5.0	13.5		6.0		13.5	13.5	
Lane Util. Factor		1.00	1.00		0.95	1.00		0.97		1.00	1.00	
Flt		1.00	0.85		1.00	0.85		0.99		1.00	0.89	
Flt Protected		1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		3529	1546		3303	1478		3500		1652	1542	
Flt Permitted		1.00	1.00		1.00	1.00		0.78		0.34	1.00	
Satd. Flow (perm)		3529	1546		3303	1478		2738		588	1542	
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95
Adj. Flow (vph)	0	1476	23	0	1055	515	148	645	35	492	156	144
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1476	23	0	1055	515	0	828	0	492	300	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Turn Type		NA	Perm		NA	Over	Prot	Prot		Prot	Prot	
Protected Phases		6			2	3	4	4		3	3	
Permitted Phases			6									
Actuated Green, G (s)		48.5	48.5		49.0	38.5		25.0		38.5	38.5	
Effective Green, g (s)		49.5	48.5		50.0	39.5		26.0		39.5	39.5	
Actuated g/C Ratio		0.35	0.35		0.36	0.28		0.19		0.28	0.28	
Clearance Time (s)		6.5	6.5		6.0	14.5		7.0		14.5	14.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		1247	535		1179	417		650		466	435	
v/s Ratio Prot		c0.42			0.32	c0.35		c0.24		0.30	0.19	
v/s Ratio Perm			0.01									
v/c Ratio		1.18	0.04		0.89	1.24		1.27		1.06	0.69	
Uniform Delay, d1		45.2	30.4		42.5	50.2		57.0		50.2	44.8	
Progression Factor		1.00	1.00		0.77	0.73		1.00		1.00	1.00	
Incremental Delay, d2		91.1	0.2		7.8	119.7		135.0		57.2	4.5	
Delay (s)		136.3	30.5		40.6	156.6		192.0		107.4	49.3	
Level of Service		F	C		D	F		F		F	D	
Approach Delay (s)		134.7			78.7			192.0		85.4		
Approach LOS		F			E			F		F		
Intersection Summary												
HCM 2000 Control Delay		117.7			HCM 2000 Level of Service					F		
HCM 2000 Volume to Capacity ratio		1.27										
Actuated Cycle Length (s)		140.0			Sum of lost time (s)					29.0		
Intersection Capacity Utilization		139.8%			ICU Level of Service					H		
Analysis Period (min)		15										

c Critical Lane Group

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	1554	168	67	1269	136	10	20	273	15	20	78
Future Volume (vph)	135	1554	168	67	1269	136	10	20	273	15	20	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	11	11	11	11	11	11
Storage Length (ft)	110		0	95		0	0		60	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		389			406			559			317	
Travel Time (s)		8.8			9.2			12.7			7.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	142	1813	0	71	1479	0	0	32	287	0	119	0
v/c Ratio	0.53	1.68		0.43	0.80			0.13	0.70		0.40	
Control Delay	70.9	327.1		73.6	21.6			48.9	15.8		26.9	
Queue Delay	0.0	1.8		0.0	48.2			0.0	61.7		0.1	
Total Delay	70.9	329.0		73.6	69.8			48.9	77.5		26.9	
Queue Length 50th (ft)	137	~2475		66	716			25	0		39	
Queue Length 95th (ft)	m118	m#2077		m72	m685			56	89		100	
Internal Link Dist (ft)		309			326			479			237	
Turn Bay Length (ft)	110			95					60			
Base Capacity (vph)	267	1080		164	1839			296	410		335	
Starvation Cap Reductn	0	88		0	606			0	0		0	
Spillback Cap Reductn	0	321		0	452			0	201		9	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.53	2.39		0.43	1.20			0.11	1.37		0.37	
Intersection Summary												
Area Type:	Other											
~	Volume exceeds capacity, queue is theoretically infinite.											
	Queue shown is maximum after two cycles.											
#	95th percentile volume exceeds capacity, queue may be longer.											
	Queue shown is maximum after two cycles.											
m	Volume for 95th percentile queue is metered by upstream signal.											

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	1554	168	67	1269	136	10	20	273	15	20	78
Future Volume (vph)	135	1554	168	67	1269	136	10	20	273	15	20	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	11	11	11	11	11	11
Total Lost time (s)	6.0	4.5		5.0	4.0			6.0	5.0		7.0	
Lane Util. Factor	1.00	1.00		1.00	0.95			1.00	1.00		1.00	
Flt	1.00	0.99		1.00	0.99			1.00	0.85		0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)	1652	1713		1652	3255			1770	1531		1622	
Flt Permitted	0.95	1.00		0.95	1.00			0.89	1.00		0.96	
Satd. Flow (perm)	1652	1713		1652	3255			1600	1531		1561	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	1636	177	71	1336	143	11	21	287	16	21	82
RTOR Reduction (vph)	0	2	0	0	5	0	0	0	259	0	58	0
Lane Group Flow (vph)	142	1811	0	71	1474	0	0	32	28	0	61	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Over	Perm	NA	
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases							8			4		
Actuated Green, G (s)	21.7	87.2		12.9	77.9			21.4	12.9		20.4	
Effective Green, g (s)	22.7	88.2		13.9	78.9			22.4	13.9		21.4	
Actuated g/C Ratio	0.16	0.63		0.10	0.56			0.16	0.10		0.15	
Clearance Time (s)	7.0	5.5		6.0	5.0			7.0	6.0		8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	267	1079		164	1834			256	152		238	
v/s Ratio Prot	c0.09	c1.06		0.04	0.45				0.02		c0.04	
v/s Ratio Perm								0.02				
v/c Ratio	0.53	1.68		0.43	0.80			0.12	0.19		0.25	
Uniform Delay, d1	53.8	25.9		59.3	24.4			50.4	57.9		52.3	
Progression Factor	1.29	0.75		1.21	0.79			1.00	1.00		1.00	
Incremental Delay, d2	0.2	305.7		0.6	1.2			0.2	0.6		0.6	
Delay (s)	69.7	325.2		72.5	20.4			50.6	58.5		52.8	
Level of Service	E	F		E	C			D	E		D	
Approach Delay (s)		306.6			22.8			57.7			52.8	
Approach LOS		F			C			E			D	
Intersection Summary												
HCM 2000 Control Delay		167.2			HCM 2000 Level of Service			F				
HCM 2000 Volume to Capacity ratio		1.36										
Actuated Cycle Length (s)		140.0			Sum of lost time (s)			21.0				
Intersection Capacity Utilization		129.3%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	397	1063	21	4	1173	35	23	20	9	631	12	619
Future Volume (vph)	397	1063	21	4	1173	35	23	20	9	631	12	619
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	11	11	14
Storage Length (ft)	140		0	0		0	0		0	0		0
Storage Lanes	2		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		411			252			348			208	
Travel Time (s)		9.3			5.7			7.9			4.7	
Peak Hour Factor	0.97	0.97	0.97	0.88	0.88	0.88	0.78	0.78	0.78	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	409	1118	0	0	1378	0	0	67	0	335	349	659
v/c Ratio	1.15	1.14			1.39			0.46		0.85	0.89	0.83
Control Delay	147.8	83.2			218.8			69.5		75.5	79.4	37.0
Queue Delay	0.0	1.2			0.2			0.0		0.0	0.0	0.8
Total Delay	147.8	84.4			218.9			69.5		75.5	79.4	37.8
Queue Length 50th (ft)	~248	~1256			~947			58		332	350	406
Queue Length 95th (ft)	m151	m206			#1054			93		#554	#585	#659
Internal Link Dist (ft)		331			172			268			128	
Turn Bay Length (ft)	140											
Base Capacity (vph)	355	980			989			147		392	394	797
Starvation Cap Reductn	0	193			31			0		0	0	0
Spillback Cap Reductn	0	0			0			0		0	0	26
Storage Cap Reductn	0	0			0			0		0	0	0
Reduced v/c Ratio	1.15	1.42			1.44			0.46		0.85	0.89	0.85

Intersection Summary

Area Type: Other
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	397	1063	21	4	1173	35	23	20	9	631	12	619
Future Volume (vph)	397	1063	21	4	1173	35	23	20	9	631	12	619
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	11	11	14
Total Lost time (s)	5.5	5.0			8.0			7.0		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00			0.95			1.00		0.95	0.95	1.00
Frt	1.00	1.00			1.00			0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00			0.98		0.95	0.95	1.00
Satd. Flow (prot)	3236	1751			3321			1815		1641	1648	1706
Flt Permitted	0.95	1.00			0.76			0.98		0.95	0.95	1.00
Satd. Flow (perm)	3236	1751			2512			1815		1641	1648	1706
Peak-hour factor, PHF	0.97	0.97	0.97	0.88	0.88	0.88	0.78	0.78	0.78	0.94	0.94	0.94
Adj. Flow (vph)	409	1096	22	5	1333	40	29	26	12	671	13	659
RTOR Reduction (vph)	0	0	0	0	1	0	0	6	0	0	0	138
Lane Group Flow (vph)	409	1118	0	0	1377	0	0	61	0	335	349	521
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Perm	NA		Split	NA		Split	NA	pt+ov
Protected Phases	1	6			2		3	3		4	4	4 1
Permitted Phases				2								
Actuated Green, G (s)	15.5	83.0			58.0			10.6		34.9	34.9	57.9
Effective Green, g (s)	16.5	84.0			59.0			11.6		35.9	35.9	58.9
Actuated g/C Ratio	0.11	0.56			0.39			0.08		0.24	0.24	0.39
Clearance Time (s)	6.5	6.0			9.0			8.0		7.5	7.5	
Vehicle Extension (s)	3.0	3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	355	980			988			140		392	394	669
v/s Ratio Prot	0.13	c0.64						c0.03		0.20	c0.21	0.31
v/s Ratio Perm					c0.55							
v/c Ratio	1.15	1.14			1.39			0.44		0.85	0.89	0.78
Uniform Delay, d1	66.8	33.0			45.5			66.1		54.6	55.1	39.9
Progression Factor	1.40	0.46			1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	71.7	64.7			183.3			2.2		16.4	20.5	5.7
Delay (s)	165.4	79.9			228.8			68.3		71.0	75.5	45.6
Level of Service	F	E			F			E		E	E	D
Approach Delay (s)		102.8			228.8			68.3			59.7	
Approach LOS		F			F			E			E	
Intersection Summary												
HCM 2000 Control Delay		129.1			HCM 2000 Level of Service			F				
HCM 2000 Volume to Capacity ratio		1.19										
Actuated Cycle Length (s)		150.0			Sum of lost time (s)			31.0				
Intersection Capacity Utilization		131.6%			ICU Level of Service			H				
Analysis Period (min)		15										

c Critical Lane Group

	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Group												
Lane Configurations		↑	↑		↑↑	↑		↑↑		↑	↑	
Traffic Volume (vph)	0	1022	43	0	1292	486	94	269	6	481	276	133
Future Volume (vph)	0	1022	43	0	1292	486	94	269	6	481	276	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	10	10
Storage Length (ft)	0		0	0		260		0	0	160	0	
Storage Lanes	0		1	0		1		2	0	1	1	
Taper Length (ft)	25			25				25		25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		30			30			30		30		
Link Distance (ft)		829			394			153		213		
Travel Time (s)		18.8			9.0			3.5		4.8		
Peak Hour Factor	0.94	0.94	0.94	0.96	0.96	0.96	0.86	0.86	0.86	0.87	0.87	0.87
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1087	46	0	1346	506	0	429	0	553	470	0
v/c Ratio		0.78	0.08		1.01	1.01		1.23		0.99	0.90	
Control Delay		44.2	29.3		49.8	85.6		178.1		83.6	68.3	
Queue Delay		0.1	0.0		34.3	35.5		15.0		43.2	0.0	
Total Delay		44.3	29.3		84.1	121.1		193.0		126.8	68.3	
Queue Length 50th (ft)		969	28		~641	~531		~271		537	437	
Queue Length 95th (ft)		1149	57		#857	m#665		#361		#741	#606	
Internal Link Dist (ft)		749			314			73		133		
Turn Bay Length (ft)						260				160		
Base Capacity (vph)		1399	602		1334	502		350		561	524	
Starvation Cap Reductn		0	0		272	190		220		0	0	
Spillback Cap Reductn		26	0		0	0		0		284	0	
Storage Cap Reductn		0	0		0	0		0		0	0	
Reduced v/c Ratio		0.79	0.08		1.27	1.62		3.30		2.00	0.90	

Intersection Summary

Area Type: Other

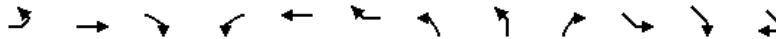
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations		↑	↑		↑↑	↑		↑↑		↑	↑	
Traffic Volume (vph)	0	1022	43	0	1292	486	94	269	6	481	276	133
Future Volume (vph)	0	1022	43	0	1292	486	94	269	6	481	276	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	10	10
Total Lost time (s)		5.5	6.5		5.0	13.5		6.0		13.5	13.5	
Lane Util. Factor		*0.95	1.00		0.95	1.00		*0.95		1.00	1.00	
Flt		1.00	0.85		1.00	0.85		1.00		1.00	0.89	
Flt Protected		1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		3529	1546		3336	1492		3500		1668	1557	
Flt Permitted		1.00	1.00		1.00	1.00		0.78		0.34	1.00	
Satd. Flow (perm)		3529	1546		3336	1492		2738		593	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.96	0.96	0.96	0.86	0.86	0.86	0.87	0.87	0.87
Adj. Flow (vph)	0	1087	46	0	1346	506	109	313	7	553	317	153
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1087	46	0	1346	506	0	429	0	553	470	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type		NA	Perm		NA	Over	Prot	Prot		Prot	Prot	
Protected Phases		6			2	3	4	4		3	3	
Permitted Phases			6									
Actuated Green, G (s)		58.5	58.5		59.0	49.5		14.0		49.5	49.5	
Effective Green, g (s)		59.5	58.5		60.0	50.5		15.0		50.5	50.5	
Actuated g/C Ratio		0.40	0.39		0.40	0.34		0.10		0.34	0.34	
Clearance Time (s)		6.5	6.5		6.0	14.5		7.0		14.5	14.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		1399	602		1334	502		350		561	524	
v/s Ratio Prot		0.31			c0.40	c0.34		c0.12		0.33	0.30	
v/s Ratio Perm			0.03									
v/c Ratio		0.78	0.08		1.01	1.01		1.23		0.99	0.90	
Uniform Delay, d1		39.5	28.8		45.0	49.8		67.5		49.4	47.3	
Progression Factor		1.00	1.00		0.67	1.16		1.00		1.00	1.00	
Incremental Delay, d2		4.3	0.2		19.1	29.5		124.4		34.0	17.8	
Delay (s)		43.8	29.0		49.2	87.5		191.9		83.4	65.1	
Level of Service		D	C		D	F		F		F	E	
Approach Delay (s)		43.2			59.6			191.9		75.0		
Approach LOS		D			E			F		E		
Intersection Summary												
HCM 2000 Control Delay		71.8			HCM 2000 Level of Service					E		
HCM 2000 Volume to Capacity ratio		1.07										
Actuated Cycle Length (s)		150.0			Sum of lost time (s)					29.0		
Intersection Capacity Utilization		111.8%			ICU Level of Service					H		
Analysis Period (min)		15										

c Critical Lane Group

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	1322	128	157	1620	44	10	10	105	20	10	168
Future Volume (vph)	59	1322	128	157	1620	44	10	10	105	20	10	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	11	11	11	11	11	11
Storage Length (ft)	110		0	95		0	0		60	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		394			411			556			309	
Travel Time (s)		9.0			9.3			12.6			7.0	
Peak Hour Factor	0.98	0.98	0.92	0.92	0.85	0.85	0.92	0.92	0.92	0.73	0.92	0.73
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	2%	2%	2%	1%	2%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	1488	0	171	1958	0	0	22	114	0	268	0
v/c Ratio	0.43	1.60		0.50	0.90			0.13	0.28		0.72	
Control Delay	62.8	294.3		61.5	10.2			53.8	10.2		31.7	
Queue Delay	0.0	0.3		0.0	46.4			0.0	0.4		9.5	
Total Delay	62.8	294.6		61.5	56.6			53.8	10.6		41.2	
Queue Length 50th (ft)	57	~2103		157	317			18	0		85	
Queue Length 95th (ft)	m66	m#2333		m146	m229			46	55		187	
Internal Link Dist (ft)		314			331			476			229	
Turn Bay Length (ft)	110			95					60			
Base Capacity (vph)	138	932		341	2185			191	406		407	
Starvation Cap Reductn	0	0		0	431			0	0		0	
Spillback Cap Reductn	0	49		0	598			0	91		107	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.43	1.69		0.50	1.23			0.12	0.36		0.89	
Intersection Summary												
Area Type:	Other											
~	Volume exceeds capacity, queue is theoretically infinite.											
	Queue shown is maximum after two cycles.											
#	95th percentile volume exceeds capacity, queue may be longer.											
	Queue shown is maximum after two cycles.											
m	Volume for 95th percentile queue is metered by upstream signal.											

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	1322	128	157	1620	44	10	10	105	20	10	168
Future Volume (vph)	59	1322	128	157	1620	44	10	10	105	20	10	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	11	11	11	11	11	11
Total Lost time (s)	6.0	4.5		5.0	4.0			6.0	5.0		7.0	
Lane Util. Factor	1.00	1.00		1.00	0.95			1.00	1.00		1.00	
Flt	1.00	0.99		1.00	1.00			1.00	0.85		0.88	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)	1668	1730		1652	3323			1757	1531		1599	
Flt Permitted	0.95	1.00		0.95	1.00			0.60	1.00		0.96	
Satd. Flow (perm)	1668	1730		1652	3323			1083	1531		1547	
Peak-hour factor, PHF	0.98	0.98	0.92	0.92	0.85	0.85	0.92	0.92	0.92	0.73	0.92	0.73
Adj. Flow (vph)	60	1349	139	171	1906	52	11	11	114	27	11	230
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	90	0	149	0
Lane Group Flow (vph)	60	1486	0	171	1957	0	0	22	24	0	119	0
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	2%	2%	2%	1%	2%	1%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Over	Perm	NA	
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases							8			4		
Actuated Green, G (s)	11.5	79.6		30.0	97.6			21.9	30.0		20.9	
Effective Green, g (s)	12.5	80.6		31.0	98.6			22.9	31.0		21.9	
Actuated g/C Ratio	0.08	0.54		0.21	0.66			0.15	0.21		0.15	
Clearance Time (s)	7.0	5.5		6.0	5.0			7.0	6.0		8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	139	929		341	2184			165	316		225	
v/s Ratio Prot	0.04	c0.86		c0.10	c0.59				0.02			
v/s Ratio Perm								0.02			c0.08	
v/c Ratio	0.43	1.60		0.50	0.90			0.13	0.07		0.53	
Uniform Delay, d1	65.4	34.7		52.7	21.4			55.0	47.9		59.3	
Progression Factor	0.89	0.66		1.12	0.36			1.00	1.00		1.00	
Incremental Delay, d2	1.1	272.3		0.1	0.6			0.4	0.1		2.4	
Delay (s)	59.5	295.1		59.0	8.4			55.3	48.0		61.7	
Level of Service	E	F		E	A			E	D		E	
Approach Delay (s)		286.0			12.4			49.2			61.7	
Approach LOS		F			B			D			E	
Intersection Summary												
HCM 2000 Control Delay		120.7									F	
HCM 2000 Volume to Capacity ratio		1.25										
Actuated Cycle Length (s)		150.0							21.0			
Intersection Capacity Utilization		118.5%									H	
Analysis Period (min)		15										

c Critical Lane Group

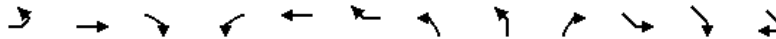
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	936	892	18	2	976	57	28	33	3	187	8	509
Future Volume (vph)	936	892	18	2	976	57	28	33	3	187	8	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	11	11	14
Right Turn on Red			No			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		406			232			359			201	
Travel Time (s)		9.2			5.3			8.2			4.6	
Peak Hour Factor	0.96	0.96	0.96	0.97	0.97	0.97	0.76	0.76	0.76	0.84	0.84	0.84
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	1%	1%	1%
Shared Lane Traffic (%)										49%		
Lane Group Flow (vph)	975	948	0	0	1067	0	0	84	0	114	119	606
v/c Ratio	1.28	1.10			2.36			0.74		0.58	0.61	0.62
Control Delay	168.2	59.0			640.5			93.8		67.2	68.3	8.7
Queue Delay	0.2	2.2			1.1			376.7		0.0	0.0	61.6
Total Delay	168.4	61.3			641.6			470.5		67.2	68.3	70.2
Queue Length 50th (ft)	~526	~934			~781			70		96	102	59
Queue Length 95th (ft)	m179	m46			#920			#116		153	158	127
Internal Link Dist (ft)		326			152			279			121	
Turn Bay Length (ft)												
Base Capacity (vph)	759	862			453			114		195	196	975
Starvation Cap Reductn	27	249			0			0		0	0	0
Spillback Cap Reductn	0	0			50			112		0	0	730
Storage Cap Reductn	0	0			0			0		0	0	0
Reduced v/c Ratio	1.33	1.55			2.65			42.00		0.58	0.61	2.47

Intersection Summary

Area Type: Other
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	936	892	18	2	976	57	28	33	3	187	8	509
Future Volume (vph)	936	892	18	2	976	57	28	33	3	187	8	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	11	11	14
Total Lost time (s)	5.5	5.0			8.0			7.0		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00			0.95			1.00		0.95	0.95	1.00
Frt	1.00	1.00			0.99			0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00			0.98		0.95	0.96	1.00
Satd. Flow (prot)	3236	1750			3276			1847		1641	1652	1706
Flt Permitted	0.95	1.00			0.71			0.98		0.95	0.96	1.00
Satd. Flow (perm)	3236	1750			2342			1847		1641	1652	1706
Peak-hour factor, PHF	0.96	0.96	0.96	0.97	0.97	0.97	0.76	0.76	0.76	0.84	0.84	0.84
Adj. Flow (vph)	975	929	19	2	1006	59	37	43	4	223	10	606
RTOR Reduction (vph)	0	0	0	0	3	0	0	1	0	0	0	296
Lane Group Flow (vph)	975	948	0	0	1064	0	0	83	0	114	119	310
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Perm	NA		Split	NA		Split	NA	pt+ov
Protected Phases	1	6			2		3	3		4	4	4 1
Permitted Phases				2								
Actuated Green, G (s)	29.5	63.0			24.0			7.0		14.5	14.5	51.5
Effective Green, g (s)	30.5	64.0			25.0			8.0		15.5	15.5	52.5
Actuated g/C Ratio	0.23	0.49			0.19			0.06		0.12	0.12	0.40
Clearance Time (s)	6.5	6.0			9.0			8.0		7.5	7.5	
Lane Grp Cap (vph)	759	861			450			113		195	196	688
v/s Ratio Prot	c0.30	0.54						c0.04		0.07	c0.07	0.18
v/s Ratio Perm					c0.45							
v/c Ratio	1.28	1.10			2.36			0.74		0.58	0.61	0.45
Uniform Delay, d1	49.8	33.0			52.5			60.0		54.2	54.4	28.2
Progression Factor	0.96	0.22			0.98			1.00		1.00	1.00	1.00
Incremental Delay, d2	129.0	47.4			620.6			34.3		12.2	13.2	2.1
Delay (s)	176.6	54.8			672.0			94.3		66.4	67.6	30.4
Level of Service	F	D			F			F		E	E	C
Approach Delay (s)		116.6			672.0			94.3			40.5	
Approach LOS		F			F			F			D	
Intersection Summary												
HCM 2000 Control Delay		251.2			HCM 2000 Level of Service			F				
HCM 2000 Volume to Capacity ratio		1.15										
Actuated Cycle Length (s)		130.0			Sum of lost time (s)			31.0				
Intersection Capacity Utilization		103.7%			ICU Level of Service			G				
Analysis Period (min)		15										
c Critical Lane Group												

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations												
Traffic Volume (vph)	0	1358	21	0	960	469	135	587	32	467	148	137
Future Volume (vph)	0	1358	21	0	960	469	135	587	32	467	148	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	10	10
Storage Length (ft)	0		0	0		260		0	0	160	0	
Storage Lanes	0		1	0		1		2	0	1	1	
Taper Length (ft)	25			25				25		25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		30			30			30		30		
Link Distance (ft)		829			389			144		254		
Travel Time (s)		18.8			8.8			3.3		5.8		
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1476	23	0	1055	515	0	828	0	492	300	0
v/c Ratio		1.12	0.04		0.85	1.93		1.23		1.65	1.08	
Control Delay		103.4	27.0		19.6	444.9		163.5		341.4	126.3	
Queue Delay		0.6	0.0		17.5	0.0		7.2		21.2	30.2	
Total Delay		104.1	27.0		37.1	444.9		170.7		362.6	156.6	
Queue Length 50th (ft)		~1432	12		137	~686		~453		~600	~281	
Queue Length 95th (ft)		#1698	33		m124	m#603		#580		#817	#465	
Internal Link Dist (ft)		749			309			64		174		
Turn Bay Length (ft)						260				160		
Base Capacity (vph)		1316	564		1244	267		673		298	278	
Starvation Cap Reductn		0	0		207	0		369		0	0	
Spillback Cap Reductn		190	7		0	0		336		207	195	
Storage Cap Reductn		0	0		0	0		0		0	0	
Reduced v/c Ratio		1.31	0.04		1.02	1.93		2.72		5.41	3.61	
Intersection Summary												
Area Type:	Other											
~	Volume exceeds capacity, queue is theoretically infinite.											
	Queue shown is maximum after two cycles.											
#	95th percentile volume exceeds capacity, queue may be longer.											
	Queue shown is maximum after two cycles.											
m	Volume for 95th percentile queue is metered by upstream signal.											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations		↑	↑		↑↑	↑		↑↑		↑	↑	
Traffic Volume (vph)	0	1358	21	0	960	469	135	587	32	467	148	137
Future Volume (vph)	0	1358	21	0	960	469	135	587	32	467	148	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	10	10
Total Lost time (s)		5.5	6.5		5.0	13.5		6.0		13.5	13.5	
Lane Util. Factor		1.00	1.00		0.95	1.00		0.97		1.00	1.00	
Flt		1.00	0.85		1.00	0.85		0.99		1.00	0.89	
Flt Protected		1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		3529	1546		3303	1478		3500		1652	1542	
Flt Permitted		1.00	1.00		1.00	1.00		0.78		0.34	1.00	
Satd. Flow (perm)		3529	1546		3303	1478		2738		588	1542	
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95
Adj. Flow (vph)	0	1476	23	0	1055	515	148	645	35	492	156	144
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1476	23	0	1055	515	0	828	0	492	300	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Turn Type		NA	Perm		NA	Over	Prot	Prot		Prot	Prot	
Protected Phases		6			2	3	4	4		3	3	
Permitted Phases			6									
Actuated Green, G (s)		47.5	47.5		48.0	22.5		24.0		22.5	22.5	
Effective Green, g (s)		48.5	47.5		49.0	23.5		25.0		23.5	23.5	
Actuated g/C Ratio		0.37	0.37		0.38	0.18		0.19		0.18	0.18	
Clearance Time (s)		6.5	6.5		6.0	14.5		7.0		14.5	14.5	
Lane Grp Cap (vph)		1316	564		1244	267		673		298	278	
v/s Ratio Prot		c0.42			0.32	c0.35		c0.24		0.30	0.19	
v/s Ratio Perm			0.01									
v/c Ratio		1.12	0.04		0.85	1.93		1.23		1.65	1.08	
Uniform Delay, d1		40.8	26.6		37.1	53.2		52.5		53.2	53.2	
Progression Factor		1.00	1.00		0.50	0.75		1.18		1.00	1.00	
Incremental Delay, d2		65.3	0.1		0.7	419.2		113.8		307.5	76.6	
Delay (s)		106.0	26.7		19.2	459.0		175.5		360.8	129.9	
Level of Service		F	C		B	F		F		F	F	
Approach Delay (s)		104.8			163.5			175.5		273.3		
Approach LOS		F			F			F		F		
Intersection Summary												
HCM 2000 Control Delay		165.4			HCM 2000 Level of Service			F				
HCM 2000 Volume to Capacity ratio		1.29										
Actuated Cycle Length (s)		130.0			Sum of lost time (s)			29.0				
Intersection Capacity Utilization		139.8%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	1554	168	67	1269	136	10	20	273	15	20	78
Future Volume (vph)	135	1554	168	67	1269	136	10	20	273	15	20	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	11	11	11	11	11	11
Storage Length (ft)	110		110	95		0	0		60	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		389			406			559			317	
Travel Time (s)		8.8			9.2			12.7			7.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	142	1636	177	71	1479	0	0	32	287	0	119	0
v/c Ratio	0.75	2.09	0.24	0.81	1.18			0.10	0.81		0.33	
Control Delay	72.0	512.1	6.5	67.4	133.0			39.3	25.6		21.0	
Queue Delay	0.0	1.5	0.0	0.0	1.2			0.0	3.8		0.0	
Total Delay	72.0	513.6	6.5	67.4	134.3			39.3	29.5		21.0	
Queue Length 50th (ft)	128	~2161	20	63	~733			15	77		30	
Queue Length 95th (ft)	m104	m#1648	m10	m55	m404			m28	#127		87	
Internal Link Dist (ft)		309			326			479			237	
Turn Bay Length (ft)	110		110	95					60			
Base Capacity (vph)	190	782	724	88	1257			323	353		362	
Starvation Cap Reductn	0	0	0	0	306			0	0		0	
Spillback Cap Reductn	0	163	0	0	33			0	26		0	
Storage Cap Reductn	0	0	0	0	0			0	0		0	
Reduced v/c Ratio	0.75	2.64	0.24	0.81	1.56			0.10	0.88		0.33	
Intersection Summary												
Area Type:	Other											
~	Volume exceeds capacity, queue is theoretically infinite.											
	Queue shown is maximum after two cycles.											
#	95th percentile volume exceeds capacity, queue may be longer.											
	Queue shown is maximum after two cycles.											
m	Volume for 95th percentile queue is metered by upstream signal.											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	1554	168	67	1269	136	10	20	273	15	20	78
Future Volume (vph)	135	1554	168	67	1269	136	10	20	273	15	20	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	11	11	11	11	11	11
Total Lost time (s)	6.0	4.5	5.5	5.0	4.0			6.0	5.0		7.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95			1.00	1.00		1.00	
Flt	1.00	1.00	0.85	1.00	0.99			1.00	0.85		0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)	1652	1739	1478	1652	3255			1770	1531		1622	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.90	1.00		0.96	
Satd. Flow (perm)	1652	1739	1478	1652	3255			1615	1531		1567	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	1636	177	71	1336	143	11	21	287	16	21	82
RTOR Reduction (vph)	0	0	70	0	6	0	0	0	272	0	61	0
Lane Group Flow (vph)	142	1636	107	71	1473	0	0	32	15	0	58	0
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA	Over	Perm	NA	
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases			6				8			4		
Actuated Green, G (s)	14.0	57.5	57.5	6.0	49.0			25.0	6.0		24.0	
Effective Green, g (s)	15.0	58.5	57.5	7.0	50.0			26.0	7.0		25.0	
Actuated g/C Ratio	0.12	0.45	0.44	0.05	0.38			0.20	0.05		0.19	
Clearance Time (s)	7.0	5.5	5.5	6.0	5.0			7.0	6.0		8.0	
Lane Grp Cap (vph)	190	782	653	88	1251			323	82		301	
v/s Ratio Prot	c0.09	c0.94		0.04	0.45				0.01			
v/s Ratio Perm			0.07					0.02			c0.04	
v/c Ratio	0.75	2.09	0.16	0.81	1.18			0.10	0.19		0.19	
Uniform Delay, d1	55.7	35.8	21.8	60.8	40.0			42.4	58.8		44.0	
Progression Factor	1.25	0.65	0.89	0.99	1.58			0.91	2.03		1.00	
Incremental Delay, d2	2.5	491.8	0.0	7.1	80.7			0.4	3.7		1.4	
Delay (s)	72.0	515.0	19.4	67.4	143.8			38.9	123.1		45.4	
Level of Service	E	F	B	E	F			D	F		D	
Approach Delay (s)		437.9			140.3			114.7			45.4	
Approach LOS		F			F			F			D	
Intersection Summary												
HCM 2000 Control Delay			282.9			HCM 2000 Level of Service					F	
HCM 2000 Volume to Capacity ratio			1.23									
Actuated Cycle Length (s)			130.0			Sum of lost time (s)					21.0	
Intersection Capacity Utilization			119.1%			ICU Level of Service					H	
Analysis Period (min)			15									

c Critical Lane Group

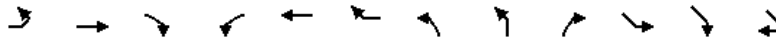
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	397	1063	21	4	1173	35	23	20	9	631	12	619
Future Volume (vph)	397	1063	21	4	1173	35	23	20	9	631	12	619
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	11	11	14
Right Turn on Red			No			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		411			252			348			208	
Travel Time (s)		9.3			5.7			7.9			4.7	
Peak Hour Factor	0.97	0.97	0.97	0.88	0.88	0.88	0.78	0.78	0.78	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	409	1118	0	0	1378	0	0	67	0	335	349	659
v/c Ratio	0.92	1.47			2.69			0.53		1.40	1.45	0.74
Control Delay	74.1	245.5			786.8			63.9		242.4	263.2	14.2
Queue Delay	0.0	1.1			7.3			0.0		0.0	0.0	0.6
Total Delay	74.1	246.6			794.0			63.9		242.4	263.2	14.8
Queue Length 50th (ft)	174	~1159			~963			46		~365	~388	106
Queue Length 95th (ft)	m102	m298			#1054			80		#561	#585	261
Internal Link Dist (ft)		331			172			268			128	
Turn Bay Length (ft)												
Base Capacity (vph)	444	758			512			127		239	240	892
Starvation Cap Reductn	0	120			0			0		0	0	0
Spillback Cap Reductn	0	37			255			0		0	0	54
Storage Cap Reductn	0	0			0			0		0	0	0
Reduced v/c Ratio	0.92	1.75			5.36			0.53		1.40	1.45	0.79

Intersection Summary

Area Type: Other
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	397	1063	21	4	1173	35	23	20	9	631	12	619
Future Volume (vph)	397	1063	21	4	1173	35	23	20	9	631	12	619
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	11	11	14
Total Lost time (s)	5.5	5.0			8.0			7.0		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00			0.95			1.00		0.95	0.95	1.00
Frt	1.00	1.00			1.00			0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00			0.98		0.95	0.95	1.00
Satd. Flow (prot)	3236	1751			3321			1815		1641	1648	1706
Flt Permitted	0.95	1.00			0.68			0.98		0.95	0.95	1.00
Satd. Flow (perm)	3236	1751			2272			1815		1641	1648	1706
Peak-hour factor, PHF	0.97	0.97	0.97	0.88	0.88	0.88	0.78	0.78	0.78	0.94	0.94	0.94
Adj. Flow (vph)	409	1096	22	5	1333	40	29	26	12	671	13	659
RTOR Reduction (vph)	0	0	0	0	2	0	0	7	0	0	0	327
Lane Group Flow (vph)	409	1118	0	0	1376	0	0	60	0	335	349	332
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Perm	NA		Split	NA		Split	NA	pt+ov
Protected Phases	1	6			2		3	3		4	4	4 1
Permitted Phases				2								
Actuated Green, G (s)	15.5	51.0			26.0			7.0		16.5	16.5	39.5
Effective Green, g (s)	16.5	52.0			27.0			8.0		17.5	17.5	40.5
Actuated g/C Ratio	0.14	0.43			0.22			0.07		0.15	0.15	0.34
Clearance Time (s)	6.5	6.0			9.0			8.0		7.5	7.5	
Lane Grp Cap (vph)	444	758			511			121		239	240	575
v/s Ratio Prot	0.13	c0.64						c0.03		0.20	c0.21	0.19
v/s Ratio Perm					c0.61							
v/c Ratio	0.92	1.47			2.69			0.50		1.40	1.45	0.58
Uniform Delay, d1	51.1	34.0			46.5			54.1		51.2	51.2	32.7
Progression Factor	1.40	1.15			1.02			1.00		1.00	1.00	1.00
Incremental Delay, d2	3.8	214.4			767.2			14.0		204.0	226.1	4.2
Delay (s)	75.2	253.6			814.9			68.1		255.3	277.3	36.9
Level of Service	E	F			F			E		F	F	D
Approach Delay (s)		205.8			814.9			68.1			153.8	
Approach LOS		F			F			E			F	
Intersection Summary												
HCM 2000 Control Delay		382.0			HCM 2000 Level of Service			F				
HCM 2000 Volume to Capacity ratio		1.47										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)			31.0				
Intersection Capacity Utilization		131.6%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations												
Traffic Volume (vph)	0	1022	43	0	1292	486	94	269	6	481	276	133
Future Volume (vph)	0	1022	43	0	1292	486	94	269	6	481	276	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	10	10
Storage Length (ft)	0		0	0		260		0	0	160	0	
Storage Lanes	0		1	0		1		2	0	1	1	
Taper Length (ft)	25			25				25		25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		30			30			30		30		
Link Distance (ft)		829			394			153		213		
Travel Time (s)		18.8			9.0			3.5		4.8		
Peak Hour Factor	0.94	0.94	0.94	0.96	0.96	0.96	0.86	0.86	0.86	0.87	0.87	0.87
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1087	46	0	1346	506	0	429	0	553	470	0
v/c Ratio		0.80	0.08		1.03	1.60		0.98		1.56	1.42	
Control Delay		37.8	24.5		34.9	299.3		97.3		299.6	243.6	
Queue Delay		49.3	0.0		27.5	0.0		46.4		8.8	34.2	
Total Delay		87.1	24.5		62.4	299.3		143.7		308.4	277.7	
Queue Length 50th (ft)		774	23		~152	~578		185		~606	~491	
Queue Length 95th (ft)		951	49		m101	m#362		#272		#788	#667	
Internal Link Dist (ft)		749			314			73		133		
Turn Bay Length (ft)						260				160		
Base Capacity (vph)		1367	586		1306	317		437		354	330	
Starvation Cap Reductn		0	0		204	0		244		0	0	
Spillback Cap Reductn		458	5		0	0		0		171	270	
Storage Cap Reductn		0	0		0	0		0		0	0	
Reduced v/c Ratio		1.20	0.08		1.22	1.60		2.22		3.02	7.83	
Intersection Summary												
Area Type:	Other											
~	Volume exceeds capacity, queue is theoretically infinite.											
	Queue shown is maximum after two cycles.											
#	95th percentile volume exceeds capacity, queue may be longer.											
	Queue shown is maximum after two cycles.											
m	Volume for 95th percentile queue is metered by upstream signal.											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations		↑	↑		↑↑	↑		↑↑		↑	↑	
Traffic Volume (vph)	0	1022	43	0	1292	486	94	269	6	481	276	133
Future Volume (vph)	0	1022	43	0	1292	486	94	269	6	481	276	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	10	10
Total Lost time (s)		5.5	6.5		5.0	13.5		6.0		13.5	13.5	
Lane Util. Factor		*0.95	1.00		0.95	1.00		*0.95		1.00	1.00	
Flt		1.00	0.85		1.00	0.85		1.00		1.00	0.89	
Flt Protected		1.00	1.00		1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		3529	1546		3336	1492		3500		1668	1557	
Flt Permitted		1.00	1.00		1.00	1.00		0.78		0.34	1.00	
Satd. Flow (perm)		3529	1546		3336	1492		2738		593	1557	
Peak-hour factor, PHF	0.94	0.94	0.94	0.96	0.96	0.96	0.86	0.86	0.86	0.87	0.87	0.87
Adj. Flow (vph)	0	1087	46	0	1346	506	109	313	7	553	317	153
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1087	46	0	1346	506	0	429	0	553	470	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type		NA	Perm		NA	Over	Prot	Prot		Prot	Prot	
Protected Phases		6			2	3	4	4		3	3	
Permitted Phases			6									
Actuated Green, G (s)		45.5	45.5		46.0	24.5		14.0		24.5	24.5	
Effective Green, g (s)		46.5	45.5		47.0	25.5		15.0		25.5	25.5	
Actuated g/C Ratio		0.39	0.38		0.39	0.21		0.12		0.21	0.21	
Clearance Time (s)		6.5	6.5		6.0	14.5		7.0		14.5	14.5	
Lane Grp Cap (vph)		1367	586		1306	317		437		354	330	
v/s Ratio Prot		0.31			c0.40	c0.34		c0.12		0.33	0.30	
v/s Ratio Perm			0.03									
v/c Ratio		0.80	0.08		1.03	1.60		0.98		1.56	1.42	
Uniform Delay, d1		32.5	23.8		36.5	47.2		52.4		47.2	47.2	
Progression Factor		1.00	1.00		0.42	0.84		1.15		1.00	1.00	
Incremental Delay, d2		4.9	0.3		17.1	269.7		37.9		266.4	207.7	
Delay (s)		37.4	24.1		32.6	309.5		97.9		313.6	255.0	
Level of Service		D	C		C	F		F		F	F	
Approach Delay (s)		36.9			108.3			97.9		286.7		
Approach LOS		D			F			F		F		
Intersection Summary												
HCM 2000 Control Delay		130.2			HCM 2000 Level of Service			F				
HCM 2000 Volume to Capacity ratio		1.14										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)			29.0				
Intersection Capacity Utilization		111.8%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	1322	128	157	1620	44	10	10	105	20	10	168
Future Volume (vph)	59	1322	128	157	1620	44	10	10	105	20	10	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	11	11	11	11	11	11
Storage Length (ft)	110		110	95		0	0		60	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		394			411			556			309	
Travel Time (s)		9.0			9.3			12.6			7.0	
Peak Hour Factor	0.98	0.98	0.92	0.92	0.85	0.85	0.92	0.92	0.92	0.73	0.92	0.73
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	2%	2%	2%	1%	2%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	1349	139	171	1958	0	0	22	114	0	268	0
v/c Ratio	0.62	2.03	0.22	1.25	1.47			0.07	0.46		0.53	
Control Delay	65.2	484.8	4.4	172.5	231.9			32.2	15.4		12.6	
Queue Delay	0.0	0.4	0.0	0.0	1.0			0.0	3.1		2.8	
Total Delay	65.2	485.3	4.4	172.5	232.9			32.2	18.5		15.4	
Queue Length 50th (ft)	50	~1669	11	~169	~1126			11	5		25	
Queue Length 95th (ft)	m53	m#1543	m13	m104	m155			m29	50		105	
Internal Link Dist (ft)		314			331			476			229	
Turn Bay Length (ft)	110		110	95					60			
Base Capacity (vph)	97	665	639	137	1331			320	248		504	
Starvation Cap Reductn	0	0	0	0	289			0	0		0	
Spillback Cap Reductn	0	42	0	0	127			0	67		141	
Storage Cap Reductn	0	0	0	0	0			0	0		0	
Reduced v/c Ratio	0.62	2.17	0.22	1.25	1.88			0.07	0.63		0.74	

Intersection Summary

Area Type: Other

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	1322	128	157	1620	44	10	10	105	20	10	168
Future Volume (vph)	59	1322	128	157	1620	44	10	10	105	20	10	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	11	11	11	11	11	11
Total Lost time (s)	6.0	4.5	5.5	5.0	4.0			6.0	5.0		7.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.88	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)	1668	1756	1478	1652	3323			1757	1531		1599	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.82	1.00		0.97	
Satd. Flow (perm)	1668	1756	1478	1652	3323			1479	1531		1553	
Peak-hour factor, PHF	0.98	0.98	0.92	0.92	0.85	0.85	0.92	0.92	0.92	0.73	0.92	0.73
Adj. Flow (vph)	60	1349	139	171	1906	52	11	11	114	27	11	230
RTOR Reduction (vph)	0	0	87	0	2	0	0	0	105	0	181	0
Lane Group Flow (vph)	60	1349	52	171	1956	0	0	22	10	0	87	0
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%	2%	2%	2%	1%	2%	1%
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA	Over	Perm	NA	
Protected Phases	1	6		5	2			8	5		4	
Permitted Phases			6				8			4		
Actuated Green, G (s)	6.0	44.5	44.5	9.0	47.0			25.0	9.0		24.0	
Effective Green, g (s)	7.0	45.5	44.5	10.0	48.0			26.0	10.0		25.0	
Actuated g/C Ratio	0.06	0.38	0.37	0.08	0.40			0.22	0.08		0.21	
Clearance Time (s)	7.0	5.5	5.5	6.0	5.0			7.0	6.0		8.0	
Lane Grp Cap (vph)	97	665	548	137	1329			320	127		323	
v/s Ratio Prot	0.04	c0.77		c0.10	0.59				0.01			
v/s Ratio Perm			0.03					0.01			c0.06	
v/c Ratio	0.62	2.03	0.09	1.25	1.47			0.07	0.07		0.27	
Uniform Delay, d1	55.2	37.2	24.6	55.0	36.0			37.4	50.7		39.8	
Progression Factor	1.12	0.72	1.14	1.32	0.39			0.84	1.47		1.00	
Incremental Delay, d2	2.7	463.3	0.0	117.3	212.7			0.4	1.1		2.0	
Delay (s)	64.8	490.1	28.0	189.9	226.8			31.9	75.9		41.9	
Level of Service	E	F	C	F	F			C	E		D	
Approach Delay (s)		432.1			223.8			68.8			41.9	
Approach LOS		F			F			E			D	
Intersection Summary												
HCM 2000 Control Delay		285.7			HCM 2000 Level of Service			F				
HCM 2000 Volume to Capacity ratio		1.12										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)			21.0				
Intersection Capacity Utilization		110.7%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												



Route 9 at Washington Street / High Street

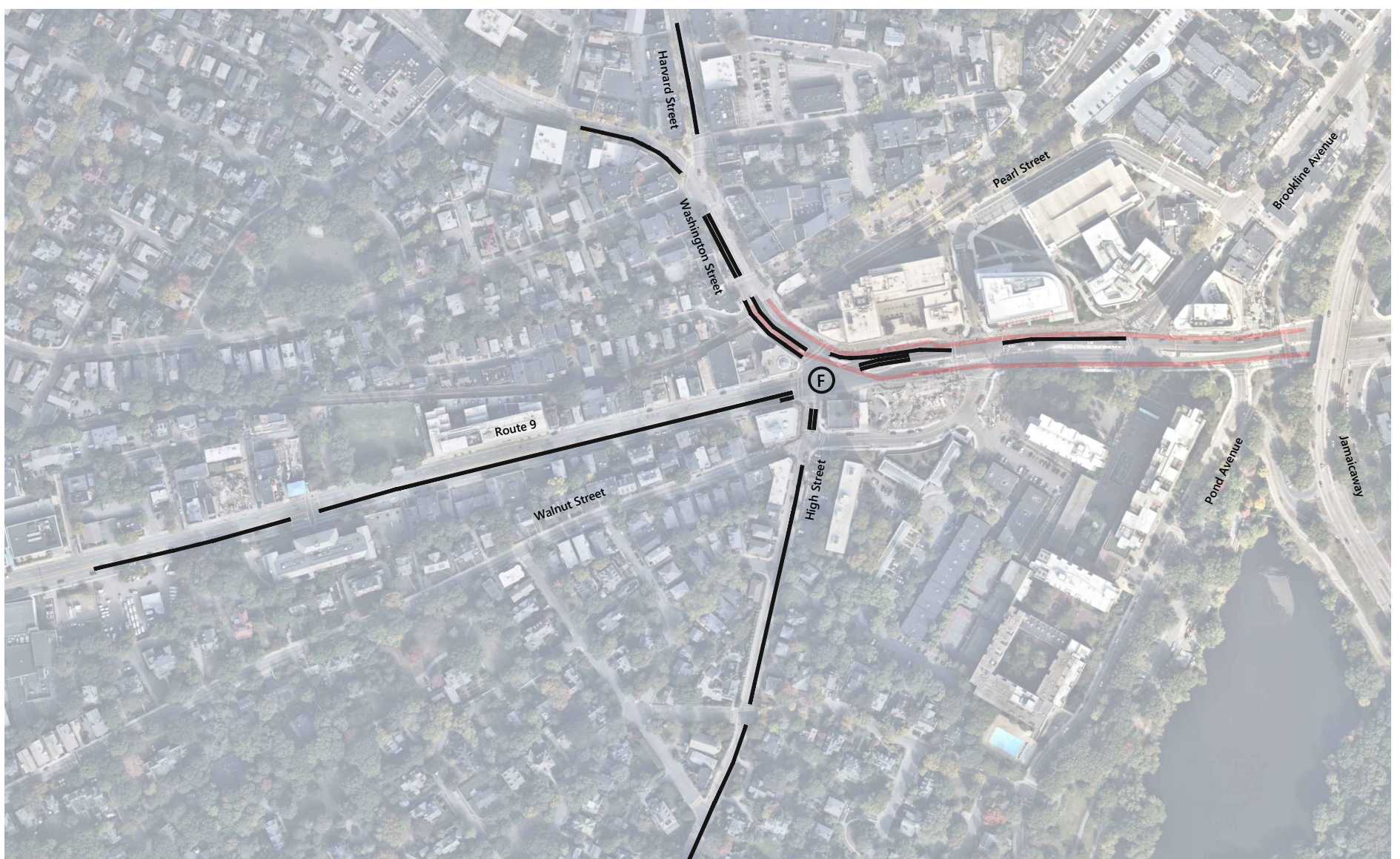
ⓧ Intersection Level of Service

■ 95th Percentile Queue

Proposed Bus Lane



2020 Gateway East



2020 Gateway East with Dedicated Bus Lanes

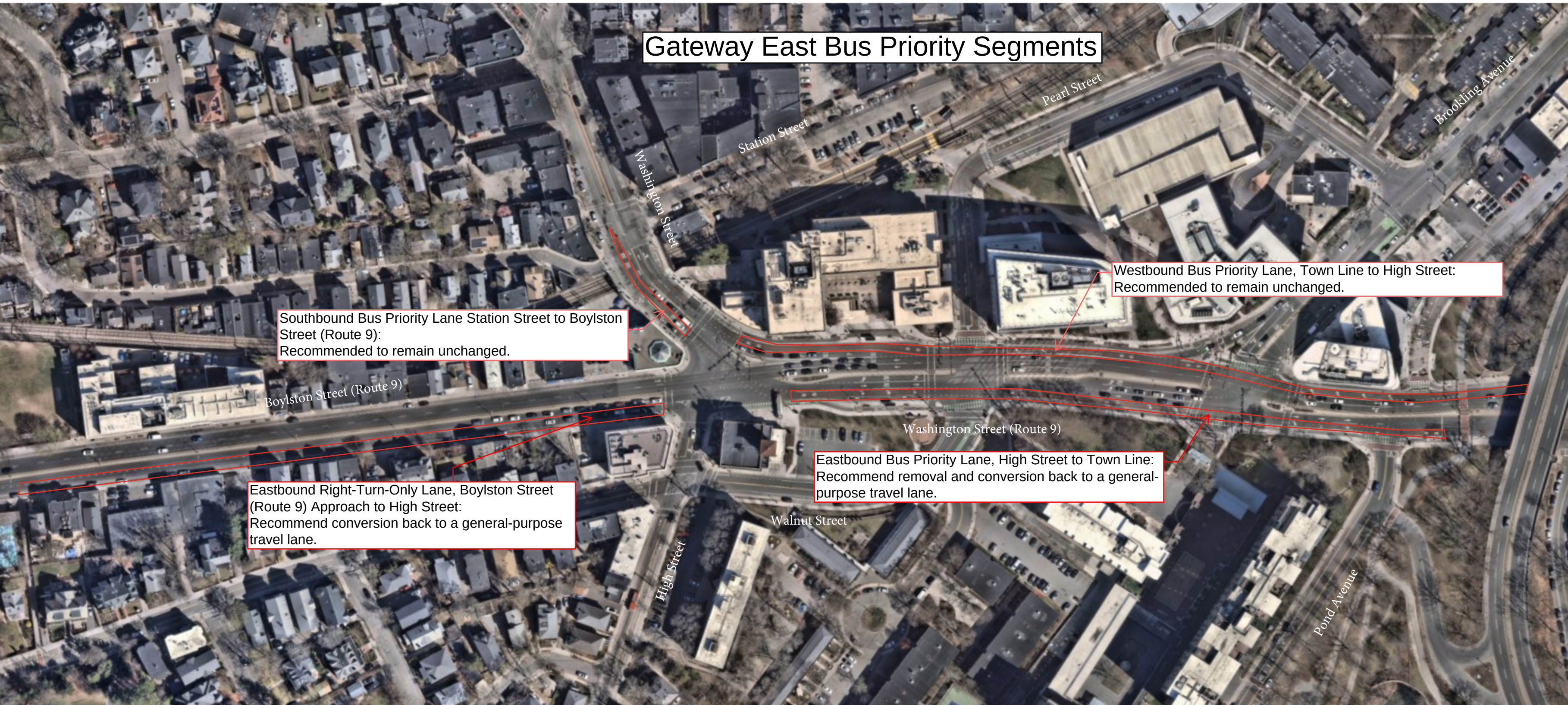
Weekday Morning Queue Diagrams



A horizontal number line is shown with three tick marks labeled 0, 175, and 350 Feet. There is a gap in the line between 0 and 175, and another gap between 175 and 350.

Gateway East - Transit Improvements Brookline, Massachusetts

Gateway East Bus Priority Segments



Southbound Bus Priority Lane Station Street to Boylston Street (Route 9):
Recommended to remain unchanged.

Westbound Bus Priority Lane, Town Line to High Street:
Recommended to remain unchanged.

Eastbound Right-Turn-Only Lane, Boylston Street (Route 9) Approach to High Street:
Recommend conversion back to a general-purpose travel lane.

Eastbound Bus Priority Lane, High Street to Town Line:
Recommend removal and conversion back to a general-purpose travel lane.

Gateway East Bus Lane Pilot Public Comment Submitted By email

The Gateway East Dedicated Bus Lane Pilot has generated significant public feedback, with the majority of comments expressing concern about its impacts on traffic operations, safety, and overall effectiveness. A small number of comments were supportive of the bus lane's intent, but even these noted operational challenges.

Key Themes Identified:

1. Widespread Non-Compliance and Lack of Enforcement

Numerous residents reported that private vehicles, including police cars, regularly use the bus-only lanes without consequence. Many view the lack of enforcement as the primary reason the bus lane is not functioning as intended.

2. Increased Congestion and Gridlock

Most comments described worsening traffic congestion, particularly eastbound on Route 9 approaching High Street and near the Brookline fire station. Several residents noted long backups requiring multiple light cycles to clear intersections, with traffic often blocking key cross streets like Washington, Walnut, and Harvard.

3. Confusing Lane Configurations and Driver Behavior

Residents cited unclear lane markings, abrupt merges, and driver confusion leading to dangerous maneuvers and near-collisions. There were repeated concerns about merging conflicts near Station Street and the Brook House driveway.

4. Low Bus Frequency and Lane Utilization

Many questioned whether dedicating a full lane was justified given that buses on Washington Street, including the 66, operate infrequently, particularly outside of peak hours. Observations of empty bus lanes and minimal transit ridership were common.

5. Unsafe Conditions for Cyclists and Pedestrians

Multiple cyclists described feeling unsafe navigating the corridor due to conflicts with vehicles and limited protection. Some suggested additional signage or physical separation to improve safety.

6. Concerns About Signal Timing

Residents noted poorly coordinated signal timings, particularly along Route 9, which compound congestion and block intersections. Several called for a review of signal phasing and better synchronization.

7. General Sentiment

While some residents supported efforts to improve transit reliability, most felt the current design prioritizes too few buses at the expense of general traffic and safety. Several residents requested the pilot be ended or significantly revised.

From: Rebecca Fitzgerald <
Sent: Sunday, June 28, 2026 5:02 PM
To: Transportation Shared <transportation@brooklinema.gov>
Subject: Light at high street and route 9 east

CAUTION: This email originated from a sender outside the Town of Brookline mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

I wanted to submit a complaint about the light at high Street and Route nine when you're driving east.

This is a very busy intersection and the light goes green for a total of 13 seconds. Barely 4 cars can get through it by the time they realize the light has turned green. Meanwhile, you have to wait at least two minutes for all the other lights to go through their routine. Second, you made the right lane a turn only lane. I have been waiting in the left lane behind about 15 cars and watched at least 15 go by me in the right lane and instead of taking a right they go straight. I don't understand why you need a right turn only lane at that intersection. Hardly anybody goes right and you can't go right on Red.

I've attached a picture of the intersection I'm talking about. I asked that you take a look at the timing at the intersection to make it fair for all cars on the road. I also would suggest you either make the right lane straight or right or just make it a normal lane again.

Thank you for your consideration



Cheers,
Rebecca

Rebecca Fitzgerald | (m)

Sent from my iPhone

From: Elton Lossner <>
Sent: Saturday, March 7, 2026 1:36 PM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: Re: This pilot isn't working

CAUTION: This email originated from a sender outside the Town of Brookline mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Hey,

Following up on this. The signs have been up for nearly a year, and I've seen no enforcement by Brookline PD nor any change in driver behavior. What's the point of the bus lane if the traffic pattern doesn't change?

This pilot is DOA unless the police step it up.

I'm tempted to spend my next afternoon with a camera on a tripod, record every vehicle that violates the lane, extract the plates with an OCR tool, and mail the spreadsheet out.

Thanks,
Elton

From: Ted Arnstein <
Sent: Friday, November 21, 2025 12:33 PM
To: Transportation Shared <transportation@brooklinema.gov>
Subject: Boylston Inbound from Washington to Brookline Ave.

Hello,

I wanted to provide my view that the new right-turn lane / bus lane additions at the subject location are ignored by 90% of drivers, and with good reason. It is a far too congested and complicated series of intersections to cut off crucial lanes. I appreciate the idea, but it clearly is not working and only serves to frustrate drivers who try to obey the markings only to wait in longer lines than ever and then watch so many others drive by them as they ignore the markings. It's a brutal intersection, but in my humble opinion, this experiment has only made it worse.

Sincerely,

Ted Arnstein

From: Owen < >

Sent: Friday, November 7, 2025 9:14 PM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: Gateway Bus Lanes Feedback

Good evening Gateway Project team,

I have given feedback previously about my observations of the signal timing as a daily commuter through the project area, and I wished to expand upon that with another thought I had about the lane configuration relating to the inbound left-turn onto Brookline Ave which is the cause of all the backups and delays.

The vast majority of traffic inbound in the morning is trying to go to Longwood, which means taking that left onto Brookline. And what are they accommodated with, only about 230ft of turning queues between poorly synced intersection timings across the three on Rt9. This pushed drivers *into* the bus lane because it's the only way around the backup to get into those short left-turn lanes. I've said before how the signal coordination can be changed to accommodate *all* traffic, but an additional lane reconfiguration that would go a long way is eliminating the left-only onto Pearl and making it an extension of the Brookline turn lanes, which would also move more traffic onto the essentially wide open Walnut St to go straight across to Pearl. Doing this would turn what is currently ~370 linear feet of left-turn queue for Brookline into ~1100 linear feet (550 x 2) whilst leaving a lane much clearer as a straight shot through to Huntington and drivers not feeling as much need to encroach on the bus lane.

Attached is a roughly done sketch in paint. Blue path shows additional queue length there would be for the Brookline Ave turn and path drivers would take. Green shows the new path to Pearl via Walnut (where I'd also reroute the 65 inbound to avoid having to dive across all the lanes for a left turn, even if a 66 transfer is less smooth, though I understand that's up to the MBTA). This follows national practice of eliminating lefts on busy roads where possible by rerouting left-turning traffic onto a straight-across alignment. This should all fit within the existing road as long as the bus lane is shifted into the stop. This would also simplify the Walnut/Pearl signal since it'd only need a shorter left-only cycle for the left onto Walnut from Washington. That can be accommodated simply by giving the Westbound side a leading green with a dedicated arrow for a few seconds.



—

Page 637 of 1121

From: stephenproducer <>
Sent: Wednesday, November 5, 2025 2:29 PM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Cc: Diana Ensor <>; Nicole Jones <.com>
Subject: 44 Washington Street entrance to the Brook House

Hello Traffic Gurus (cc to the Brook House) - First, let us thank you for trying to unsnarl traffic in the block of Washington Street in front of the Brook House, where we live. Crossing the street as pedestrians has become easier, leaving 44 Washington remains easy. But ENTERING has become problematic.

INBOUND FROM THE WEST

Route 9 inbound drivers ignore the restrictions on the bus lane, which is also the right turn lane for the Brook House. Motorists, instead of leaving the lane open for buses and right-turning cars, freely use the restricted lane as a through-lane to continue at full speed toward Huntington Avenue. (**See video attached**). When I drive in from the west, I have given up trying to cross the restricted lane to take a right turn into the Brook House. Too many cars passing dangerously on the right. I take an alternate route.

OUTBOUND FROM THE EAST

This is a lesser problem, but as there is no left turn arrow on the traffic signal where Route 9 meets Brookline Avenue, it can take courage and skill to turn left across inbound traffic into the Brook House entrance. Again, I take an alternate route.

Note: I see that the Transportation Board looked at the Gateway East project on October 8 ([minutes here](#)), but I saw scant attention paid to the eastbound traffic problem at 44 Washington. Will there be another meeting to come?

I know this is a massive headache for everyone, but I did notice that in our first example — the Route 9 traffic inbound from the west — drivers observe the lane restriction when there is a police presence. Would it be possible, during peak traffic hours for a few weeks, to have a police officer onsite to either enforce traffic rules or actively direct traffic?

Stephen Snyder
Diana Ensor
77 Pond Ave, Apt C506
Brookline, MA 02445

From: Suzanne Salamon < >

Sent: Sunday, September 28, 2025 2:37 PM

To: Sam Downes <sdownes@brooklinema.gov>

Subject: Traffic congestion at Washington street merging onto Route 9

Hi

Please forward this to the right person.

The merge going from Washington Street onto Route 9 is terrible. It creates gridlock, forces people into the "Bus Only Lane" just to get out of the way to oncoming traffic and causes near fender-benders.

Please drive down this area, especially in rush hour, to see what I mean

Thank you

Suzanne Salamon

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

From: Lydia Baumrind < >

Sent: Sunday, September 28, 2025 8:26 PM

To: Sam Downes <sdownes@brooklinema.gov>

Subject: Traffic jams on route 9 intersections

Hello, There has been an ongoing and extremely frustrating traffic jam in the area of route 9 east intersections with Washington Street and Brookline Ave due to the lane set aside for buses . The congestion seems to be constant and not restricted to rush hour traffic. A few weekends ago Route 9 heading east was backed up to the Old Lincoln school. This thoroughfare is used by many to go to the hospital area and downtown. It is a high traffic route and this is a nightmare scenario day and night.

I would be most grateful if you would forward my complaint to the traffic division and please let me know if there is someone I can speak to directly.

Much thanks ,
Lydia Baumrind
Resident of Brookline

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From: matt cullen <>
Sent: Saturday, August 2, 2025 6:57 PM
To: DPW Info <dpwinfo@brooklinema.gov>
Subject: Boston Street Bus Lanes

Hello,

I just wanted to leave feedback that the bus lanes on Boylston Street clearly are not effective and should be removed.

The lane causes traffic to build up quicker at every light, many drivers do not follow the law (which is also not enforced by police), and in my daily experience the lane is rarely occupied by a bus.

There are many instances in the Boston area of effective bus lanes including further up on Huntington but I just don't think this is one of them.

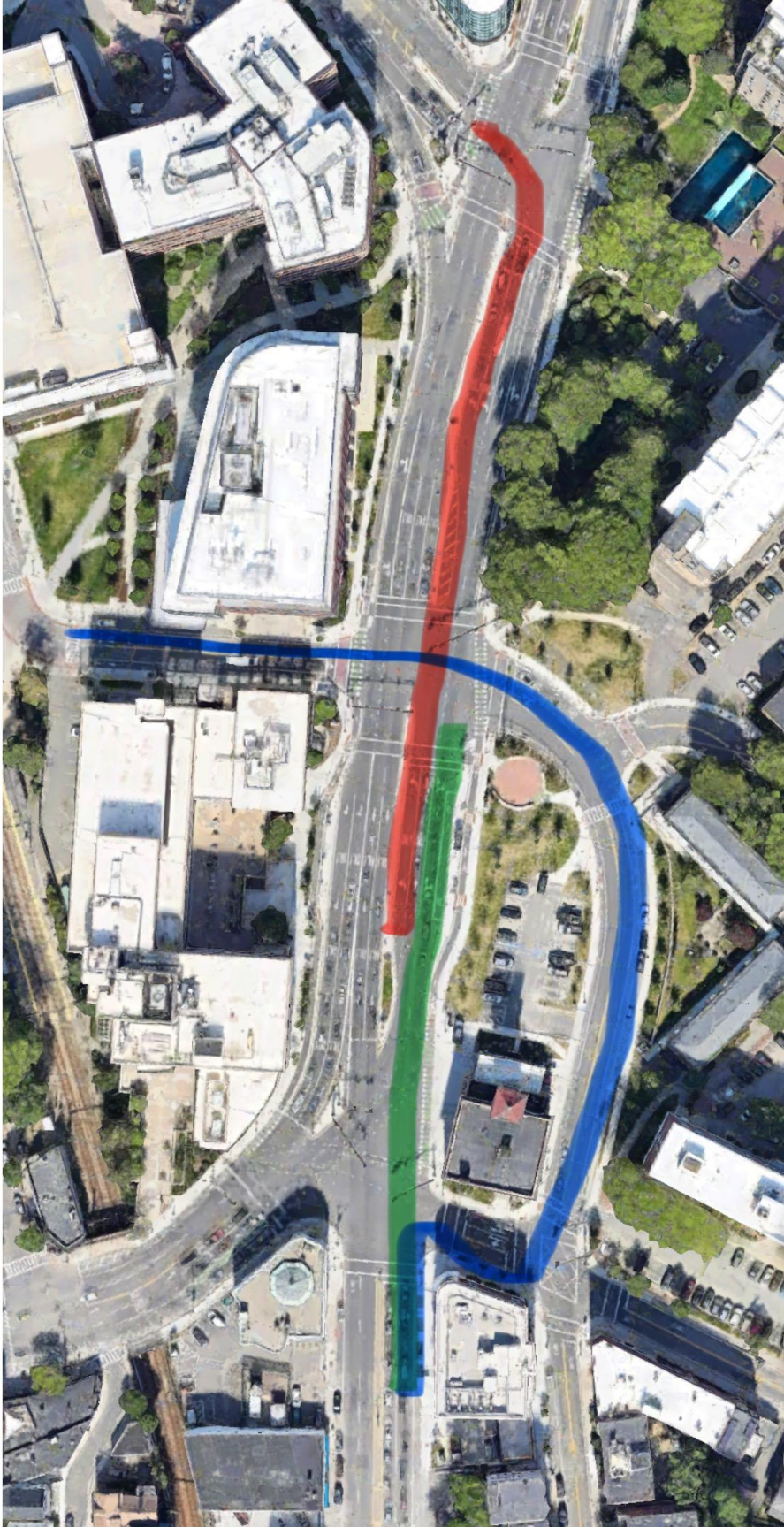
It would be more efficient, practical and safer to remove the bus lane.

From: Owen < >
Sent: Friday, July 25, 2025 9:53 PM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: Gateway Bus Lane Comments

Good evening Gateway Bus Lane Project Team,

I'm a Brighton resident who commutes through the project area every day on either the 65 or 66 buses, or by bike, and what I have personally observed to be the biggest driver of delay for vehicular traffic, and a limiting factor for bus travel time gains, is a combination of poorly timed signals for given traffic volumes and a lack of awareness from drivers heading from Rt9 eastbound onto Brookline Ave that if they followed the right turn lane onto High St (rather than illegally proceeding straight through into the bus lane) they would be able to bypass the traffic queue for the left turn and the current signal timings actually make it quicker. The following is a more in-depth description of my observations and what I believe would better suit the rush hour traffic patterns (this is taken from a post I had made in a forum discussion about the project area on the website archboston.com):

Doing my best to annotate on an iPhone on an old image but the problem is that there are a lot of backups trying to take the left onto Brookline from Rt9 in the AM, so everyone ignores the "Right Only" at High St. and continues straight through the bus lane (Green) to get around the left turn traffic (Red). This turning traffic builds up a lot because Washington St from Brookline Village releases onto Rt9 at the end of the green cycles for Brookline Ave and the Pearl/Walnut intersection leading to the Rt9 traffic at Washington Int. getting released into already full lanes on a red. What would go a long way to relieving this is if drivers coming from Rt9 realized they could take the legal right onto High to go then left on Walnut and straight through to Pearl and then Brookline (Blue). As it stands, these side streets only have a few cars each cycle on them and are basically empty, and with the current signal timing, doing this maneuver would get those going to Brookline Ave through the area quicker since its on green or about to go green when they get that Washington green (convoluted sounding, I know).



That being said, reconfiguring the timings and cycles to better suit the traffic patterns of the given time of day, as originally stated, would be the best remedy of the situation. Rt9 at High St should go red before Pearl/Walnut and Brookline, leaving them green to empty traffic before letting Washington out onto Rt9 with Peal/Walnut green (westbound can simultaneously head up Washington) to let Wahsington traffic fill the Queue then turning red briefly for cross traffic (whilst Westbound is released up the Rt9 hill) then start from the top with green at Brookline for Rt9 eastbound cascading to Peal/Walnut and High St. This would keep queues from overflowing and blocking the next cycle and is much better in line with where the AM traffic volumes are than the existing timings. PM is way simpler and not too bad. The backups happen more with the Cypruss intersection than back here and the bus has a clear path because few people are heading right up Washington.

I hope these observations and thoughts provide a clearer picture to the project team of the daily conditions there and aid in your decision making on what to do next with the project.

Thank you for your time and hard work,

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-

Owen K.

From: Jesse Hefter < >

Sent: Friday, June 27, 2025 5:45 PM

To: Erin Chute <echute@brooklinema.gov>; Daniel J. Murphy <djmurphy@brooklinema.gov>; Daniel Martin <dmartin@brooklinema.gov>; John VanScoyoc <jvanscoyoc@brooklinema.gov>; Kevin Johnson <kjohnson@brooklinema.gov>; Brian (TBoard) Kane <brianseankane@gmail.com>; Lynda Roseman < >

Subject: Gateway East Pilot - Observations from the field

Hi all:

Over many months of traveling up and down Boylston St during the day, I have observed the traffic situation in the Gateway East area numerous times.

This past Thursday, I was traveling eastbound towards Gateway East during the morning rush hours and made the observations summarized in the attached document.

There are additional observations that I would include on driving eastbound from either Huntington Ave or Brookline Ave into the main Gateway interchange, but that would delay me in getting this document to all of you.

There are real issues in the interchange in terms of traffic flow and driver behavior. Ultimately, the current design is not providing efficient flow for vehicles and the signal timing that seems to have been changed in the recent months, has generated significant backups within the interchange area.

Overall, I am hoping that a review of my observations in the attachment can be followed by a conversation not about how we got here but, rather, what we can do to improve the reality of the situation.

I would be happy to schedule time in the field with anyone to observe first-hand what happens there at different times of the day.

Thanks,
Jesse

[EXTERNAL EMAIL] [CAUTION] This email originated from a sender outside of the Town of Brookline mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

From: Anne McKinnon
Sent: Friday, March 28, 2025 11:30 AM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: bus lane pilot

I think the bus lane pilot at Route 9 is a not only silly (how much time do buses save) but also very dangerous for cyclists. The EB queues on Route 9 that occur at many times of the day (not just rush hour) block the Washington Street traffic trying to get to Route 9 at the firehouse. But as a cyclist I am terrified that a car stuck in the queue in front of the firehouse will run me over as I come down from Brookline Village. The irony is the cars block access to the bus lane too. It also appears that the bike crossing near the bridge is penalized in an attempt to keep traffic moving at peak hours. Until this pilot thing, I rarely saw big numbers of people crossing there get frustrated with the long wait to cross and make the decision to dodge the cars in the crosswalk against the signal.

And compliance with the bus only lanes is pretty low, but who cares? There are too few buses using it going toward Brookline Village (maybe 12 per hour max?) to keep people from driving in it.

This is a bad design that should not be continued. What could possible be the benefits?

Anne L. McKinnon

From: Fred Weissman
Sent: Friday, April 25, 2025 10:48 AM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: Re: Brookline Village Bus Lane Comments

Hi...

When will the Brookline Village bus lanes start being enforced. I was told quite some time ago that the Town was waiting for the MBTA to put up signs. The signs have been up for at least a month and there is no enforcement of the bus only lanes. I find it particularly annoying as I head south and then east from Washington Street (towards Boston.) I need to make a right turn in to the Brook House and there are cars in the bus lane making it almost impossible for me to get to the right turn lane. A few times I couldn't turn until I got to Pond Ave and one I had to go to South Huntington Ave before I could I get into the right lane to make a turn.

There is absolutely no point in having bus only lanes if they are being used by all vehicles. We need enforcement.

There is also a gridlock issue at intersection of High and Washington (heading south and then east) because the traffic lights at Walnut Street turn red long before the traffic light on Boylston does. Then the light turns green for Washington St and there are still cars blocking the intersection because of the red light at High St. The timing of that light needs to be adjusted.

Thank you.

Fred Weissman
Losing my patience in Brookline Village

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

From: Joseph J Taylor

Sent: Tuesday, January 28, 2025 7:08 AM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: Washington Bus/Turn Lanes

Hello,

Thanks for the work that you do!

I drive into the Longwood Medical Area from Metrowest. Unfortunately, few fellow drivers obey the bus/turn lanes that you added in this area.

Cars regularly drive through the bus and right-turn-only lanes, especially during the morning commute. Drivers like me who follow the rules by staying in the single straight lane are being cut off, delayed, trapped at multiple light cycles, and nearly sideswiped. I've even seen police do it and fail to pull over vehicles that are blatantly ignoring the rules of the road.

I understand the need to prioritize public transit, especially bus lanes. However, the current situation does not seem to be working for anyone. It seems like the experiment should be abandoned unless police will actually enforce the rules actively each morning.

Thanks for reading.

Joe

From: Nick Angell-Huynh
Sent: Thursday, June 5, 2025 4:38 PM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: Route 9/Harvard Ave/Washington St Bus Lane feedback

To whom it may concern,

I wanted to provide feedback, although I'm not sure how late I am. I regularly drive and bike through this area. I am typically a huge fan of bus and bike lanes and support development of infrastructure for the average resident.

That said, these bus lanes need to go, especially in the strip between the interior design store all the way down to the Hilton. That also includes that single strip on Washington next to NETA.

Being situated in one of the busiest intersections of the area, it makes zero sense to eliminate an entire lane for a bus that comes every 12-14 minutes (assuming no delays, lol). Also, given that some of the buses then have to mudslide over to the leftmost lane to turn onto Brookline Ave, it doesn't just block one lane, it actually blocks several.

Many cars don't respect the bus lane as it is, INCLUDING police. The few people that do "respect the bus lane" now just cause an insane amount of gridlock, causing everyone to just drive recklessly and it's actually decreasing the safety around there.

If you have any questions, let me know, happy to clarify. Thank you for your time.

Best,
Nick

From: Lisa Rachielles
Sent: Wednesday, September 18, 2024 8:42 PM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: Bus Lane feedback

Hello,

First I want to say that I appreciate all initiatives with the aim of making public transportation and bike commuting safer and more viable options! I commute between Jamaica Plain and Brighton a few times a week for work, often on my bike but also by car.

With the new implementation of bus only lanes in the area of Route 9/S Huntington/Harvard Ave/Washington St I have been observing some issues that are preventing their effectiveness.

1. Lights along Route 9 and particularly at the major intersection by the fire station and NETA are timed very poorly. This has always been an issue but it is amplified when cars need to all move through the intersections in a reduced number of lanes. This wouldn't be a failure of the bus lanes except that with so many lights in quick succession, buses get stuck in traffic when even just a few cars decide not to obey the lanes. A better study of light timing could help here.

2. Buses are absolutely moving slower through the section where Washington & Harvard Ave merge back towards Route 9. Traffic gets so much more backed up than before the bus only lane that the 66 bus is sitting in a line of traffic with cars for an extra 10 minutes in order to finally reach the bus only lane for that short section of road. I know because I've sat in that traffic with buses many times for the last few weeks!

3. At that same area, I feel that people are mostly obeying the lane, but when someone doesn't it is usually someone looking to turn right, who then cuts off the people in the proper lane. I've seen many near accidents or it causes people to slam on their brakes and reduces the number of cars that can get through the very short light. The added congestion has also made it even less safe for bicyclists because there is always traffic backed up over where the bike line is supposed to cut through. Side note: the light going up the hill across the intersection is SO poorly timed that cars get backed up IN the intersection. It needs to be coordinated so traffic can move through as only 2-3 cars can fit without obstructing the intersection.

Thank you for working to improve commutes in the area!

Best,
Lisa Rachielles
Jamaica Plain

From: Jesse Hefter <>
Sent: Friday, February 28, 2025 2:31 PM
To: Transportation Shared <transportation@brooklinema.gov>
Cc: John VanScoyoc <j>; Brenda Hefter <>; Sheera Hefter <>
Subject: Eastbound traffic issues at Gateway East

Hi:

I am writing to briefly share my frustration with the new traffic pattern when approaching and transiting the Gateway East area at the "bottom" of Boylston Street (on the Eastbound side).

I am a frequent driver in this area, either to head to the hospitals or to drive through the village to the edge of Mission Hill and get to South Huntington Ave on the way to Roxbury/Dorchester.

The reduction in traffic lanes for vehicles going eastbound is somewhat pointless and headache-producing. Having vehicles fill up the left lane as you approach the traffic intersection at High St (yesterday at 9:15 AM, this backup stretched past the Homewood Suites) leads to a situation where one needs to wait 4-6 light cycles to get past High Street. In theory, it is doubling the amount of time that cars are idling and inching forward while they wait.

Regardless of the very few signs that announce to drivers that the right lane becomes Right Turn Only at High Street, a large volume of vehicles continue as far as they can in the right lane and then do one of three things:

1. They continue straight through the intersection in the Gateway East area in the bus lane (many do this)
2. They put their left directional signal on and then force their way into the left lane thus preventing the folks who were already in the left lane (per the "rules") to wait longer to get through the traffic lighted intersection (many do this)
3. They put on a directional to turn right and then turn right (this is a vast minority of vehicles)

The situation continues to be complicated once you have transited into the Gateway East area with the painted bus lanes. With the infrequent number of buses during the day, cars and trucks freely transit the right lane all the way to Pond Ave, South Huntington, or stay on Huntington by forcing themselves into the left lane.

Meanwhile, there is jockeying for position for vehicles continuing from the Village into the Gateway East jumble of lanes. I have seen buses and vehicles together in the bus lane with no issues - people seem to get along just fine ignoring the painted lanes especially when there are no buses present (or even with a bus in front or behind them - it runs smoothly).

I wonder if the approach to managing the traffic in this complicated intersection might benefit from some new thinking. The Boylston St corridor is heavily used for folks coming in from Route 128, Newton, South Brookline, etc. to get to the Medical area or to points east along Huntington Ave (North Eastern, the Museum of Art, Copley Square, etc.).

If you spend any time after about 2:30 PM every weekday looking at the westbound lanes of Boylston St between Washington (the NETA building) and Cypress St, you will normally see two packed lanes of vehicles headed out of the city (via Brookline) towards points west. It's an area for a Brookline driver to avoid.

I would be happy to entertain a discussion with anyone on the board about this notion that allowing buses a dedicated lane in a heavily trafficked area will somehow bolster bus ridership. The bus system has not made significant additions to its routes that would motivate people to leave their cars at home. Thus, our vehicle traffic continues to be dense and heavy during morning and late-afternoon hours and those who are driving are somehow put at a disadvantage for no really strong reason.

I can only hope that the entire Boylston stretch between Cypress and Washington is not further constricted as time moves on as the effects would be massively felt by commuters and Brookline drivers.

Thanks for your time and efforts on behalf of the transportation side of our community,

Jesse

Jesse Hefter, Ph.D.
653 Chestnut Hill Ave

Member, Brookline School Committee
Member, Town Meeting, Precinct 14
Member, Pedestrian Advisory Committee

From: Lee, Pui < >

Sent: Monday, January 27, 2025 9:14 AM

To: Transportation Shared <transportation@brooklinema.gov>

Subject: Brookline traffic issue around Boyston (route 9) and Washington St.

Dear Brookline Transportation team,

I work in the Longwood medical area and have been commuting from Newton the many years. I would like to raise my concerns about the traffic pattern on Route 9 eastbound (Boyston St.) near the intersections with Washington St. and Brookline Ave.

Since the two lane traffic on Route 9 was reduced to one lane last year (right lane now must turn right on High St. and the remainder of the path is reserved for buses), the traffic during rush hour has been worse than ever as it takes much longer to get to work each morning. Many vehicles are forced to merge to the left lane at the last minute, and the numerous traffic lights during that short stretch together are creating heavier traffic with frequently blocked intersections. Much of the right lane on Boylston is empty because few cars turn right on High st. And there are only a few buses. In my opinion, this traffic pattern change has created a lot more problems than perceived benefits.

I hope you can look into this issue and continue to make necessary adjustments.

Thank you for your time and attention.

best,

Pui Lee

From: Doron Bracha < >
Sent: Thursday, July 4, 2024 9:23 AM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: Input on dedicated bus lane pilot on Washington st

Hello,

I read about the dedicated bus lane pilot in the newsletter:
<https://www.brooklinema.gov/DocumentCenter/View/51632/2024-07-TA-Newsletter?bidId=>

I've been a Brookline resident for 20 years. In the first ten years we lived near Coolidge Corner and I used the T and the buses. In the last ten years we've been living close to Baker school in south Brookline. Public transportation is very limited and unreliable; it's practically only bus #51 and it only comes about once an hour, often off schedule. So we have two cars and we drive the kids back and forth to the high school (because the school bus is also very bad), and to activities around Coolidge Corner, Boston etc.

We would love to see a significant improvement in public transportation in south Brookline and also closer to the center. But creating a dedicated bus lane would not do that, and would not encourage more people to take the bus. In reality, it would only worsen congestion and traffic jams. Most people will have to keep driving cars because the services and coverage of the buses and trains is really inadequate and unreliable.

These matters should be considered holistically, improvement will require careful town planning and budget for public transit. We have a lot to learn from Europe, and in the meantime- I think that dedicating a lane to buses, and cramming more cars in the other lane would only make traffic congestion much worse.

Thank you,

Doron Bracha

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

From: Gregg Lebovitz < >

Sent: Thursday, June 20, 2024 2:45 PM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: Suggestion

If you are going to replace traffic lanes with bus and bicycle lanes, please make sure that bus service is more reliable and friendly. Right now it is not and my recent experiences of riding the 66 bus have led me to purchase a second car.

Also, if you are going to increase investment in bicycle lanes, please start enforcing traffic laws for bikes. They don't stop or slow at stop sign and lights. They ride on sidewalks where not permitted and do not yield to pedestrians. You have also added right of ways for high speed electric bicycles. I've even had to dodge vespas who use the bike lanes.

As to your efforts, no increase in bicycle barriers are going to protect rides who do where helmets or follow traffic rules. It's just putting the onus on drivers and pedestrians.

But I solute you for your efforts. I know you mean well. Only time will tell whether or not these improvements are truly improving the experience.

I plan to move from here as soon as it is possible.

Sent from my iPhone

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

From: Judy K < >

Sent: Thursday, June 20, 2024 2:03 PM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: What about the homeowners?

This proposal screws them .

Sent from my iPhone

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

From: Charles Kirschner < >

Sent: Tuesday, July 9, 2024 12:18 PM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: Feedback

Hello,

These new bus lanes are very effectively making living in Brookline a sufferable experience after you removed the two lanes of traffic a week ago. Particularly when attempting to turn off Washington towards Station Street on Harvard Ave, or going the opposite direction. Whoever thought this was a good idea very obviously never needs to turn onto Harvard Ave when going through this stretch of Brookline, and I very much hope that this pilot test is canceled. The first stretch isn't even that bad, it's just that turn at Harvard Ave that went from two lanes to one that is the issue. It causes people needing to turn to back up onto Washington street that then in turn causes Washington Street to get backed up.

It was already extremely congested before removing two lanes of traffic. Now it's even worst and an annoying amount of drivers just completely ignore the lane markers and bypass everyone who is trying to abide by the new lanes which only adds to the frustration of sitting in traffic beside a now empty bus lane with no buses in sight.

Also, if you want to help fix traffic flow, please start actually ticketing and/or towing the numerous UberEats drivers that randomly stop and double park on Harvard Ave.

Thanks,
Charles

From: Nik Varga < >
Sent: Tuesday, July 9, 2024 3:37 PM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: So Far So Good!

Hello, my name is Nikolas Varga and I frequently ride the 66 bus through the Gateway East project limits. With the installation of the bus lanes having occurred recently, my experience riding the bus through Gateway East has improved. It feels much faster at peak hours to ride the bus through the project, and the overall experience is smoother. Installation of signals that give buses priority would be a great next step I would like to see to further improve the transit experience through the area.

Thanks, Nik

From:

Sent: Saturday, July 13, 2024 5:51 PM

To: Select Board <selectboard@brooklinema.gov>

Cc: DPW Info <dpwinfo@brooklinema.gov>; Erin Chute <echute@brooklinema.gov>

Subject: Bus lane in Brookline Village/Route 9 and signs advertising the 4 foot rule for cars/cyclists

I'm emailing you regarding the new bus lane that was installed in Brookline Village and Route 9. In addition, I also want to recommend that Brookline install signs to advertise the law that was passed last year requiring cars to give 4 feet of clearance when passing cyclists, pedestrians and other "vulnerable road users".

I was riding my bike yesterday on High Street going north at 11:30 AM. Since the fire trucks showed up and reset the lights in the intersection, I had plenty of time to wait, observe the flow of traffic on Route 9, and count cars. Traffic was very light, but was still backing up into the intersection in front of the fire station. The cars are forced to stop at the jug handle light (where Walnut Street feeds into Route 9) and then a block later at Brookline Avenue. With only one lane now available, it takes only 12 cars from the jug handle to gridlock the intersection. Cars prevent traffic from proceeding north from High Street into Brookline Village and from going south from the village onto High Street. The jug handle traffic light does not change fast or frequently enough, so more traffic comes out of the village onto Route 9 exacerbating the congestion. When I was there, only two or three cars were waiting on Route 9 at the light in front of NETA going eastbound, a summertime anomaly.

The bus lane is going to cause a traffic disaster once school resumes in September and the amount of traffic increases exponentially. Imagine the backup and gridlock we are going to experience! The heavy rush hour traffic will be compounded by the use of the old Lincoln School for the Pierce School kids. Traffic is going to back up down Route 9 going west, north on Washington and Harvard Streets, and south on High Street into JP. (This traffic congestion occurred even before the bus lane was installed.) Traffic will also be gridlocked on Walnut Street, Cypress, and Davis as well. My guess is that traffic from Huntington Avenue will have a tough time making it through Brookline on Route 9 westbound. It will be impossible to drive in the area and the trucks will be unable to get out of the firehouse. I'm glad I'm retired and don't have to go to work.

I am concerned about the second phase of the project Eastbound on Route 9 compressing two lanes into one. If implemented, that design change will just exacerbate the congestion in the area. It's going to be a mess.

On a separate topic, I was biking in Concord last week and saw a new sign telling motorists to steer 4 feet away from cyclists. I researched that sign and learned that the state had passed a 4 foot law. It went into effect on April 1, 2023. (Florida has a similar law, but it's only 3 feet.) Today, I noticed a 4 foot sign on Route 9 in Newton in a place a cyclist would be crazy to ride. Perhaps the location of the sign is just to educate motorists. I applaud the legislation (there is more to it), though enforcement is a significant issue, and would like to see our town install some signs advertising the new law. (The article I read about the law said signage was the state's responsibility.) I also believe the Florida signs are better because they show a picture of a car, a bike and a line in between with some text. (You can see them on-line.) The MA signs are just text.

Mitch Dynan

P5

From: DAVID SIMON < >
Sent: Monday, July 15, 2024 4:19 PM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: Gateway Bus Only Lanes

I rode my bike through the new painted lanes traveling eastbound yesterday. Judging by the many cars that ignore the painted restriction I expect this effort to be an ineffective waste of public money. It makes no sense to try to restrict such a short piece of roadway to buses only. The only time day when it will make any difference for buses is during peak travel periods. During those periods cars are going to get trapped in the bus only lane because of backups in the adjacent lane which will extend way beyond the painted area. Since the restriction occurs with no notice whatsoever, cars will drive into the bus lane unknowingly and not be able to move over. This is another example of thinking something will work in theory, only to find out it is totally impractical in real life.

David F. Simon
45 Powell Street | Brookline, MA | 02446

From: Casey Townsend < >
Sent: Monday, July 22, 2024 6:22 PM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: By far the dumbest traffic pattern I have seen

To whom it may concern,

Not only is the new traffic pattern located in Brookline Village a clear case of bad decision making; it also is not being enforced in any way as drivers using the designated bus lanes are creating highly dangerous merging situations. Please get your cops out there if you intend to keep this traffic pattern in effect!!!

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

From: Fred Weissman <>

Sent: Tuesday, July 23, 2024 11:36 AM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: Brookline Village Bus Lane Comments

Hi...

I'd like to offer some feedback on the dedicated bus lane pilot project running through Brookline Village.

Even before this project was underway, there has been gridlock at the intersection of Washington, Boylston, and High Streets. As you can see from the attached photo (taken at 10:20 on a Tuesday morning) southeast bound traffic has the green light, but cars heading east on Boylston are still in the intersection. I've noticed this since December and it probably has been happening long before that. I believe the problem is that the traffic lights at Washington St and Brookline Ave, and at Washington St and Walnut St turn red before the lights at the intersection in front of the fire station. So cars keep heading east until traffic is now blocking the intersection. Adjusting the timing of the lights at the fire station should fix this problem. Note that in no way am I a traffic engineer. What I present is just what I'm seeing. And if I'm seeing it, I'm surprised that the professionals aren't seeing it. And corrected it.

As for the dedicated bus lanes, in order for them to accomplish what they're supposed to do, enforcement is needed. Again, in the attached photo, the car ahead of me is in the bus lane and turning left. Once the gridlock broke, this person stayed in the bus lane all the way to the Riverway overpass. Every time I'm in this area, which is daily, the bus lane is being used by passenger vehicles. It doesn't matter what time of the day it is. People will continue to use the bus-only lanes until they are stopped. And perhaps fined. Are there any plans to start enforcement and prevent passenger cars from tying up the bus lanes? It would certainly go a long way to making sure the pilot program works as planned. I'm in favor of the dedicated lanes, but not as they're working now.

I'd appreciate any comments.

Thank you.

Fred Weissman
Brookline Village

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From: Michael Weintraub <

Sent: Wednesday, July 24, 2024 10:42 AM

To: gatewaybus@brooklinema.gov. <gatewaybus@brooklinema.gov>; Daniel J. Murphy <djmurphy@brooklinema.gov>; Mike Murphy - Police <mpmurphy@brooklinema.gov>

Subject: Bus Lanes

Hello: Below is my email that I originally sent 2 weeks ago but was blocked from the Town's servers at the time. It has since been corrected, although I have been advised that the gatewaybus@brooklinema.gov is no longer valid. In these two weeks I have personally witnessed other safety and traffic issues coming from every direction but thought it best to simply stick with my initial thoughts that are outlined below. Your attention to these issues would be greatly appreciated. Thank you.

Hello: I am a long time resident and condo owner at The Brook House. Without getting into the pros and cons of the bus lane at this time, this inquiry is more about understanding the "rules of the road."

1. Initially, I thought these lanes were approved during rush hours, but evidently, they are 24/7? Why? It seems to make no sense to tie up lanes during weekends, nights and other hours when congestion for buses do not seem to be a major issue?
2. Driving eastbound on Route 9, when is it permissible to get into the bus lane when taking a right-hand turn into The Brook House? Can I get into the lane between High St and Juniper or do I have to wait until I get past Juniper? The problem with waiting until I get past Juniper is that I can get boxed in and not safely turn right into the Brook House. This happens for several reasons. First, some busses that stop at the Juniper Bus Stop immediately get into the left hand lane turning left onto Brookline Ave, causing safety issues for those of us using the "proper" lane. Second, many drivers still drive in the bus lane, again boxing those of us out who try to get into the right lane when it is too late. Third, general congestion and traffic pattern often make it difficult to navigate and know exactly when to switch lanes. These are all serious safety issues. Bottom line question is when is it appropriate to get into the bus lane to turn right into the Brook House.
3. Same question, but driving from Harvard or Washington Street and turning left at the fire house onto Route 9? For those of us turning into the Brook House, can we get into the bus lane at that point or are we supposed to get in the left lane and at some point between High and

Brook House switch lanes? At this point, drivers are turning left from the left lane, bus lane and even the right lane.

4. Driving westbound on Route 9 and turning right onto Washington and then to Harvard, are we allowed to use the bus lane? If not, does that mean we are get in the left lane to turn onto Washington St and then immediately switch to the right lane to get onto Harvard or turn onto Station?
5. Finally, if I don't know these rules, I suspect many others do not as well. What is the plan of education? It can get a bit frustrating when you are following the rules, but too many others are not whether by ignorance or selfishness. Either way without consequences or accountability.

Thank you and I look forward to your response so I can better understand how to navigate the streets that I call home.

Michael

Michael Weintraub, Principal
The Rosebrook Group LLC
99 Pond Avenue, Suite 323
Brookline, MA 02445

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

From: Sean Levy < >

Sent: Thursday, July 25, 2024 8:06 AM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: Feedback for bus lanes on Washington st.

This was a terrible project to put in place. The traffic in that area was already awful in the morning, and this only makes it much much worse, and it's still July and not even the school year yet. Please consider getting rid of it.

Sincerely,

Sean Levy

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

From: Sam Londer < >

Sent: Thursday, August 1, 2024 8:27 PM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: Remove Buss Lane

I can appreciate the thought that a bus line might help. Realistically unless the bus is running every couple of minutes, maybe every 10, it makes no sense to have dedicated lane unless people can use it and then move out of it every time a bus comes.

At this intersection, it seems to make even less sense. This is probably one of the worst intersections in Brookline and I'm not sure if this is part of traffic calming but something else is needed for this intersection.

Thank you

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From: Elton Lossner < >
Sent: Thursday, August 1, 2024 10:47 PM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: This pilot isn't working

Hello,

Simply put, this pilot is not working. It's making traffic even worse and possibly more dangerous.

Pointedly, I have observed:

- Cars are still using the bus lanes anyway. Brookline/Boston police do not enforce moving violations, so there is no reason cars should
- Eastbound traffic now just diverts onto Walnut street, a residential-zoned area lined by homes. That traffic now goes far too fast for the designated road
- Traffic gridlocks at the intersection of Washington/High/Boylston because, again, police do not enforce moving violations, so cars just block the box

Can speak in more detail over email or phone if this inbox is actually monitored. Don't want to write a graduate thesis that goes unread.

Hope you're doing well and have a good one.

Thanks,
Elton

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

From: Ah-Ram Kim < >

Sent: Friday, August 2, 2024 7:28 AM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: Concern Regarding New Bus Lane and Resulting Traffic Congestion

Hi,

I hope this message finds you well.

I am writing to express my concern regarding the new bus lane that has been recently implemented. As a resident of Brookhouse, I frequently use my car to drop off and pick up my son from summer camp. Unfortunately, I have noticed that the new bus lane is causing significant traffic congestion, with many cars waiting in the single lane while the bus lane remains mostly empty.

Additionally, I have observed that Bus 65 is often using the non-bus lane in front of the fire station, which seems to defeat the purpose of the bus lane and contributes further to the traffic issues.

I believe this situation needs to be reconsidered, as it is causing unnecessary delays and inconvenience for many residents. A reassessment of the traffic flow and the bus lane usage could greatly improve the current situation.

Thank you for your attention to this matter.

Best regards,

Ah-Ram Kim

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From: Darren Huang <>
Sent: Friday, August 2, 2024 9:45 AM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: Comments on Gateway Bus Pilot

Hello,

I am a nearby resident in Mission Hill that travels through the pilot area almost every day. Most often driving (4-5 days a week), either on Route 9 or onto Harvard St. I also take the 66 bus (1-2 days a week) and occasionally bike (1-2 times a month). I love the intention of the project but would like to share some comments.

1. Since the pilot started, I have NEVER seen bus lane enforcement and have ALWAYS seen violators travelling in the bus lanes, consistently, every time I drive through the area. The bus lanes cannot be useful in meeting their intent if private vehicles are permitted to drive in them anyway. Enforcement needs to be a part of the pilot to have any long-term effectiveness.
2. The light timing in the area is not conducive to efficient travel.
 1. The bike lane lights are very odd in the area. When I bike, I often will wait 2-3 car light signals before I get a green bike lane signal. Because of this, I typically ignore the bike lane signals now and travel with caution.
 2. The light signals along Route 9 (between Jamaica Way and High St.) do not seem to have any synchronization. When travelling through the area, it is very common to hit a red light at every single intersection travelling east/west. This seems to be a significant source of congestion. Since Route 9 is a major corridor, it would make sense to have synchronization in that direction.
3. When travelling westward along Washington St. towards Brookline Village:
 1. Driving onto Station St. requires travelling into the right lane on Washington St. However, the new bus lane ends right before that intersection. If a driver wants to turn right onto Station St. (whilst following the bus lane rules), they are required to merge right at the last moment. If there is a bus (or other traffic) in the bus lane, then they end up blocking the left lane to wait to merge. It may be beneficial to begin the right turn lane earlier so that drivers can merge earlier, thus not blocking traffic at that intersection.
 2. Likewise, traffic travelling from Washington St. to Harvard St. also requires merging into the right lane. However, the new bus lane does not allow you to merge until you are nearly at the Harvard St. intersection. This causes severe traffic waiting for drivers to perform the required merge. Allowing earlier merging on the approach to this intersection would help.

Please let me know if you have any questions. I'd love to see this project succeed, but there are a lot of hiccups that make the current configuration inefficient. Thank you!

Darren Huang

From: Terry Huh <>
Sent: Wednesday, August 7, 2024 12:21 AM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: Bus lane concerns

To whom it may concern,

My name is Terry and I am a relatively new resident of Brookline (moved here a year ago). I decided to email you out of desperation, because I have serious concerns about the bus lane that has been implemented recently surrounding the Harvard St/Route 9 intersection.

My daily commute to work involves driving down Harvard St, turning into Rt 9 and then turning right into S. Huntington Ave. The Harvard St/Route 9 intersection has always been problematic and is highly congested (I imagine you are already aware of this issue - the timing of traffic lights also worsens this issue); that said, before the bus lane was implemented, the traffic almost always felt manageable with a little bit of patience and careful driving. However, ever since the bus lane was implemented, my commute is not only now extremely stressful, but feels truly unsafe because of how congested the intersection gets now that there is a single lane of cars turning into route 9. Last week, I almost got into an accident while turning into route 9 because of the massive congestion (and confusion) caused by this new bus lane. The problem is compounded by those few cars who do not respect the bus lane and/or those who drive aggressively across these lanes.

It truly feels like this issue is beyond my control and I feel strongly that something needs to change with this intersection - whether that's the bus lane itself, the timing of traffic lights, or something - something needs to be done to reduce the chaos. I don't care if my commute takes longer, I really just want it to be safe, which it's not currently no matter how carefully I drive.

I will add that my commute back from work going the opposite direction has usually been manageable - and those bus lanes seem less problematic. I am very much in support of the idea of bus lanes in general, however something needs to be done about the one from Harvard St into route 9 - I fear every morning that I might get into an accident.

I really hope that you take this concern seriously; I know that this sentiment is shared by other drivers in the area as well. I hope that something will be done about this sooner rather than later, before people get hurt/more problems arise.

Thank you,

Terry Huh

From: Nancy Adler <>
Sent: Tuesday, August 13, 2024 7:58 AM
To: Mike Murphy - Police <mpmurphy@brooklinema.gov>
Subject: New traffic pattern

Dear Mr. Murphy,

Apologies if you are not the right person to share this concern, but we wanted to let you know that the new traffic pattern on Route 9 near the Fire Station is creating enormous congestion.

As you are likely aware, at the High St intersection, the road becomes one lane to make space for a right turn only lane.

At rush hour, this creates havoc. There is no warning and merging becomes exceedingly difficult.

Is there a chance that this revised traffic pattern can be reviewed. The commuting public would relish an appropriate revision.

Thanks for your consideration and passing this note along to the appropriate folks

Sincerely,.

Dale and Nancy Adler
Brookline MA

From: Benjamin Siegel < >
Sent: Thursday, August 8, 2024 3:25 PM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: Brookline Bus Pilot

Hi Brookline transport,

Thanks for the new dedicated bus line at Washington Street in Gateway East. I love that there's an effort being made here, and certainly, this beats having open traffic lanes. I'm writing as a bike commuter, and wanted to give a bit of feedback. I take this route nearly every day to work (I live in Boston but work in Brookline) and this intersection is the scariest part of my commute. The bike lane is absolutely terrifying, and the dedicated bus lane (which seems to be violated a lot) and the right-bound traffic create a very obvious place where a cyclist is going to get pinched and killed. I took a picture on my commute today and it's got an example of what I'm talking about. There needs to be some kind of way that cyclists can get through this intersection without being squished between two lanes of traffic like this. Something protected or raised seems obvious though I'm not a design expert — but as it stands it's just a truly scary spot for me to bike, especially when I have my daughter in tow.

Very best,
Ben

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From: Sam Craig < >
Sent: Tuesday, August 13, 2024 9:37 AM
To: Transportation Shared <transportation@brooklinema.gov>
Subject: Rte 9 Eastbound/Washington St traffic

Town of Brookline:

The team responsible for dedicated bus lanes have created an absolute disaster for eastbound traffic on Route 9. The approach to augmenting public transit and efficiency clearly did not balance the impact to thousands of daily commuters who are now subject to 1-2 bus lines that come infrequently and transport very few people. While monies went in this project, they were exclusively our taxpayer dollars. I would ask that an independent engineering review the damage this disastrous project has done with the goal of creating efficient traffic flow for commuters and public transit users. This solution was nothing short of a failure in terms of human transport through a vital intersection.

From: Ollie B <>

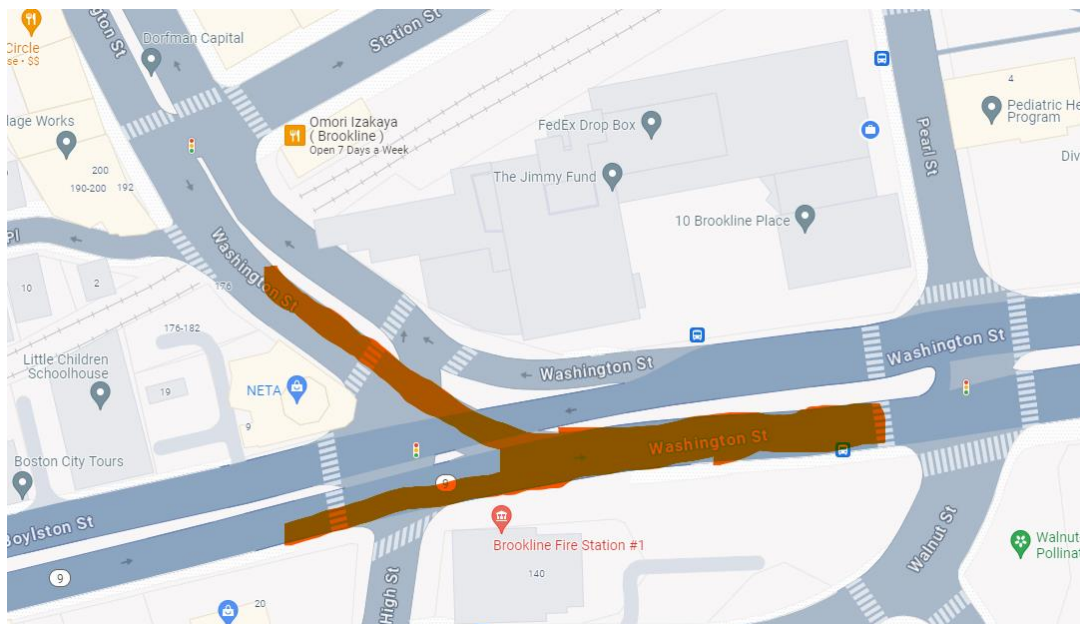
Sent: Wednesday, August 14, 2024 12:53 PM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: Inbound Bus Lane Comment

Hello,

I commute weekdays through Brookline Village down Washington Street to Brookline Place. I believe that the Inbound Bus lane causes significant problems for the intersection to be blocked at/after the Fire Station. Outbound the dedicated bus lane seems to be working fine, but narrowing Washington St to a single lane for left turns between NETA and after the Fire Station and single lane straight before the light to Pearl St is causing issues. I have witnessed many near-miss accidents and several light traffic cycles where cars can't move forward because of a blocked intersection. I rarely see buses on the route however.



Thank you for your time.

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

From: Sam Lauffer >

Sent: Tuesday, August 27, 2024 2:58 PM

To: Transportation Shared <transportation@brooklinema.gov>

Subject: Intersection Route 9 and High Street

Hello,

I am a Brookline resident and would like to submit a complaint regarding a recent change to intersection traffic pattern. The intersection is Route 9 and High Street eastbound. This used to allow two lanes to proceed straight, however, in the last few months, the right lane was painted and became right turn only. This change has caused significant confusion amongst travelers who will often go straight through the intersection instead of turning right while in the right lane. For the safety of travelers, I implore you to consider repainting the road so that it clearly indicates the right lane can proceed directly through the intersection, and does not have to turn right as currently indicated by the fresh paint.

Please let me know if I can answer any questions about my request.

Thank you,
Sam Lauffer

From: Marion Freedman-Gurspan < >
Sent: Sunday, September 15, 2024 11:14 PM
To: Gateway Bus <gatewaybus@brooklinema.gov>
Subject: my commentbus only lanes

The good and the bad.

The good. As a bus rider, the ride between S. Huntington from Coolidge Corner was quick One could only tell for sure by comparing bus travel times before and after. and if it varied by the hour.

The very bad As a driver I found the bus lanes on Washington St to be dangerous. From the Neta location, the old bank, to S. Huntington the lanes keep changing. I had to keep my focus on the road to figure out what lane to be in and how and when to get over to the right, whereas my focus should have been on the cars and jay walkers around me. Also cars coming off the Riverway are merging while other cars are trying to get in the right lane for the turn onto S. Huntington Two days of that was enough for me. Aspinwall St was a saner and safer way to drive.

Please note that I was driving during daylight hours without extremely heavy traffic. What happens when vehicles in front of you prevent you from seeing the road markings? In the snow?

Marion Freedman-Gurspan TMM09

folks around me

From: Chirag Vasavda <>

Sent: Saturday, September 28, 2024 8:26 PM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: Public Feedback on Route 9 Bus Lane Between Cypress and High Streets

Hello,

I hope this message finds you well. I am writing as a local resident and employee of Brookline and Boston to provide feedback on the recent implementation of the bus lane along Route 9 between Cypress and High Streets (Gateway East Bus Priority Lane).

While I understand and appreciate the intention behind this initiative to improve public transportation and reduce congestion, there have unfortunately been some unintended consequences that I would like to bring to your attention. Since the bus lane was put into effect, there has been a noticeable increase in traffic congestion along this stretch; this has unfortunately led to individual drivers and the buses themselves having longer commutes. At times, the flow of traffic is reduced to a near standstill, which seems to be exacerbated by poor synchronization of the traffic lights in the area. Additionally, many drivers, either unaware of the new lane or choosing to ignore it, are driving through the bus lane, creating unpredictable and potentially dangerous situations for both drivers and pedestrians.

I believe that the original goals of the initiative can be achieved by reverting back to two lanes without these negative effects. Perhaps improving the synchronization of traffic lights could help alleviate the current challenges. Additionally, barriers between the bike lane and the car lanes may provide safety for bicyclists.

Thank you for your time and consideration of this feedback. I am confident that with some refinements, this initiative can be a positive change for our community. Please let me know if there is any additional information I can provide.

Sincerely,
Chirag Vasavda

From: Ben Kersh <>

Sent: Monday, September 30, 2024 10:17 PM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: Feedback for bus pilot

I have to drive and bike a lot around this area and The Gateway East Dedicated Bus Lane Pilot has made traffic so much worse. It's frustrating and dangerous as there is no enforcement of the bus lanes.

Why make an 8 lane intersection more confusing?

From: Fardad Behzadi < >

Sent: Thursday, December 19, 2024 8:26 AM

To: Gateway Bus <gatewaybus@brooklinema.gov>

Subject: Concerns Regarding the Washington Street Dedicated Bus Lane

To whom it may concern,

I am a resident of South Huntington Street and a physician at Brigham and Women's Hospital. I am writing to express my concerns regarding the newly added dedicated bus lane on Washington Street in Brookline.

Since its implementation, the bus lane has caused significant delays in my daily commute, as well as in the commutes of my family members, colleagues, neighbors, and other members of the Brookline and Jamaica Plain communities. The increased traffic congestion at all times of the day has had a noticeable impact on the flow of travel throughout the area.

Moreover, it appears that the dedicated lane is underutilized by buses, further exacerbating the inefficiency of this change. As a member of this community, I urge the city to reconsider this initiative and explore a return to the previous traffic patterns, which were more accommodating to the needs of all commuters.

Thank you for your attention to this matter. I hope you will take these concerns into consideration as you evaluate the effectiveness of the current traffic changes.

Best,

Fardad Behzadi MD



17
Route 171
Logan Airport
Via
Andrew
Limited Service,
Early Morning
Only

44 Jackson
19 Rosindale

Better Bus Project

Making transit
better together

Gateway East Bus Priority Lanes Pilot Evaluation

Quarter 1 Analysis
August 1 – October 31, 2024

Presentation to Brookline Transportation Board
January 15, 2025

Outline

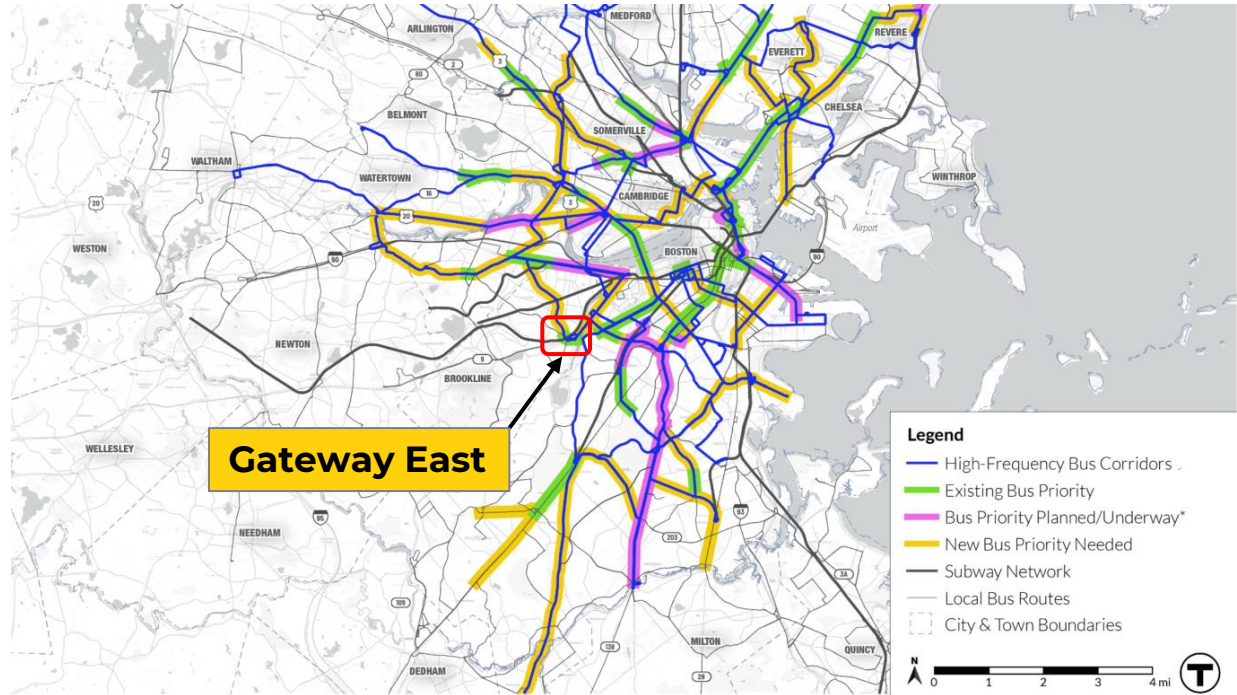
- MBTA Bus Priority Overview
- Project Background
- Project Status & Pilot Analysis Schedule
- Quarter 1 Findings
- Summary & Next Steps

MBTA Bus Priority



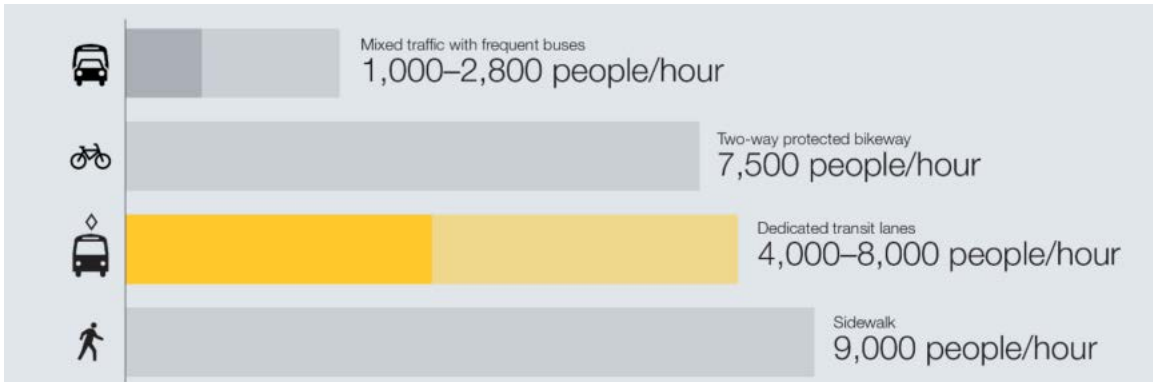
MBTA's Bus Priority Vision Plan

- **Targets existing delay** and service along 26 corridors
- Improves service to **220,000 daily bus riders**
- Covers 10-15% of the bus network; **impacts 80% of all bus riders**
- 5-7+ years of implementation



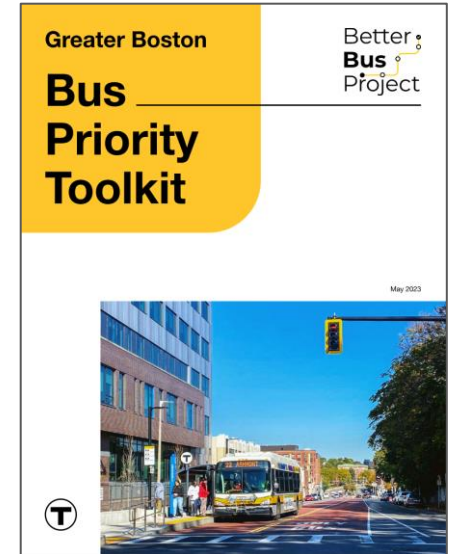
Transit Priority Moves More People

How many people can the space of one travel lane serve?



Person-Throughput Capacity (Graphic from MBTA Bus Priority Toolkit)

By repurposing space for transit, bus lanes can **increase the number of people that can travel along the corridor**, supporting future growth and mode shift to transit.



Project Goals: Why Are Bus Lanes Needed?

- **Fastest, most affordable way** to improve transit service for riders in a short time frame
- **Improving access** to Longwood Medical Area, grocery stores, and other essential services throughout the pandemic and recovery
- **Improving transit equity** by supporting the commuting needs of essential workers, low-income people, and people of color
- **Moving more people more efficiently**



Gateway East, before the bus lanes

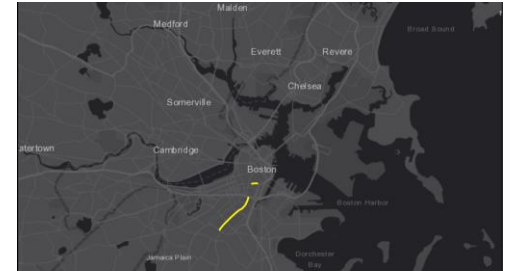
MBTA's Bus Priority Projects

Advance the Bus Priority Vision Plan to reduce bus rider delay through projects such as

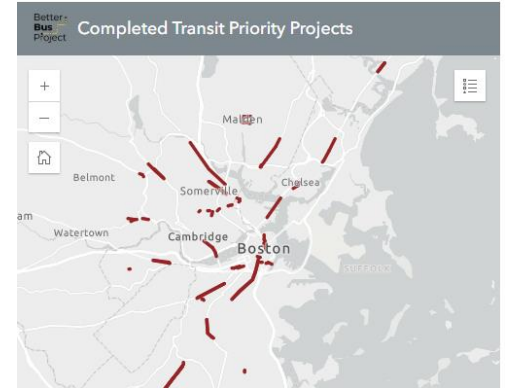
- Bus lanes
- Queue jumps
- Transit signal priority (TSP)

Growth of Bus Priority Projects in Greater Boston

- 40+ miles of bus lanes have been installed
- TSP has been activated at 85+ locations
- Collaboration is ongoing between MBTA and 12+ partner municipalities



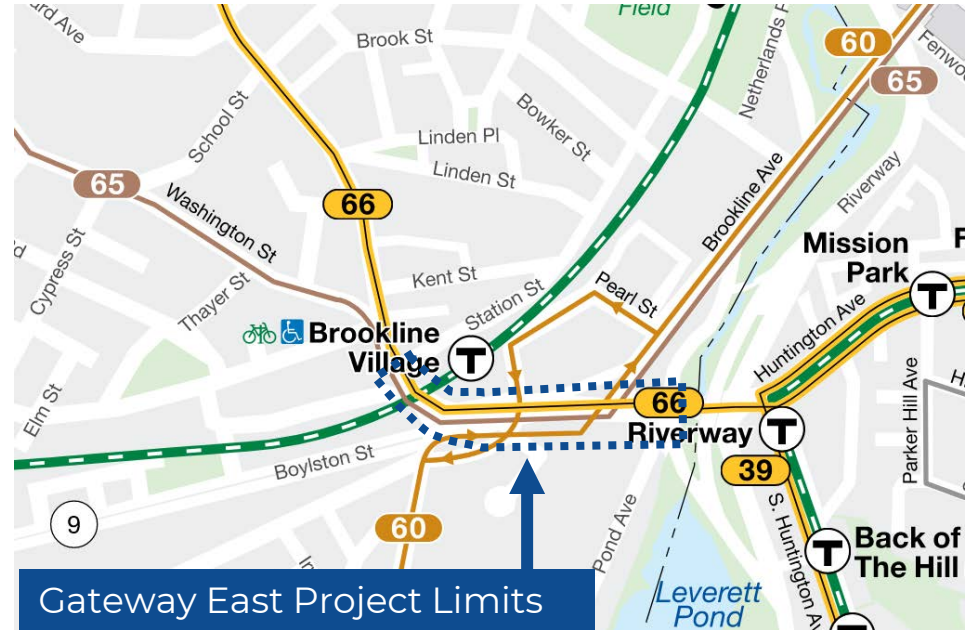
*Bus lanes completed as of **2015***



*Bus lanes completed as of **2024***

Project Motivation: Critical Transit Connection

- **Crossroads for three busiest bus routes** servicing Brookline: 60, 65, and 66 - highest bus ridership in all of Brookline
- Route 66 is **the 2nd busiest line in the entire MBTA bus system**
- Critical connections to and from the **Longwood Medical Area**, the Green Line (D and E branches), and other transit services
- Gateway East is the **busiest section of roadway** in Brookline for MBTA buses



MBTA Bus Map

Project Motivation: Bus Ridership & Equity

Typical ridership on the Route 66 bus

- 55% are from households without vehicles
- 40% are from households with incomes of less than \$43,500
- 40% are people of color
- 67% are women

Benefits nearly **15,000 daily riders** on Routes 60, 65, 66 – half of which travel through the Gateway East Corridor

During peak hours, the average 66 bus passing through the corridor has 35-45 riders - this means **multiple riders standing**



Route Number	Total Weekday	Through Riders
66*	11,293	5,086
65	2,396	1,833
60	873	343
Total	14,562	7,262

***Second-highest ridership** in entire MBTA bus system

Project Background

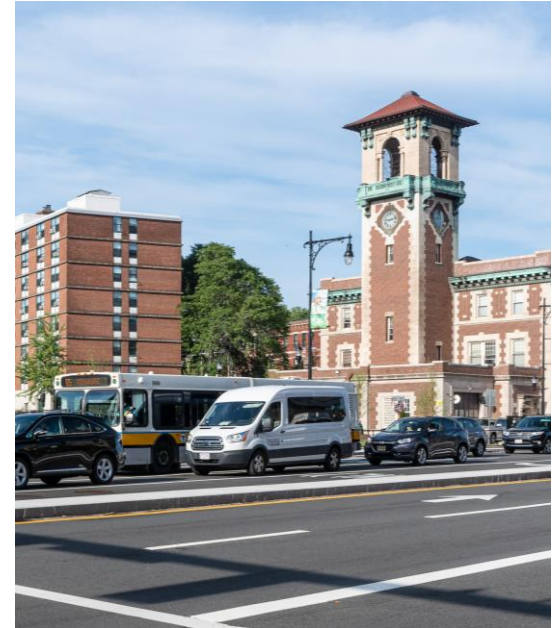


Project Background

The **Gateway East Bus Lane Pilot** is a collaborative effort between MBTA, MassDOT, and The Town of Brookline to **build on the 2021 corridor reconstruction**.

One of principles the Brookline Transportation Board set for the Priority Bus Lane Pilot:

- **“To prioritize safe, space-efficient, and energy efficient movement of people and goods over the movement and parking of private vehicles when designing and improving our public ways** with particular focus on **high traffic routes connectivity and directness** consistent with Brookline Town meetings almost unanimously approval of Warrant Article 31 (WA31), titled as a **“resolution to respond to climate change by prioritizing health, access, and equity of Brookline’s public ways.”**”



Gateway East, before

Pilot Performance Indicators

- User Feedback Surveys
- MBTA Bus Travel Time
- MBTA Bus Travel Time Variability
- Volume and Speed tracked on
Boylston St, Secondary Roads, and
Residential Side Streets
- Vehicle Travel Times and Control Delay
- Queue Length Analysis



Project Timeline

2020: Collaborative planning effort began.

2021: Brookline Transportation Board authorized Gateway East Bus Priority Lane Pilot project, funded by the MBTA.

2024: Dedicated bus lanes were implemented on Washington St between Station St and the Town Line in both directions.

➡ **2024-2025:** The pilot is expected to run for one year between August 2024 and July 2025 (note: bus lane installation occurred 6/24/2024 to 9/26/2024).

Quarterly evaluations of the pilot's impacts on bus travel times and car traffic are being conducted by Arcadis and Toole Design Group.



Gateway East, before



Gateway East, after



Gateway East, after
Photo Credit: Toole Design

Project Status



Project Status & Operations

- **Construction – Markings & Signs Completed late September**
 - Installation period extended well into the Q1 analysis period, ending 9/26/24 due to delays with signage installation
- **Traffic Signals – New Signaling System Not Currently Activated**
 - Due to technical difficulties with the vendor, the Adaptive Signal System with Transit Signal Priority is only in partial operation.



Quarter 1 should be viewed as an adjustment period due to the conditions listed above.

Project Status & Operations

- **Enforcement**

- Start of enforcement postponed due to delays with signage installation
- Provided time for drivers to adjust
- BPD is working on an enforcement program. MBTA provided educational flyer that explains regulations & how to turn across bus lanes

- **Other Factors Affecting Local Travel Patterns**

- The **Pierce School closure** may explain reduced traffic on Cypress St and increased traffic on Walnut St, as the school was relocated to the old Lincoln School between Boylston St and Walnut St



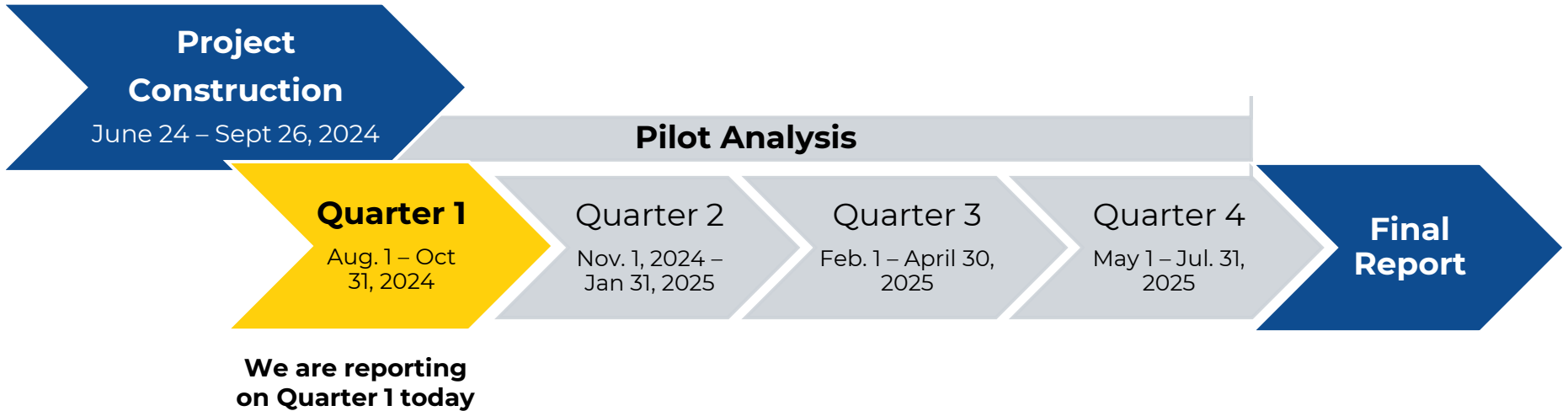
Quarter 1 should be viewed as an adjustment period due to the conditions listed above.

Public Feedback - Gateway East Bus Lane Pilot Survey

- The survey was launched in mid-November and promoted through various channels, including:
 - DPW and Town social media
 - The Town Administrators' Newsletter
 - The Longwood Collective Newsletter
 - Eye-catching yard signs along the corridor
- As of December 4th, we've received 214 responses – Thank you for your feedback!
- The survey remains open for the duration of the pilot and we'd love to hear from you! Haven't taken the survey? Go to: <https://www.surveymonkey.com/r/CN3S9WZ>
- Survey responses can be found in the appendix.



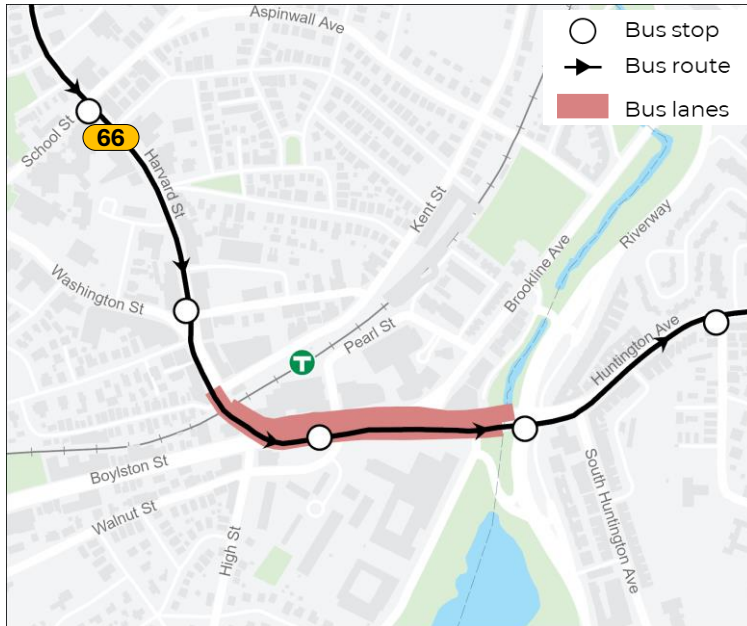
Pilot Analysis Schedule



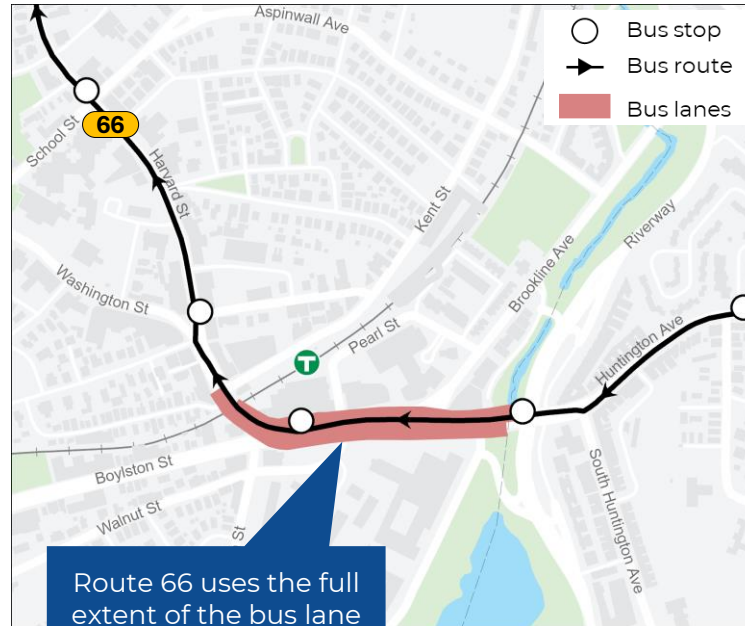
Quarter 1 Findings

Bus Routing Through the Project Area

66 Inbound



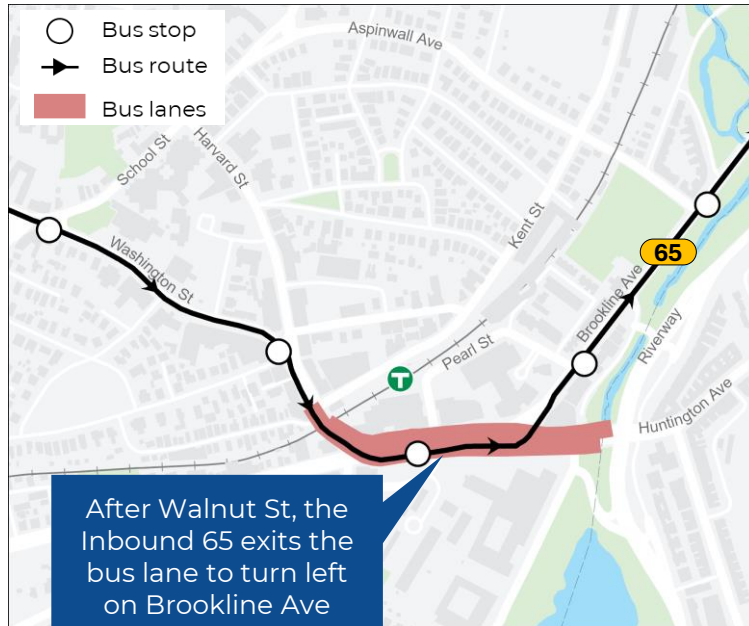
66 Outbound



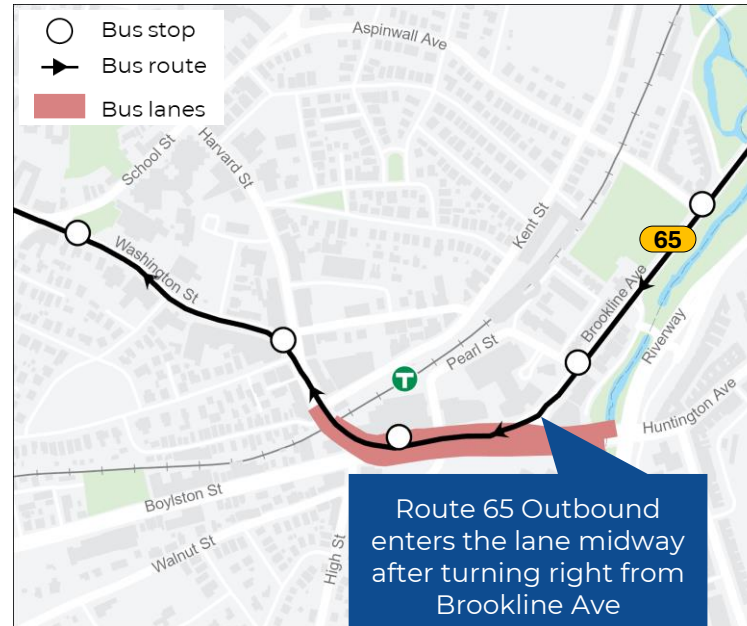
Route 66 uses the full extent of the bus lane in both directions

Bus Routing Through the Project Area

65 Inbound

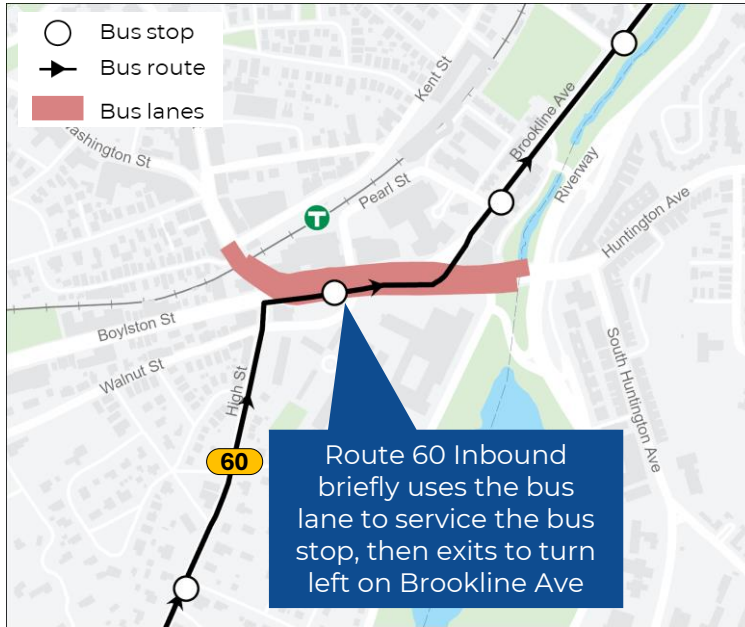


65 Outbound

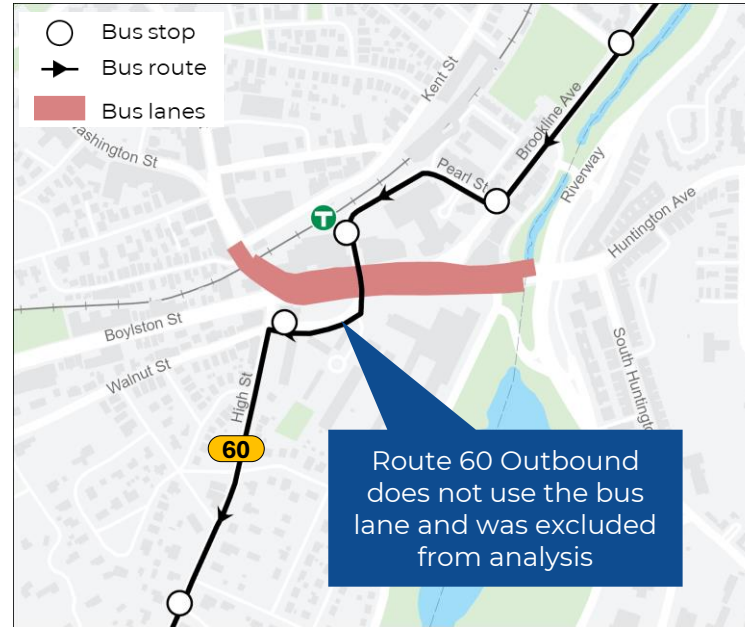


Bus Routing Through the Project Area

60 Inbound



60 Outbound

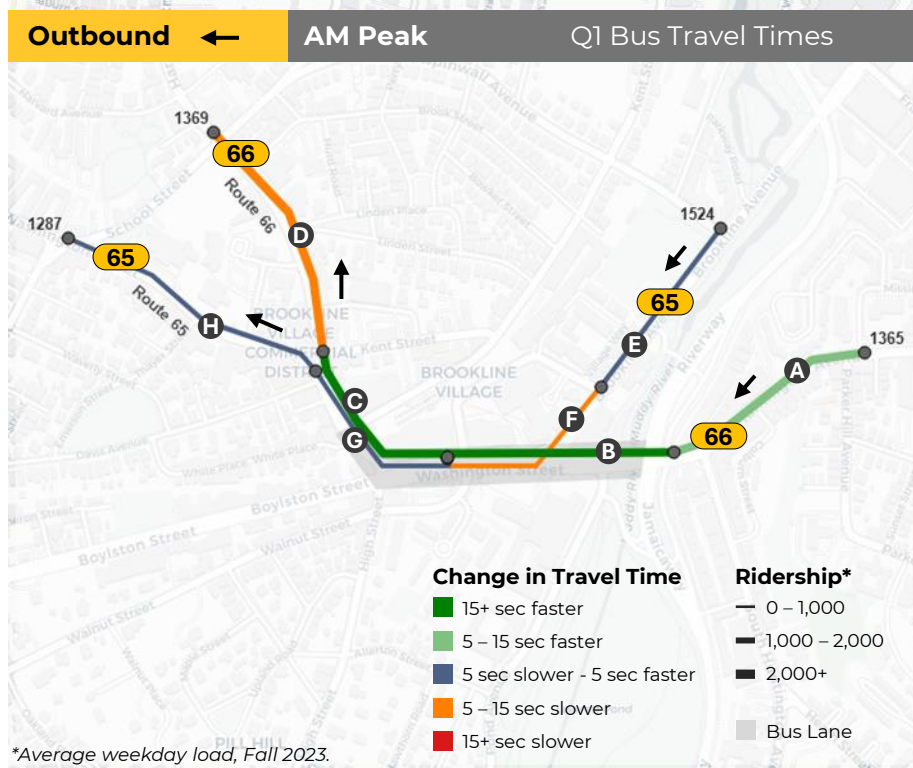


Bus Travel Times



Gateway East, after
Photo Credit: Toole Design

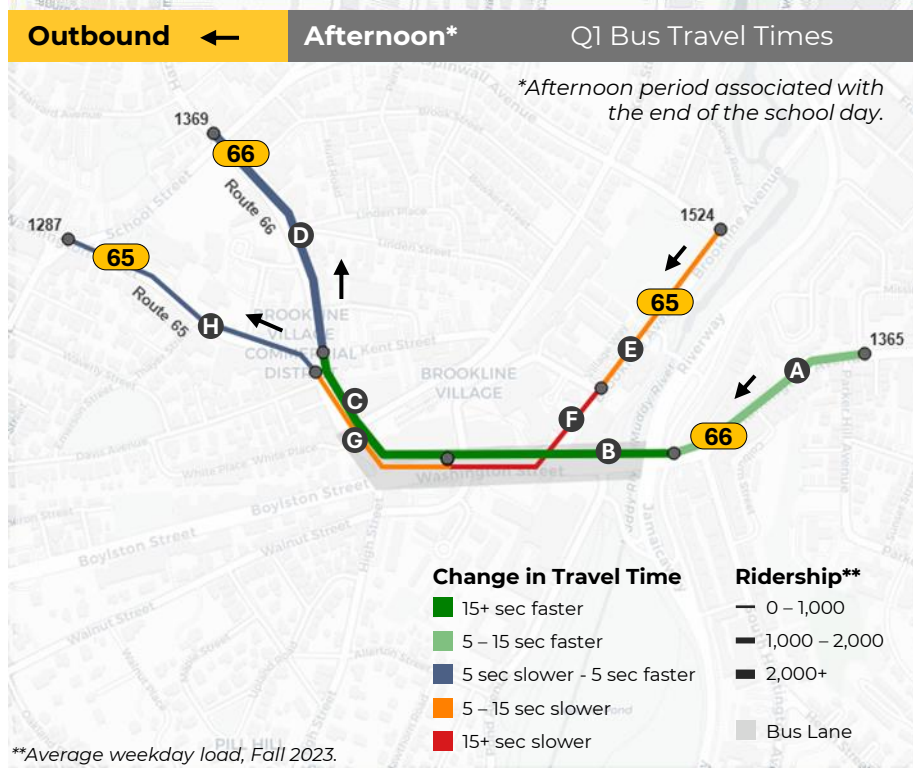
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline (min)	Q1 (min)	Change (sec)
Route 66			
Full corridor	8:23	7:46	-37
A	2:05	1:59	-6
B	2:15	1:55	-20
C	2:04	1:34	-30
D	1:54	2:05	+11
Route 65			
Full corridor	5:33	5:44	+11
E	1:07	1:12	+5
F	1:37	1:45	+8
G	1:32	1:34	+2
H	1:03	1:04	+1

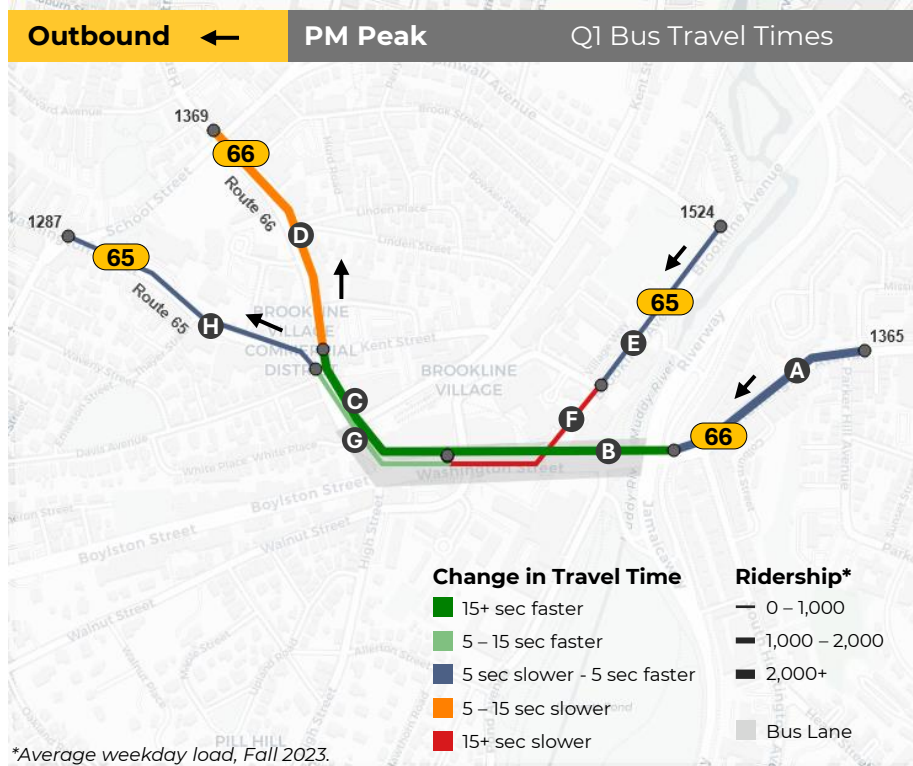
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline (min)	Q1 (min)	Change (sec)
Route 66			
Full corridor	8:25	7:25	-60
A	2:06	1:58	-8
B	2:20	1:55	-25
C	1:48	1:30	-18
D	1:59	2:00	+1
Route 65			
Full corridor	6:02	6:34	+33
E	1:15	1:24	+9
F	1:36	1:56	+20
G	1:43	1:54	+11
H	1:03	1:05	+2

Has travel time improved for bus riders?

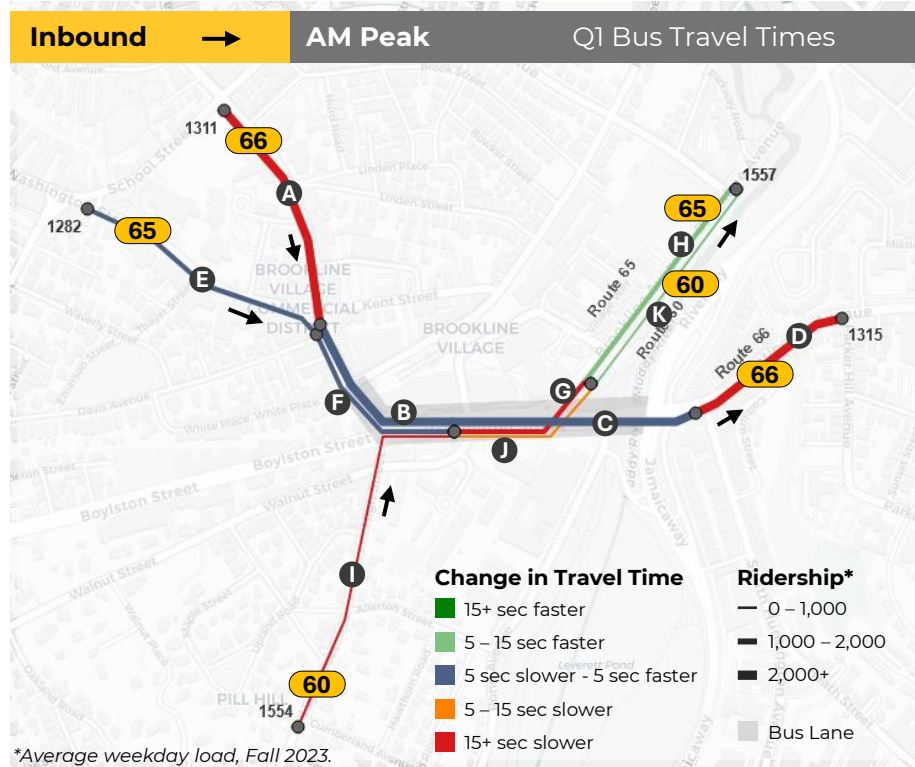


Median Stop-to-Stop Bus Travel Time

Segment	Baseline (min)	Q1 (min)	Change (sec)
Route 66			
Full corridor	8:39	8:10	-29
A	2:03	2:05	+2
B	2:39	1:59	-40
C	1:49	1:28	-21
D	2:04	2:11	+7
Route 65			
Full corridor	6:34	6:41	+7
E	1:18	1:21	+3
F	1:49	2:14	+25
G	1:56	1:48	-8
H	1:08	1:06	-2

Has travel time improved for bus riders?

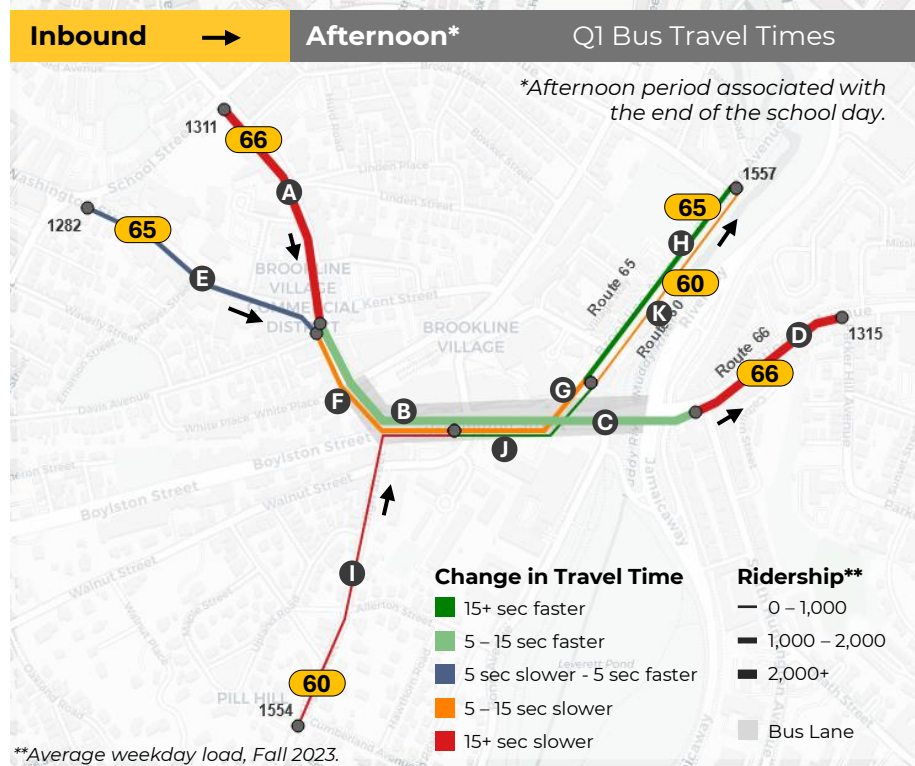
Median Stop-to-Stop Bus Travel Time



Segment	Baseline (min)	Q1 (min)	Change (sec)
Route 66			
Full corridor	8:05	9:03	+58
A	1:14	1:48	+34
B	2:34	2:32	-2
C	1:39	1:40	+1
D	2:22	2:38	+16
Route 65			
Full corridor	7:05	7:06	+1
E	1:15	1:18	+3
F	2:26	2:26	0
G	1:38	2:08	+30
H	1:06	0:54	-12
Route 60			
Full corridor	6:25	7:20	+55
I	3:10	4:02	+52
J	1:50	1:58	+8
K	1:12	1:01	-11

Has travel time improved for bus riders?

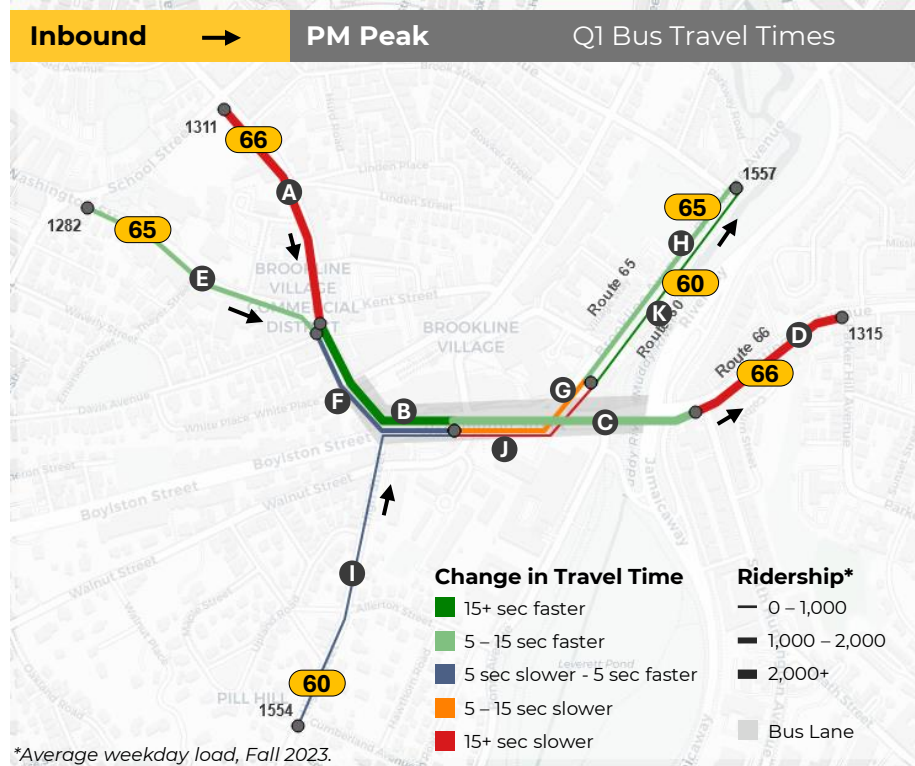
Median Stop-to-Stop Bus Travel Time



Segment	Baseline (min)	Q1 (min)	Change (sec)
Route 66			
Full corridor	8:09	8:48	+40
A	1:39	2:11	+32
B	2:59	2:47	-13
C	1:37	1:32	-6
D	1:46	2:17	+31
Route 65			
Full corridor	6:54	6:38	-16
E	1:21	1:25	+4
F	2:19	2:26	+8
G	1:36	1:47	+11
H	0:60	0:43	-17
Route 60			
Full corridor	5:41	5:50	+9
I	2:24	2:40	+16
J	2:14	1:52	-22
K	0:50	0:56	+6

Has travel time improved for bus riders?

Median Stop-to-Stop Bus Travel Time



Segment	Baseline (min)	Q1 (min)	Change (sec)
Route 66			
Full corridor	8:42	9:06	+24
A	1:41	2:16	+35
B	3:15	2:55	-20
C	1:51	1:41	-10
D	1:47	2:16	+29
Route 65			
Full corridor	7:08	6:35	-33
E	1:25	1:18	-7
F	2:17	2:17	0
G	1:42	1:48	+6
H	1:02	0:51	-11
Route 60			
Full corridor	6:02	6:05	+3
I	2:43	2:47	+4
J	1:28	2:12	+44
K	1:27	0:53	-34

Key Findings – Q1 Bus Service

Travel Time

- The **segments with bus lanes are seeing the most improvement**, compared to study area segments where buses travel in mixed traffic.
- Results on the Route 66 are promising so far (in bus lane segments)
 - Route 66 is a good lens to view the project through: it has 77% of the ridership, and is the only bus route that travels the full project corridor in both directions.
- The 65 and 60 routes have more mixed results, but their use of the project corridor is more limited. Further insights expected as monitoring continues.

Travel Time Variability

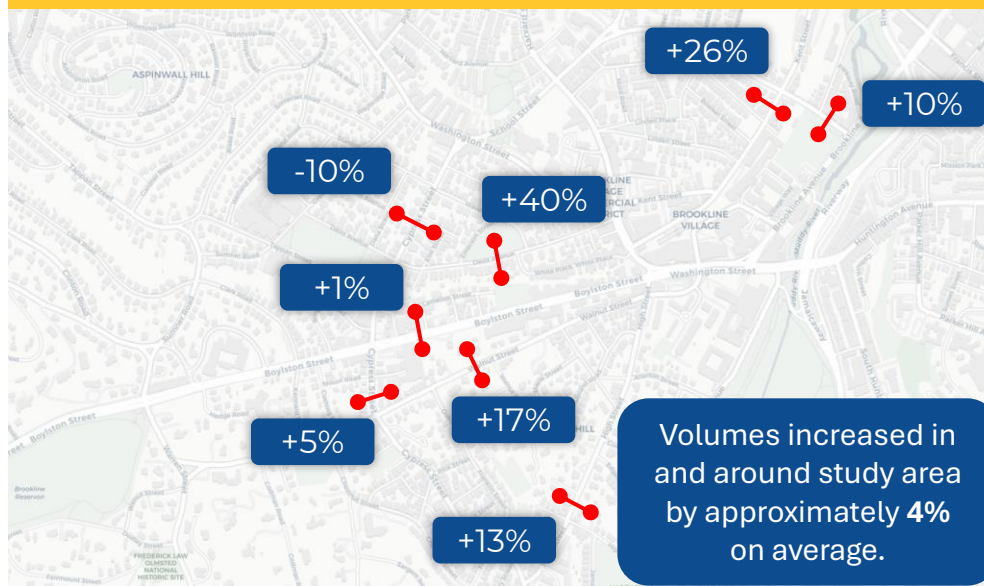
- The **improvements are notable** for such a short corridor.

Gateway East, after
Photo Credit: Toole Design

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Has the project impacted traffic on secondary streets and residential side streets?

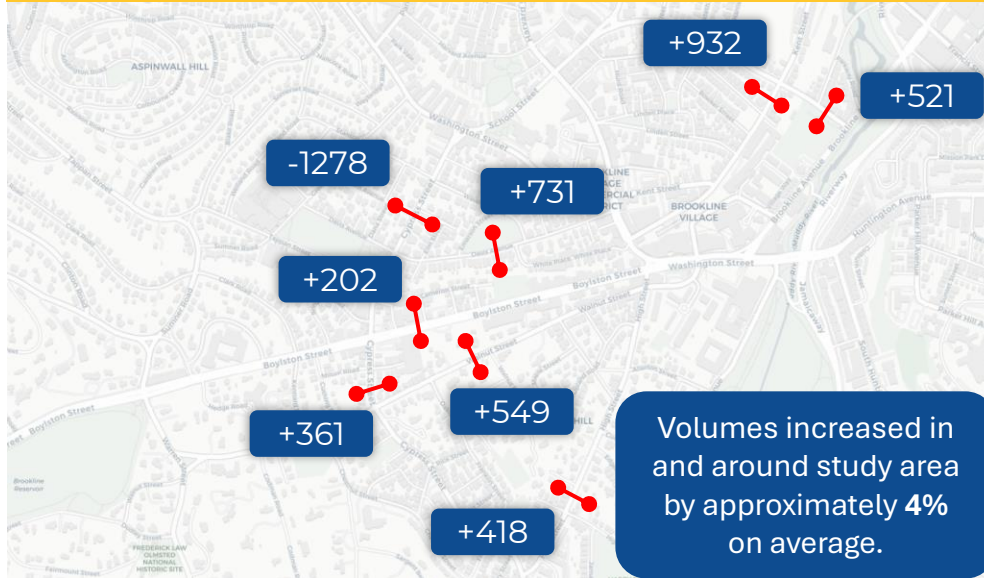
Q1 Average Daily Traffic (ADT) Volume Change – Percentage



- Traffic on Route 9 **remained relatively constant** with **moderate increase** of traffic on side streets
- Some fluctuation with speeds, but in general **most observed speeds decreased**
- Could be options for **traffic calming** in the future if trends don't correct
- Nearby traffic patterns: **Pierce School** closed for construction and relocated to Old Lincoln School on Boylston St/Walnut St

Has the project impacted traffic on secondary streets and residential side streets?

Q1 Average Daily Traffic (ADT) Volume Change - Volumes



- Traffic on Route 9 **remained relatively constant** with **moderate increase** of traffic on side streets
- Some fluctuation with speeds, but in general **most observed speeds decreased**
- Could be options for **traffic calming** in the future if trends don't correct
- Nearby traffic patterns: **Pierce School** closed for construction and relocated to Old Lincoln School on Boylston St/Walnut St

Has the project impacted speed on side streets?

Northbound/Eastbound

Location	NB/EB 50 th Percentile Speeds (MPH)			NB/EB 85 th Percentile speeds (MPH)		
	Baseline Sept 2023	Q1 Speeds Oct 2024	Change	Baseline Sept 2023	Q1 Speeds Oct 2024	Change
Aspinwall Ave, between Brookline Ave & Kent St	20.2	17.4	-13.9%	24.7	23.0	-7.1%
Kent St, between Aspinwall Ave & Brook St	18.0	17.3	-4.0%	24.1	23.7	-2.0%
Davis Ave, between Cypress St & Washington St	22.7	20.7	-8.7%	27.7	24.8	-10.4%
Cypress St, between Davis Ave & Gorham Ave	21.4	20.4	-4.4%	26.4	24.7	-6.5%
Cypress St, between Boylston St & Walnut St	19.5	19.8	+1.6%	24.1	24.2	+0.3%
Boylston St (Rt 9), between Cypress St & High St	28.8	28.1	-2.6%	34.6	35.8	+3.4%
Walnut St, between Cypress St & High St	23.5	21.4	-8.9%	28.4	25.1	-11.7%
High St, between Cumberland Ave & Edgehill Rd	22.6	26.1	+15.2%	27.4	29.9	+9.0%

Speed % Change Key:

<- 10%	-10% to - 5%	-5% to -1%	-1% to +1%	0% to +5%	+5% to +10%	>+10 %
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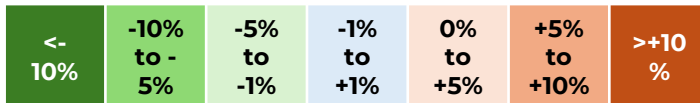
Some fluctuation with speeds, but in general most observed speeds have decreased

Has the project impacted speed on side streets?

Southbound/Westbound

Location	SB/WB 50 th Percentile Speeds(MPH)			SB/WB 85 th Percentile speeds (MPH)		
	Baseline Sept 2023	Q1 Speeds Oct 2024	Change	Baseline Sept 2023	Q1 Speeds Oct 2024	Change
Aspinwall Ave, between Brookline Ave & Kent St	20.5	20.0	-2.4%	24.9	24.1	-3.2%
Kent St, between Aspinwall Ave & Brook St	21.8	21.7	-0.3%	26.1	25.4	-3.0%
Davis Ave, between Cypress St & Washington St	21.3	18.3	-14.1%	26.1	23.2	-11.0%
Cypress St, between Davis Ave & Gorham Ave	19.3	19.7	+1.9%	24.8	25.2	+1.9%
Cypress St, between Boylston St & Walnut St	18.1	17.7	-2.3%	23.7	23.5	-0.7%
Boylston St (Rt 9), between Cypress St & High St	29.2	27.5	-5.6%	35.8	34.4	-3.9%
Walnut St, between Cypress St & High St	22.6	20.9	-7.5%	27.3	24.7	-9.4%
High St, between Cumberland Ave & Edgehill Rd	23.6	24.7	+4.5%	28.4	28.9	+1.9%

Speed % Change Key:



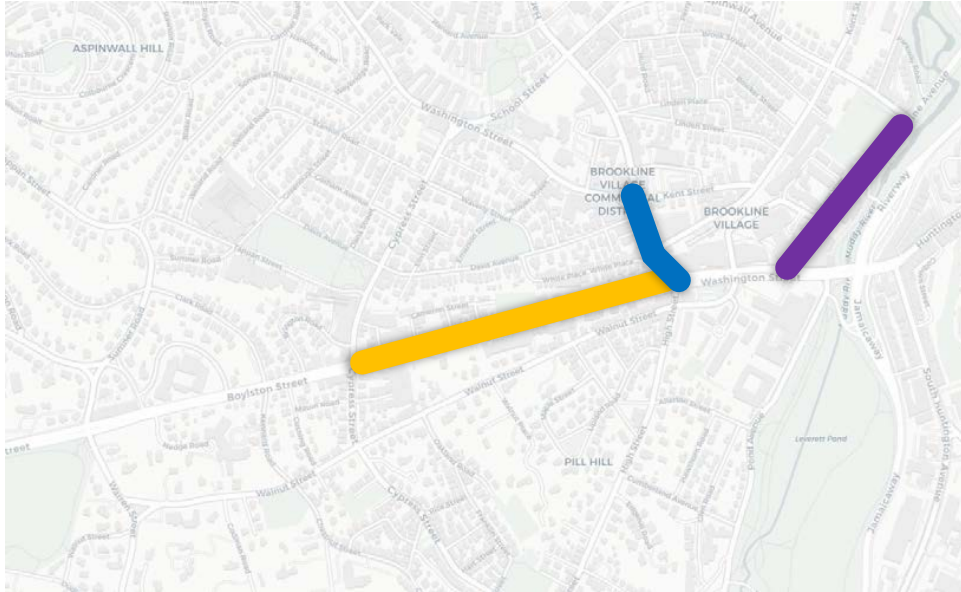
Some fluctuation with speeds, but in general most observed speeds have decreased

Vehicle Travel Times & Control Delay



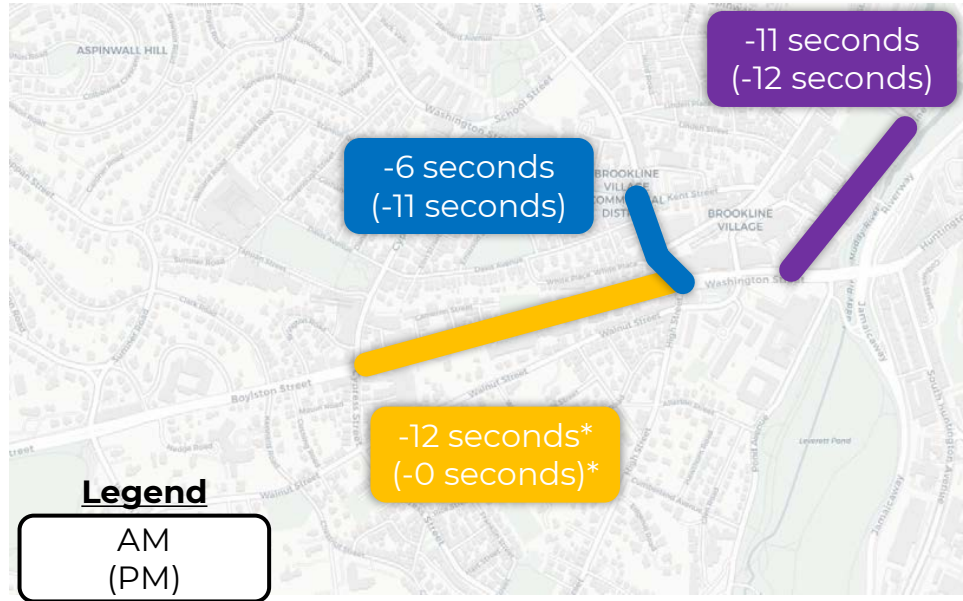
Gateway East, after
Photo Credit: Toole Design

Has the project created impacts to general purpose traffic?



1. Boylston St eastbound between Cypress St and High St (**orange**)
2. Washington St southbound between Boylston St and Harvard St (**blue**)
3. Brookline Ave northbound between Aspinwall Ave and Washington St (**purple**)

Has the project created impacts to general purpose traffic?



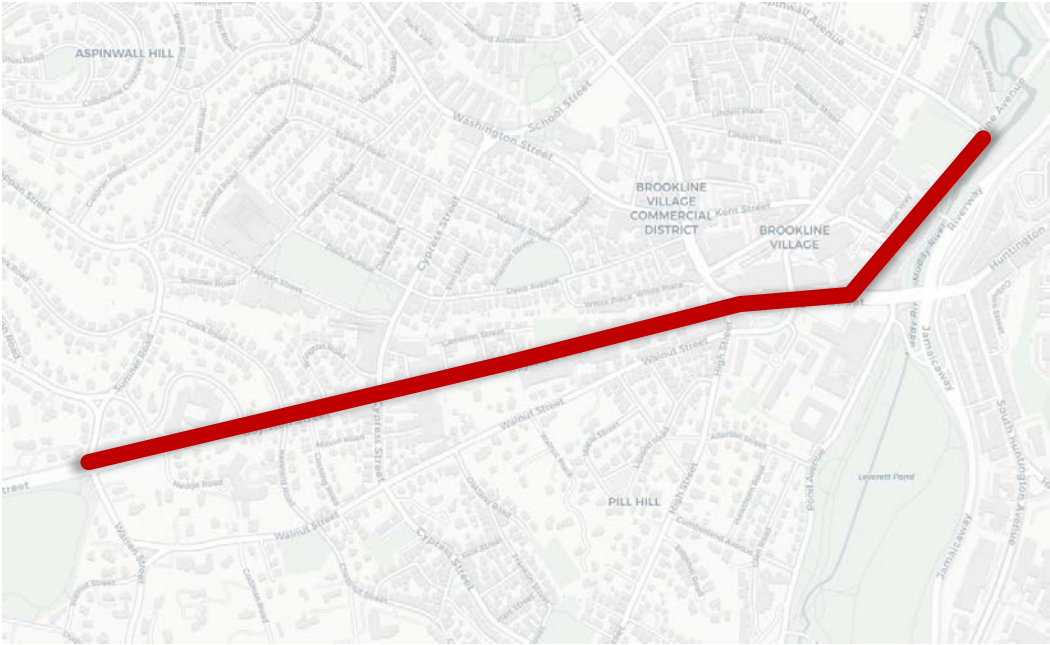
- Intersection delay either remains constant or decreases slightly
- *Data may be affected by INRIX platform limitations, but does not indicate significant increases in vehicle delay

Corridor Travel Time

Boylston Street & Brookline
Avenue between Sumner
Street and Aspinwall
Avenue

Approximately 1.2 miles

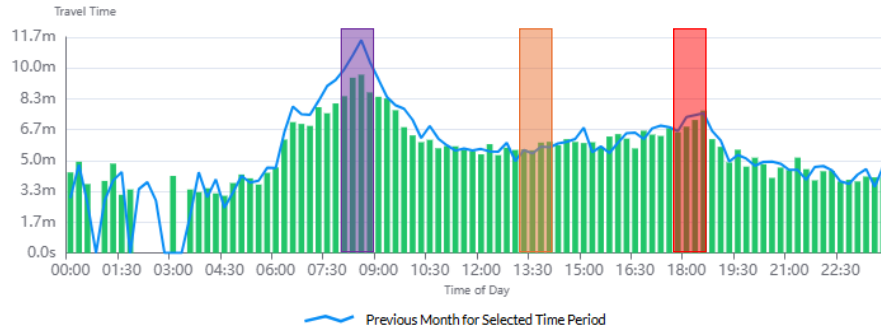
Includes all three
intersections in project area



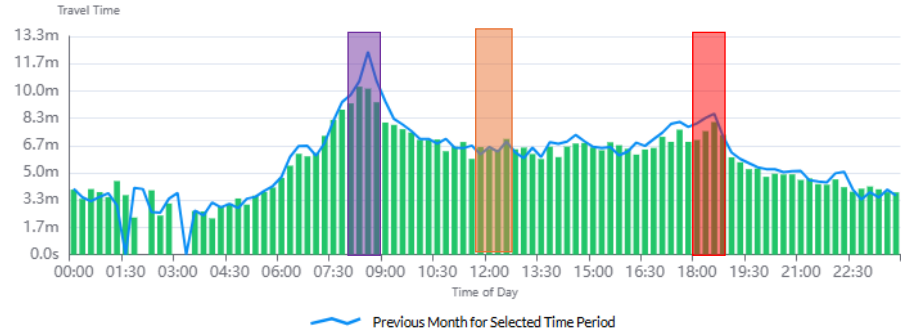
Q1 Travel Time - Boylston Street and Brookline Avenue inbound between Sumner Street and Aspinwall Avenue

Average Travel Time over Time of Day

Baseline



Quarter 1



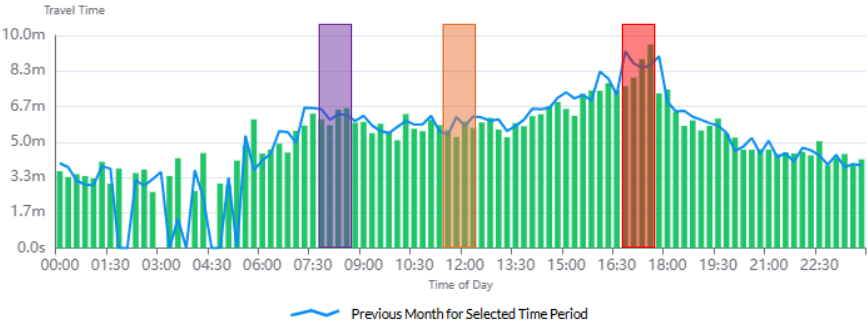
Period	Baseline Travel Time	Quarter 1 Travel Time
AM Peak Hour	9.0 minutes	9.7 minutes
MD Peak Hour	5.7 minutes	6.6 minutes
PM Peak Hour	7.0 minutes	7.5 minutes

Approximately 30-60 second increase in travel time for vehicles travelling through all project area intersections

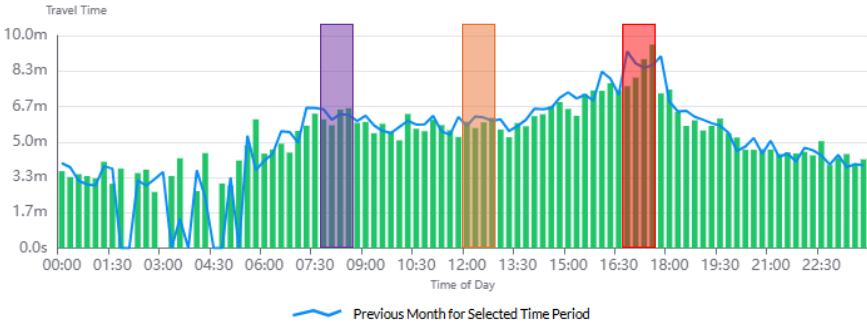
Q1 Travel Time - Boylston Street and Brookline Avenue outbound between Sumner Street and Aspinwall Avenue

Average Travel Time over Time of Day

Baseline



Quarter 1



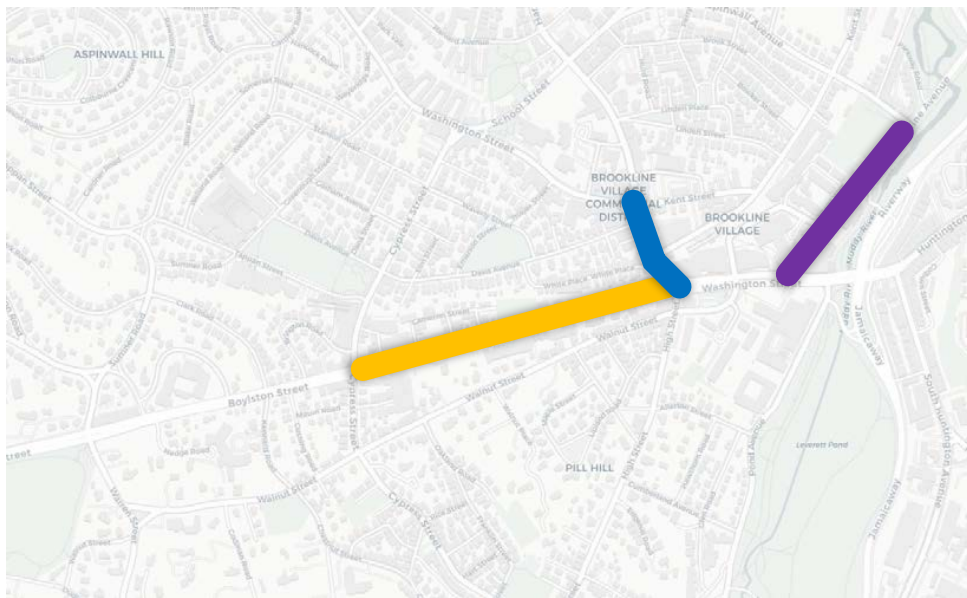
Period	Baseline Travel Time	Quarter 1 Travel Time
AM Peak Hour	6.2 minutes	6.0 minutes
MD Peak Hour	5.5 minutes	5.9 minutes
PM Peak Hour	8.5 minutes	8.8 minutes

Approximately 10-30 second increase in travel time for vehicles travelling through all project area intersections

Queuing Data

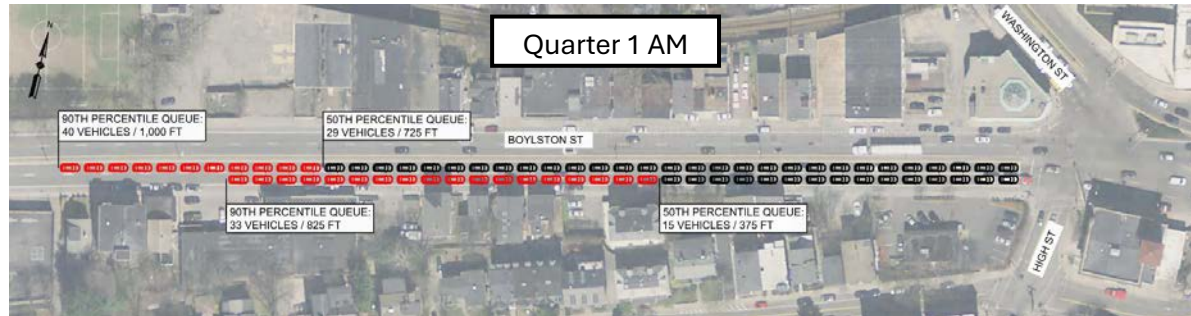
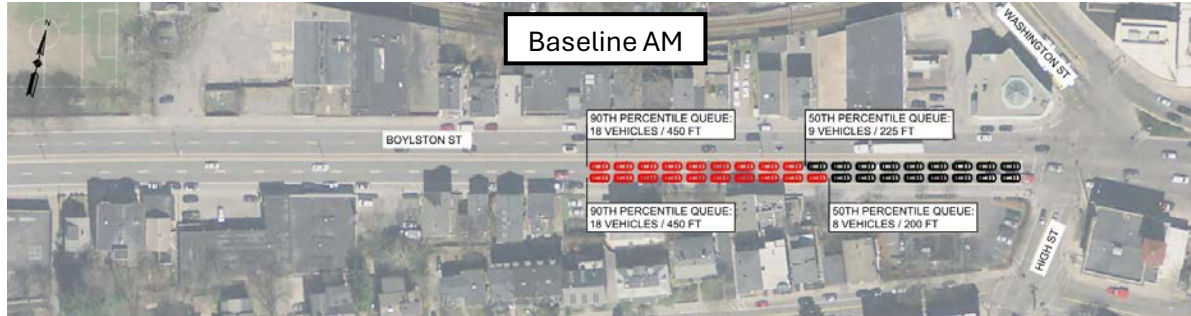


Has the project created impacts to queuing at three major approaches?



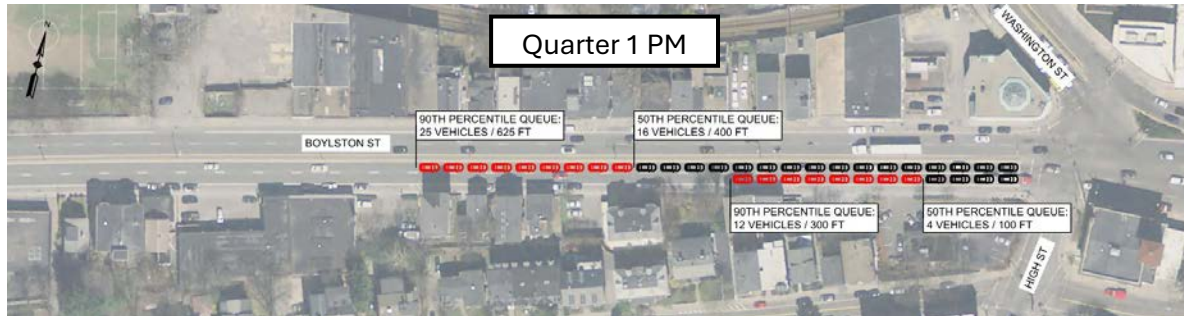
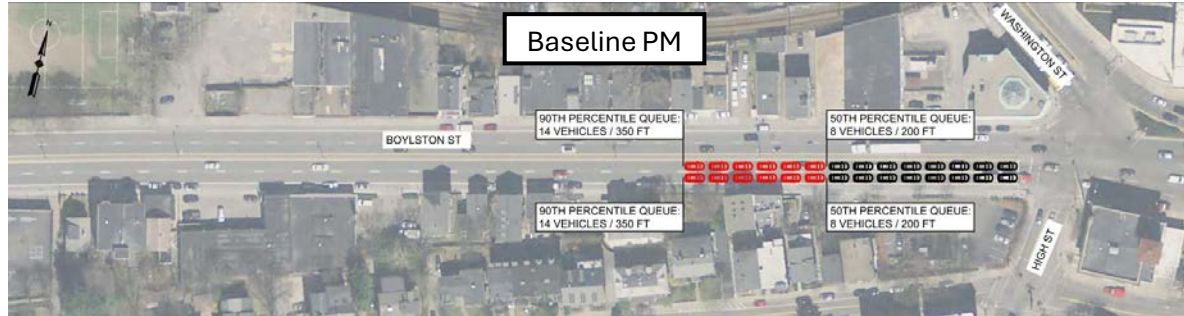
- Vehicle queues generally increased, with greatest increase observed on Route 9.
- Minimal increased delay and constant vehicle volumes indicates that while queues may be longer, the bus lanes have not reduced the ability for vehicles to travel through the project area.

Boylston Street (Rt 9), approaching Washington Street, AM



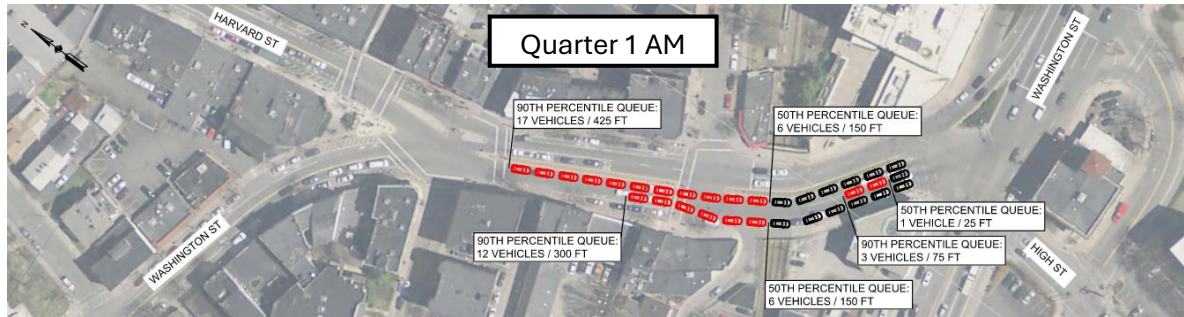
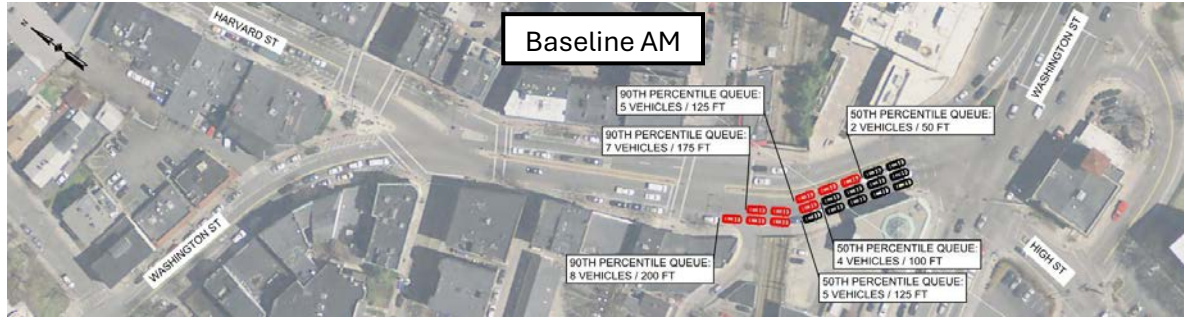
- Significant increase in AM vehicle queues

Boylston Street (Rt 9), approaching Washington Street, PM



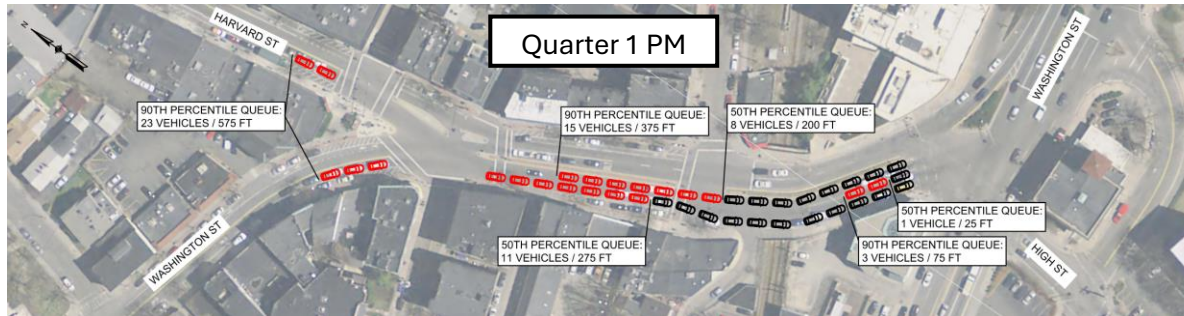
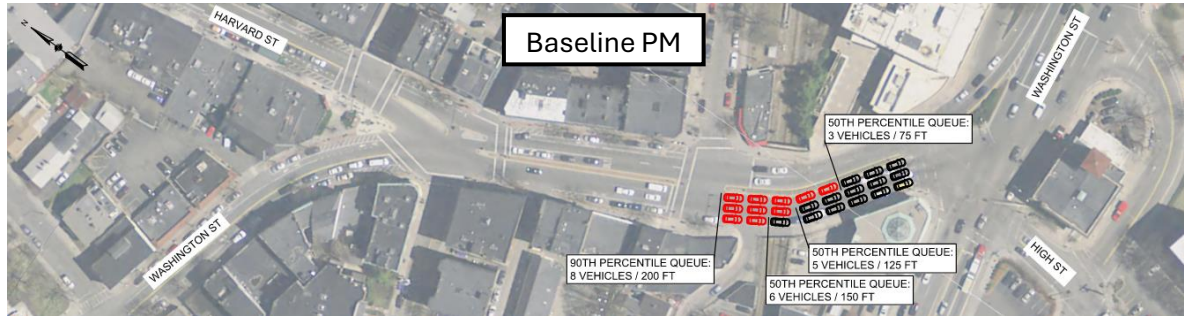
- Slight increase in PM vehicle queues

Washington Street, approaching Boylston Street (Rt 9), AM



- Increase in AM vehicle queues

Washington Street, approaching Boylston Street (Rt 9), PM



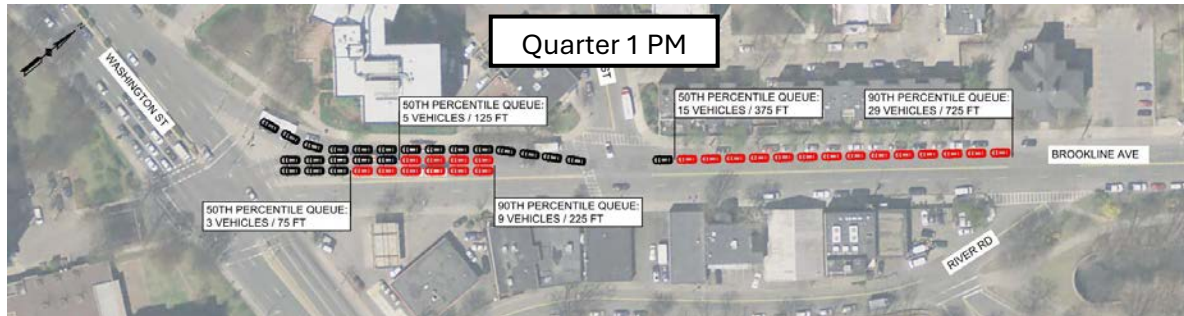
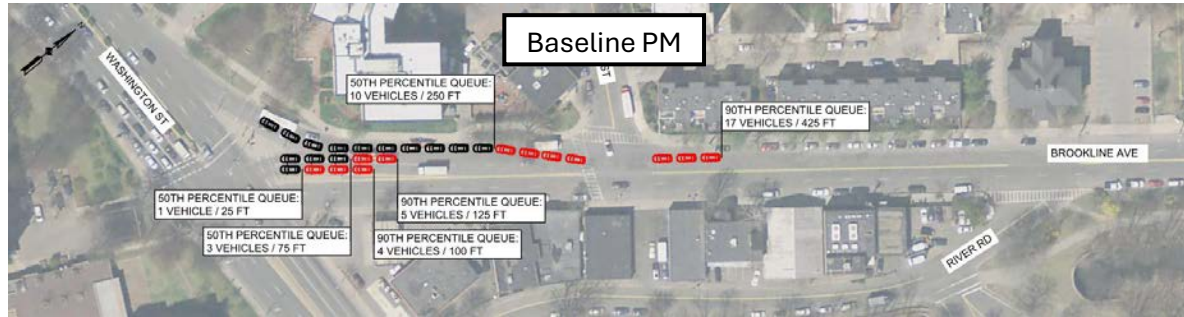
- Increase in PM vehicle queues

Brookline Avenue, approaching Washington Street (Rt 9), AM



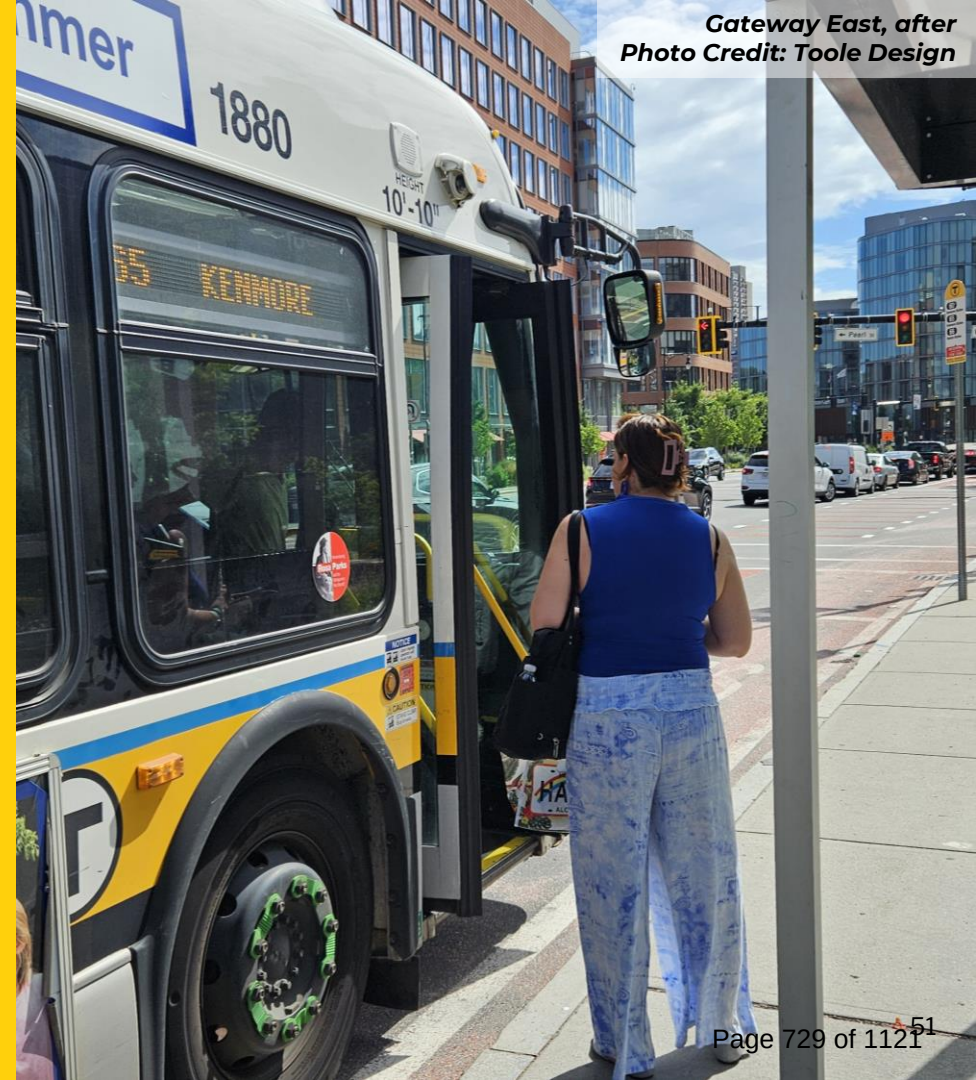
- Slight decrease in AM vehicle queues

Brookline Avenue, approaching Washington Street (Rt 9), PM



- Increase in PM vehicle queues

Summary & Next Steps



Gateway East, after
Photo Credit: Toole Design

Quarter 1 Summary

- **Bus Travel Times & Variability** improvements observed on the 66 in the bus lanes.
- **Vehicle Volumes** on Rt 9 were relatively constant with moderate increase of volumes on side streets. Most observed **speeds have decreased**.
- **Vehicle Travel Times:** intersection delay remains constant
- **Vehicle Queue Lengths** have generally increased particularly on Rt 9. However, queue lengths remain below the predictions outlined in the Bus Lane Traffic Impact Study.
- **User Feedback Surveys** will remain open throughout the pilot.

*Q1 should be viewed as an adjustment period due to factors such as delay with **bus lane implementation and enforcement** likely contributing to results.*

Next Steps

- **Continue monitoring** & reporting quarterly throughout pilot duration
 - **Next report - Winter 2025: Quarter 2 (Nov. 1, 2024 – Jan. 31, 2025)**
 - Spring 2025: Quarter 3 (Feb. 1, 2025 – April 30, 2025)
 - Summer 2025: Quarter 4 (May 1, 2025 – July 31, 2025)
 - Summer/Fall 2025: Final Report
- MBTA continue coordination with **adaptive signal system** vendor
- Brookline continue coordination with BPD on **education & enforcement**

Appendix

Data Collection Schedule

Period	Period Dates*	Traffic Count Dates	INRIX Dates	Queuing Dates
Baseline	Aug 1 – Oct 31, 2023	Sep 26-28, 2023	Jun 2024**	May 18, 2021***
Quarter 1	Aug 1 – Oct 31, 2024	Oct 8-10, 2024	Oct 2024	Dec 3 2024
Quarter 2	Nov 1, 2024 – Jan 31, 2025	Jan 2025	Jan 2025	
Quarter 3	Feb 1 – Apr 30, 2025	Apr 2025	Apr 2025	
Quarter 4	May 1 – Jul 30, 2025	Jul 2025	Jul 2025	

*APC data for travel time analysis collected over entire period.

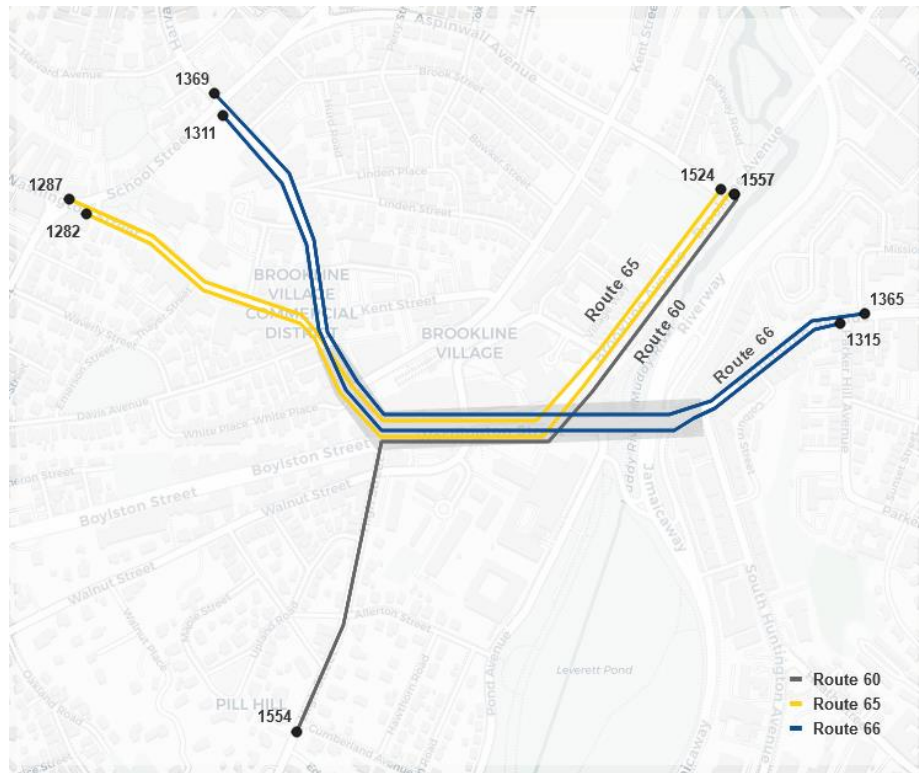
**INRIX Blackout from 6/2023 – 2/2024

***Baseline queue data may be affected by decreased traffic in wake of COVID-19 pandemic

Appendix A

Bus Service Complete Results

Analysis Area



Route 60 inbound between High St at Cumberland Ave (1554) and Brookline Ave opposite Aspinwall Ave (1557)

Route 65 inbound between Washington St at Cypress St (1282) and Brookline Ave at Aspinwall Ave (1557)

Route 65 outbound between Brookline Ave at Aspinwall Ave (1524) and Washington St at School St (1287)

Route 66 inbound between Harvard St at School St (1311) and Huntington Ave at Parker Hill Ave (1315)

Route 66 outbound between Huntington Ave opposite Parker Hill Ave (1365) and Harvard St at Aspinwall Ave (1369)

Data

- All analysis was completed using stop arrival and departure times in **automatic passenger counter (APC)** data.
- Data was collected for **weekdays** from August 1 through October 31, 2025.
- MBTA-defined **time periods**:
 - AM Peak: 7:00 AM to 9:00 AM
 - Afternoon: 2:00 PM to 4:00 PM*
 - PM Peak: 4:00 PM to 7:00 PM

Metrics

Travel Time	Variability (MBTA Metric)	Travel Time Quality of Service (TTQOS)	Travel Time Variability Quality of Service (TTVQOS)
Median travel time of a vehicle over a segment at a given time.	Relative difference between the median and 90 th percentile of travel times.	Letter grade (A to E) for how much delay vehicles experience on average over a segment at a given time.	Letter grade (A to E) for how consistent vehicle travel time is over a segment at a given time.

Metrics

TTQOS =
$$\frac{\text{average travel time (observed)}}{\text{reference travel time}^*}$$

TTVQOS =
$$\frac{\text{standard deviation travel time (observed)}}{\text{average travel time (observed)}}$$

TTQOS and TTVQOS Letter Grade Descriptions

Grade	Metric Upper Threshold		Representative Bus Service
	TTQOS	TTVQOS	
A	1.4	1.4	Fully grade-separated
B	1.8	2.7	Reserved right-of-way, subject to traffic signal control
C	2.4	3.8	Mixed traffic, little to no traffic congestion
D	3.0	5.1	Mixed traffic, modest traffic congestion
E	4.0	8.0	Mixed traffic, moderate traffic congestion
F	N/A	N/A	<i>Perceived as too slow to be a good travel choice</i>

*Based on segment length.

Bus Service - Baseline Complete Results

Travel Times, Dwell, and QOS Ratios | Time Period: AM Peak

Appendix A: Baseline Complete Results - Bus Service Analysis

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1555	190.0	492.9	13.0	23.0	91%	1.59	5.5	F	8.1	F
		1555	1556	110.0	173.3	9.0	20.0	56%	0.58	3.7	E	4.4	D
		1556	1557	72.0	130.2	11.0	19.4	47%	0.81	2.2	C	5.3	E
		1554	1557	385.0	752.6	11.0	19.4	47%	0.95	3.9	E	6.1	E
65	inbound	1282	1283	75.0	122.6	12.0	26.0	71%	0.63	2.1	C	3.3	C
		1283	1555	146.0	242.0	13.0	25.0	84%	0.66	4.7	F	4.8	D
		1555	1556	98.0	206.6	9.0	16.0	51%	1.11	3.9	E	5.7	E
		1556	1557	66.0	140.0	9.0	14.0	24%	1.12	2.1	C	4.5	D
		1282	1557	425.0	572.2	9.0	14.0	24%	0.35	3.1	E	3.7	C
65	outbound	1524	1525	67.0	102.0	8.0	14.0	54%	0.52	2.0	C	2.9	C
		1525	1526	97.0	160.0	9.0	17.0	65%	0.65	3.0	E	4.1	D
		1526	1286	92.0	153.0	9.0	13.0	57%	0.66	3.2	E	3.5	C
		1286	1287	63.0	98.4	8.0	14.0	24%	0.56	1.9	C	2.7	B
		1524	1287	333.0	445.2	8.0	14.0	24%	0.34	2.5	D	2.9	C
66	inbound	1311	1313	74.0	125.0	14.0	31.0	88%	0.69	2.2	C	3.6	C
		1313	1555	154.0	242.6	15.0	34.0	87%	0.58	5.0	F	4.9	D
		1555	1314	99.0	150.2	14.0	28.0	93%	0.52	3.1	E	3.8	C
		1314	1315	142.0	222.0	18.0	52.3	94%	0.56	4.3	F	3.8	D
		1311	1315	485.0	667.8	18.0	52.3	94%	0.38	3.6	E	3.7	C
66	outbound	1365	1366	125.0	195.0	14.0	34.0	88%	0.56	3.6	E	3.7	C
		1366	1526	135.0	211.0	13.0	23.0	94%	0.56	4.0	E	3.9	D
		1526	1367	124.0	186.0	12.0	20.0	83%	0.50	3.7	E	3.9	D
		1367	1369	114.0	203.1	11.0	19.5	79%	0.78	3.3	E	4.5	D
		1365	1369	502.5	695.0	11.0	19.5	79%	0.38	3.7	E	3.8	C

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: Afternoon

Appendix A: Baseline Complete Results - Bus Service Analysis

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1555	144.0	249.0	11.0	19.0	86%	0.73	3.4	E	5.0	D
		1555	1556	134.0	185.0	10.0	16.0	64%	0.38	4.1	F	4.5	D
		1556	1557	50.0	128.0	9.0	14.0	5%	1.56	1.8	C	4.6	D
		1554	1557	341.0	435.5	9.0	14.0	5%	0.28	3.1	E	3.4	C
65	inbound	1282	1283	81.0	145.3	12.0	33.0	64%	0.79	2.4	C	3.5	C
		1283	1555	138.5	216.6	12.0	20.6	78%	0.56	4.3	F	4.1	D
		1555	1556	96.0	203.3	10.0	16.9	53%	1.12	3.6	E	5.1	D
		1556	1557	59.5	134.3	7.0	13.6	12%	1.26	1.9	C	4.7	D
		1282	1557	414.0	559.6	7.0	13.6	12%	0.35	3.0	D	3.3	C
65	outbound	1524	1525	75.0	112.2	10.0	23.8	64%	0.50	2.3	C	2.9	C
		1525	1526	96.0	171.2	12.0	24.0	81%	0.78	3.2	E	4.0	D
		1526	1286	103.0	171.2	11.0	20.0	68%	0.66	3.6	E	3.8	C
		1286	1287	63.0	96.0	9.0	18.7	55%	0.52	2.0	C	10.8	F
		1524	1287	361.5	483.1	9.0	18.7	55%	0.34	2.7	D	4.4	D
66	inbound	1311	1313	99.0	159.0	13.0	39.5	86%	0.61	2.8	D	3.7	C
		1313	1555	179.0	268.0	18.0	42.9	83%	0.50	5.6	F	4.0	D
		1555	1314	97.0	144.7	13.0	26.0	83%	0.49	2.9	D	3.1	C
		1314	1315	106.0	164.7	14.0	36.0	83%	0.55	3.2	E	3.4	C
		1311	1315	488.5	655.7	14.0	36.0	83%	0.34	3.6	E	3.0	C
66	outbound	1365	1366	126.0	177.5	15.0	38.0	80%	0.41	3.4	E	5.5	E
		1366	1526	140.0	186.0	14.0	37.0	90%	0.33	4.0	E	3.1	C
		1526	1367	107.5	173.5	15.0	36.9	81%	0.61	3.5	E	5.5	E
		1367	1369	119.0	188.0	14.0	27.1	73%	0.58	3.1	E	9.0	F
		1365	1369	505.0	629.0	14.0	27.1	73%	0.25	3.5	E	4.6	D

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: PM Peak

Appendix A: Baseline Complete Results - Bus Service Analysis

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1555	163.0	295.0	13.0	23.0	91%	0.81	4.0	E	5.7	E
		1555	1556	88.0	176.0	9.0	15.7	37%	1.00	3.5	E	4.5	D
		1556	1557	87.0	146.2	9.0	16.1	10%	0.68	2.3	C	4.4	D
		1554	1557	362.0	497.6	9.0	16.1	10%	0.37	3.3	E	3.6	C
65	inbound	1282	1283	85.0	145.0	10.0	21.5	48%	0.71	2.4	D	3.8	C
		1283	1555	137.0	232.1	11.0	23.0	67%	0.69	4.5	F	4.2	D
		1555	1556	102.0	210.1	9.0	18.0	48%	1.06	3.8	E	5.1	D
		1556	1557	61.5	137.1	8.0	13.9	10%	1.23	2.0	C	4.9	D
		1282	1557	427.5	572.1	8.0	13.9	10%	0.34	3.1	E	3.4	C
65	outbound	1524	1525	78.0	130.8	13.0	30.0	63%	0.68	2.5	D	4.4	D
		1525	1526	109.0	191.0	14.0	31.0	78%	0.75	3.6	E	4.3	D
		1526	1286	116.0	178.8	12.0	27.0	65%	0.54	3.8	E	3.7	C
		1286	1287	68.0	106.8	12.0	27.0	63%	0.57	2.0	C	2.8	C
		1524	1287	394.0	529.0	12.0	27.0	63%	0.34	3.0	D	3.5	C
66	inbound	1311	1313	101.0	171.0	14.0	51.0	83%	0.69	2.9	D	4.4	D
		1313	1555	195.0	289.0	20.0	53.0	90%	0.48	6.0	F	3.9	D
		1555	1314	110.5	171.0	14.0	30.0	90%	0.55	3.3	E	3.4	C
		1314	1315	107.0	165.1	13.0	27.0	81%	0.54	3.2	E	5.0	D
		1311	1315	522.0	696.0	13.0	27.0	81%	0.33	3.8	E	3.6	C
66	outbound	1365	1366	123.0	204.0	18.0	45.0	80%	0.66	3.5	E	6.7	E
		1366	1526	159.0	235.0	17.0	41.0	86%	0.48	4.5	F	11.7	F
		1526	1367	109.0	166.0	15.0	39.0	76%	0.52	3.4	E	9.3	F
		1367	1369	124.0	189.0	14.0	30.0	78%	0.52	3.3	E	7.3	E
		1365	1369	519.0	702.0	14.0	30.0	78%	0.35	3.7	E	6.9	E

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Bus Service – Q1 Complete Results

Travel Times, Dwell, and QOS Ratios | Time Period: AM Peak

Appendix A: Q1 Complete Results - Bus Service Analysis

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1555	242.0	509.0	13.0	22.0	95%	1.10	6.1	F	7.1	E
		1555	1556	118.0	169.0	11.0	18.5	37%	0.43	4.0	E	3.4	C
		1556	1557	61.0	110.0	10.0	26.8	32%	0.80	1.8	C	3.9	D
		1554	1557	440.0	715.0	10.0	26.8	32%	0.62	4.1	F	5.3	E
65	inbound	1282	1283	78.0	134.0	12.0	24.0	76%	0.72	2.2	C	3.4	C
		1283	1555	146.0	235.1	14.0	24.0	91%	0.61	4.7	F	4.3	D
		1555	1556	128.0	209.0	10.0	14.5	61%	0.63	4.4	F	3.9	D
		1556	1557	54.0	107.7	9.0	14.0	26%	0.99	1.7	B	4.4	D
		1282	1557	426.0	577.7	9.0	14.0	26%	0.36	3.1	E	3.3	C
65	outbound	1524	1525	72.0	103.0	9.0	16.9	47%	0.43	2.1	C	2.7	B
		1525	1526	105.0	168.0	11.5	20.0	79%	0.60	3.2	E	3.9	D
		1526	1286	94.0	163.6	9.0	15.0	52%	0.74	3.3	E	3.7	C
		1286	1287	64.0	100.0	8.0	16.0	17%	0.56	1.9	C	2.8	C
		1524	1287	344.0	449.4	8.0	16.0	17%	0.31	2.6	D	2.8	C
66	inbound	1311	1313	108.0	167.0	15.0	34.0	92%	0.55	3.0	D	3.6	C
		1313	1555	152.0	242.9	15.0	32.7	93%	0.60	4.8	F	4.4	D
		1555	1314	99.5	153.9	15.5	31.0	95%	0.55	3.2	E	10.1	F
		1314	1315	158.0	248.8	18.0	54.5	91%	0.57	4.6	F	8.6	F
		1311	1315	543.0	711.9	18.0	54.5	91%	0.31	3.9	E	3.3	C
66	outbound	1365	1366	119.0	190.8	16.0	33.4	92%	0.60	3.4	E	3.1	C
		1366	1526	115.0	186.6	13.0	25.0	94%	0.62	3.5	E	3.8	C
		1526	1367	94.0	137.4	11.0	19.3	93%	0.46	3.0	D	3.2	C
		1367	1369	125.0	253.4	10.0	16.2	86%	1.03	3.8	E	5.6	E
		1365	1369	466.0	642.8	10.0	16.2	86%	0.38	3.4	E	3.4	C

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: Afternoon

Appendix A: Q1 Complete Results - Bus Service Analysis

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1555	160.0	262.2	14.0	23.0	96%	0.64	3.7	E	4.3	D
		1555	1556	112.0	180.2	9.0	14.0	37%	0.61	4.0	F	3.5	C
		1556	1557	56.0	101.6	9.0	12.0	6%	0.81	1.7	B	3.6	C
		1554	1557	350.0	480.8	9.0	12.0	6%	0.37	3.1	E	3.1	C
65	inbound	1282	1283	85.0	144.2	11.0	31.6	72%	0.70	2.5	D	4.0	D
		1283	1555	146.0	232.3	12.0	20.0	87%	0.59	4.6	F	4.6	D
		1555	1556	106.5	178.0	9.0	15.0	61%	0.67	3.7	E	3.4	C
		1556	1557	43.0	85.0	11.0	21.4	6%	0.98	1.3	A	3.3	C
		1282	1557	398.0	543.0	11.0	21.4	6%	0.36	2.9	D	3.5	C
65	outbound	1524	1525	84.0	120.3	11.0	26.3	70%	0.43	2.5	D	3.2	C
		1525	1526	116.0	188.3	13.0	26.0	86%	0.62	3.7	E	3.8	C
		1526	1286	114.0	182.0	11.0	23.0	73%	0.60	3.8	E	5.2	E
		1286	1287	64.5	108.0	10.0	27.7	44%	0.67	2.0	C	4.1	D
		1524	1287	394.0	519.1	10.0	27.7	44%	0.32	3.0	D	3.3	C
66	inbound	1311	1313	130.5	199.2	16.0	40.0	86%	0.53	3.6	E	4.5	D
		1313	1555	166.5	263.2	20.0	45.0	86%	0.58	5.3	F	4.1	D
		1555	1314	91.5	136.0	13.0	28.0	88%	0.49	2.7	D	3.1	C
		1314	1315	136.5	200.0	13.0	37.1	82%	0.47	4.0	E	3.4	C
		1311	1315	528.0	709.0	13.0	37.1	82%	0.34	3.9	E	3.2	C
66	outbound	1365	1366	118.0	153.0	16.0	37.0	84%	0.30	3.1	E	3.0	C
		1366	1526	115.0	172.2	16.0	52.1	93%	0.50	3.4	E	3.9	D
		1526	1367	90.0	136.0	12.0	27.6	86%	0.51	3.4	E	15.4	F
		1367	1369	120.0	218.2	12.0	21.4	61%	0.82	3.5	E	4.7	D
		1365	1369	445.0	609.4	12.0	21.4	61%	0.37	3.3	E	6.2	E

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: PM Peak

Appendix A: Q1 Complete Results - Bus Service Analysis

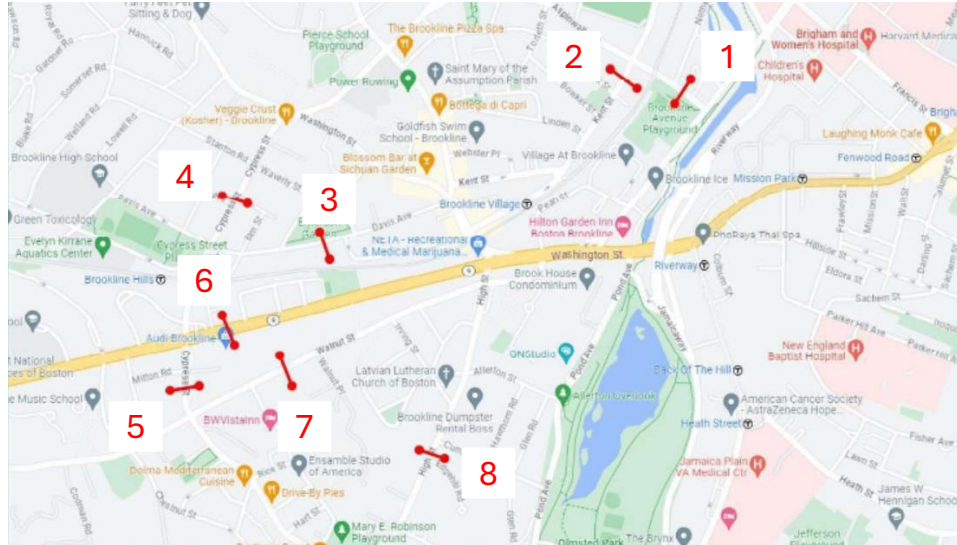
Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1555	167.0	274.0	14.0	22.0	96%	0.64	3.9	E	4.4	D
		1555	1556	132.0	186.0	9.0	16.3	43%	0.41	4.4	F	3.4	C
		1556	1557	53.0	106.0	8.0	11.0	19%	1.00	1.7	B	3.7	C
		1554	1557	365.0	504.0	8.0	11.0	19%	0.38	3.3	E	3.2	C
65	inbound	1282	1283	78.0	132.2	10.0	24.0	53%	0.69	2.3	C	4.4	D
		1283	1555	137.0	229.2	11.0	20.0	77%	0.67	4.5	F	4.3	D
		1555	1556	108.0	181.2	8.0	15.0	37%	0.68	3.8	E	3.8	C
		1556	1557	51.0	99.0	8.0	12.2	10%	0.94	1.6	B	3.6	C
		1282	1557	395.0	535.0	8.0	12.2	10%	0.35	2.9	D	3.4	C
65	outbound	1524	1525	81.0	139.0	13.0	29.0	70%	0.72	2.7	D	4.7	D
		1525	1526	134.0	212.0	14.0	28.2	84%	0.58	4.1	F	4.1	D
		1526	1286	108.0	176.7	11.0	21.0	67%	0.64	3.6	E	3.9	D
		1286	1287	66.0	101.7	10.5	21.0	50%	0.54	1.9	C	2.7	B
		1524	1287	401.0	555.4	10.5	21.0	50%	0.39	3.1	E	3.5	C
66	inbound	1311	1313	136.0	186.9	15.0	51.6	90%	0.37	3.6	E	3.8	C
		1313	1555	175.0	271.9	21.0	52.0	91%	0.55	5.5	F	4.1	D
		1555	1314	101.0	148.9	15.0	30.0	93%	0.47	3.2	E	10.5	F
		1314	1315	135.5	179.9	13.0	30.0	86%	0.33	3.9	E	3.1	C
		1311	1315	545.5	703.8	13.0	30.0	86%	0.29	4.0	E	4.1	D
66	outbound	1365	1366	125.0	190.6	19.0	42.0	87%	0.52	3.5	E	3.8	C
		1366	1526	119.0	188.0	16.0	30.0	91%	0.58	3.6	E	3.6	C
		1526	1367	88.0	151.4	14.0	36.0	79%	0.72	3.0	D	4.0	D
		1367	1369	131.0	214.6	14.0	29.0	72%	0.64	3.7	E	4.2	D
		1365	1369	490.0	639.4	14.0	29.0	72%	0.30	3.5	E	3.5	C

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Appendix B

Highway Volumes

Data Collection Locations



1. Aspinwall Ave, between Brookline Ave & Kent St
2. Kent St, between Aspinwall Ave & Brook St
3. Davis Ave, between Cypress St & Washington St
4. Cypress St, between Tappan St & Davis Ave
5. Cypress St, between Boylston St & Walnut St
6. Boylston St (Route 9), between Cypress St & High St
7. Walnut St, between Cypress St & High St
8. High St, between Cumberland Ave & Edgehill Rd

Baseline Volumes – Sept 2023

Location	ADT	Peak AM	Peak PM
Aspinwall Ave, between Brookline Ave & Kent St	5,484	465	501
Kent St, between Aspinwall Ave & Brook St	3,605	364	292
Davis Ave, between Cypress St & Washington St	1,840	264	177
Cypress St, between Davis Ave & Gorham Ave	12,553	1113	932
Cypress St, between Boylston St & Walnut St	7,730	879	585
Boylston St (Rt 9), between Cypress St & High St	22,520	1777	1765
Walnut St, between Cypress St & High St	3,193	472	435
High St, between Cumberland Ave & Edgehill Rd	3,224	321	310
Total Volumes	60,149	5,655	4,997

Q1 Volumes – Oct 2024

Location	ADT	Change	Peak AM	Change	Peak PM	Change
Aspinwall Ave, between Brookline Ave & Kent St	6,005	+9.5%	635	+36.6%	546	+9.0%
Kent St, between Aspinwall Ave & Brook St	4,537	+25.9%	533	+46.4%	392	+34.2%
Davis Ave, between Cypress St & Washington St	2,571	+39.7%	359	+36.0%	228	+28.8%
Cypress St, between Davis Ave & Gorham Ave	11,275	-10.2%	964	-13.4%	805	-13.6%
Cypress St, between Boylston St & Walnut St	8,091	+4.7%	895	+1.8%	646	+10.4%
Boylston St (Rt 9), between Cypress St & High St	22,722	+0.9%	1,826	+2.8%	1,825	+3.4%
Walnut St, between Cypress St & High St	3,742	+17.2%	505	+7.0%	482	+10.8%
High St, between Cumberland Ave & Edgehill Rd	3,642	+13.0%	352	+9.7%	335	+8.1%
Total Volumes / Average % Change	62585	+4.0%	6069	+7.3%	5259	+5.2%

Baseline Speeds (mph) -Sept 2023

Location	NB/EB 50 th Percentile	NB/EB 85 th Percentile	SB/WB 50 th Percentile	SB/WB 85 th Percentile
Aspinwall Ave, between Brookline Ave & Kent St	20.2	24.7	20.5	24.9
Kent St, between Aspinwall Ave & Brook St	18.0	24.1	21.8	26.1
Davis Ave, between Cypress St & Washington St	22.7	27.7	21.3	26.1
Cypress St, between Davis Ave & Gorham Ave	21.4	26.4	19.3	24.8
Cypress St, between Boylston St & Walnut St	19.5	24.1	18.1	23.7
Boylston St (Rt 9), between Cypress St & High St	28.8	34.6	29.2	35.8
Walnut St, between Cypress St & High St	23.5	28.4	22.6	27.3
High St, between Cumberland Ave & Edgehill Rd	22.6	27.4	23.6	28.4

Appendix C

Highway Travel Times and Control Delays

Study Locations

Intersections

1. Washington St at Station St
2. Boylston St (Route 9) at High St and Washington St
3. Washington St (Route 9) at Pearl St and Walnut St
4. Washington St (Route 9) at Brookline Ave

Corridors

1. Boylston St eastbound between Cypress St and High St
2. Washington St southbound between Boylston St and Harvard St
3. Brookline Ave northbound between Aspinwall Ave and Washington St.

Intersections

1. Washington St at Station St
2. Boylston St (Route 9) at High St and Washington St
3. Washington St (Route 9) at Pearl St and Walnut St
4. Washington St (Route 9) at Brookline Ave



#1 Washington St at Station St – Baseline

Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



- Average intersection delay of about 40 seconds
- Average intersection delay varies from ~30-60 seconds during peak periods
- Most significant delay is Washington St southbound, in the PM peak (about 1.2 minutes)

All data is from June 2024 weekdays.

#1 Washington St at Station St – Quarter 1

Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



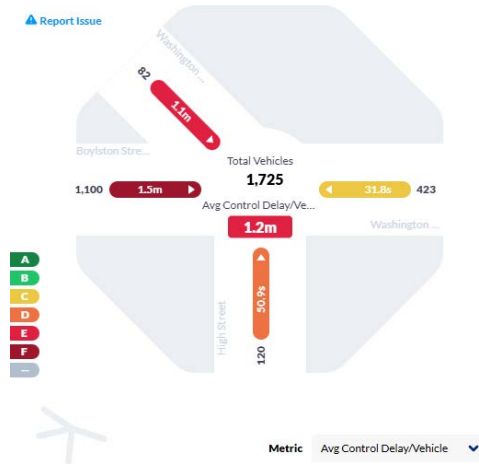
- **4-17 second decrease in total intersection delay**
- Delay reduced for Washington St southbound in PM peak.

All data is from October 2024 weekdays.

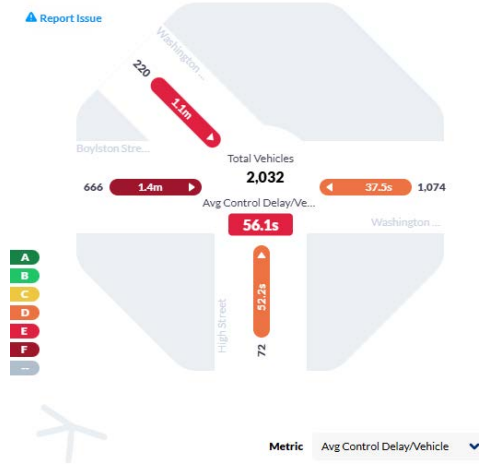
**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

#2 Boylston St (Route 9) at High St and Washington St – Baseline

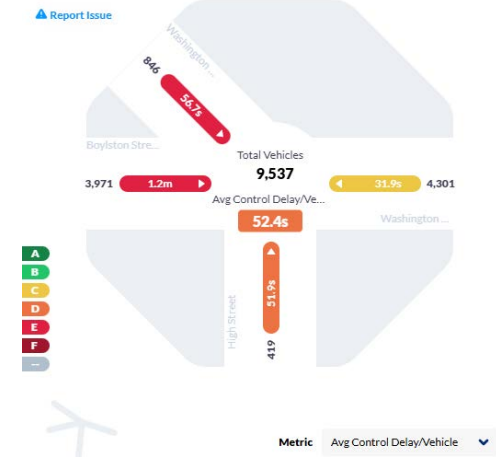
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily

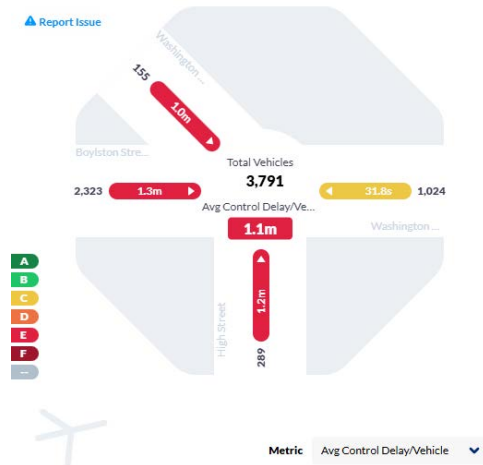


All data is from June 2024 weekdays.

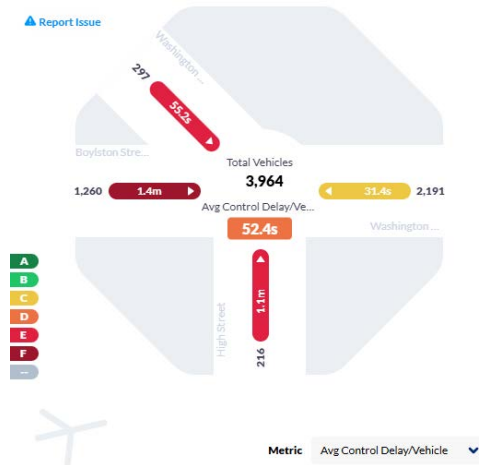
- Average intersection delay of about 1 minute throughout day
- Highest delay on Boylston St (Route 9), approximately 1.5 minutes during peak periods

#2 Boylston St (Route 9) at High St and Washington St – Quarter 1

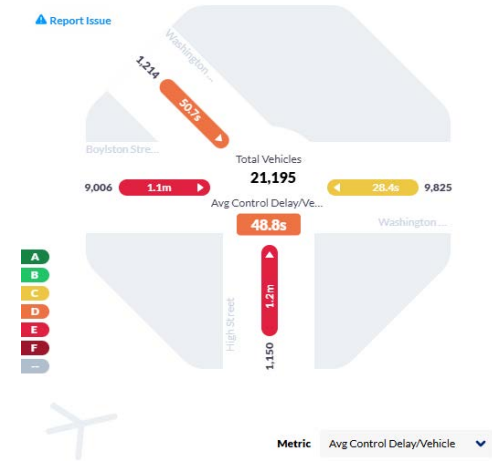
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



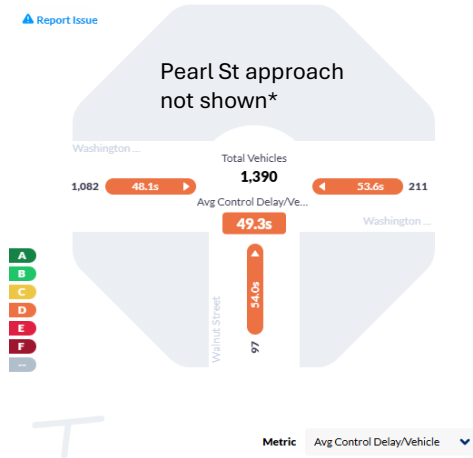
- Inrix shows slight decrease in total intersection delay**
- Long queue lengths extend past the 500' approach distance Inrix uses to collect data, so actual intersection delay is likely higher

All data is from October 2024 weekdays.

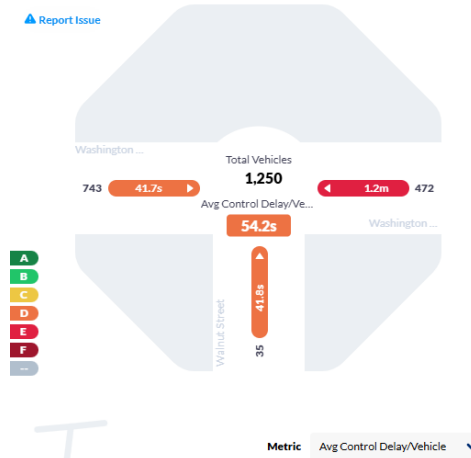
**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

#3 Washington St (Route 9) at Pearl St and Walnut St – Baseline

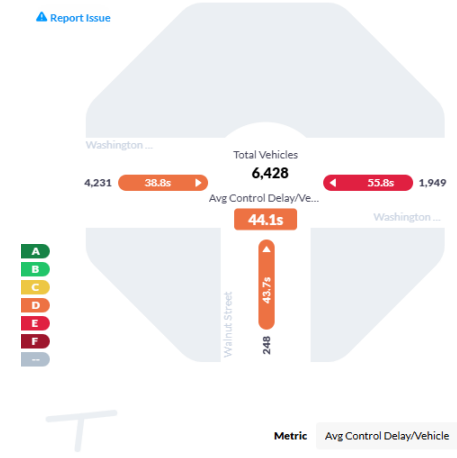
Delay AM (6am-9am)



Delay PM (4pm-7pm)



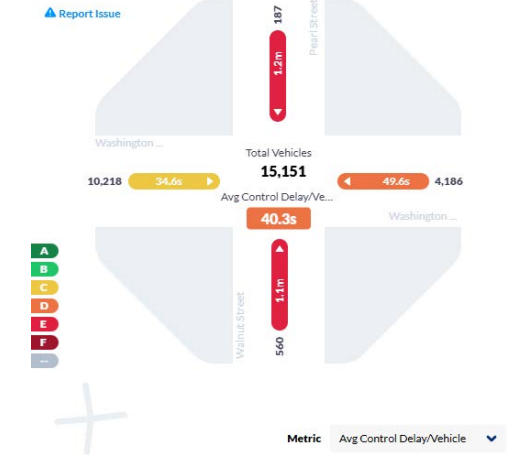
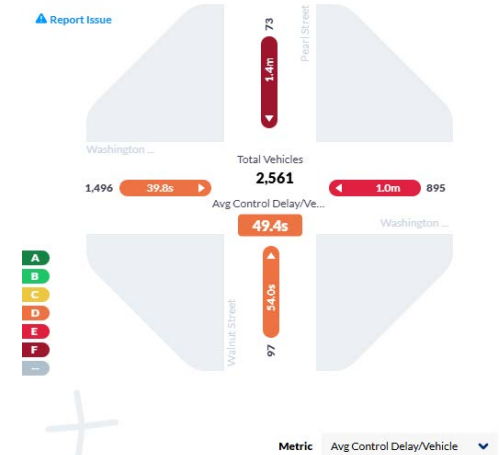
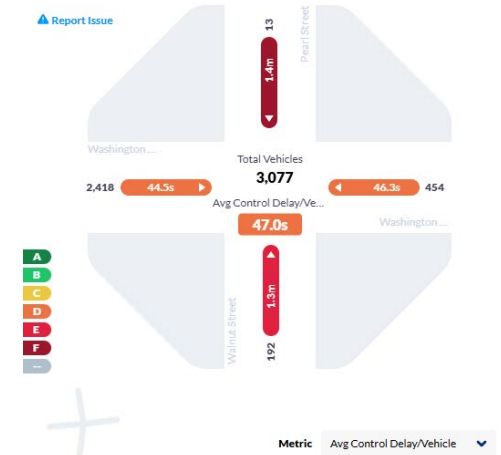
Delay Avg. Daily



- Average intersection delay of 45-55 seconds throughout day
- Washington St (Route 9) through movements typically see highest delay

All data is from June 2024 weekdays.

**Intersection diagram is missing the Pearl St approach because no volumes were recorded by INRIX at this approach during June 2024*



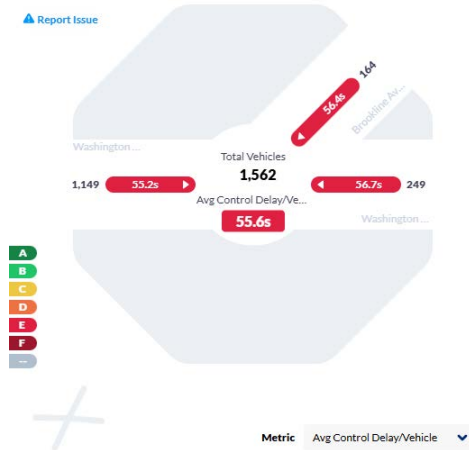
- **~4 second decrease in average intersection delay**
- Washington St (Route 9) movements see slight decreases in delay

All data is from October 2024 weekdays.

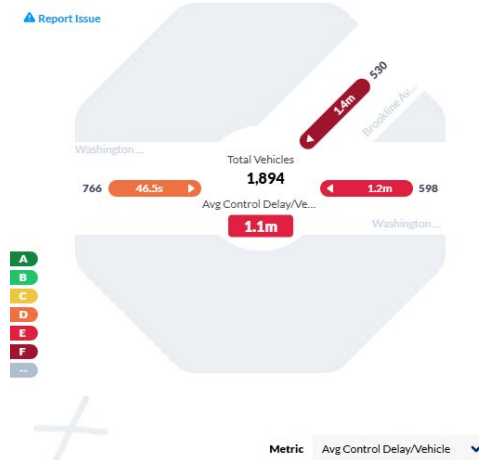
**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

#4 Washington St (Route 9) at Brookline Ave - Baseline

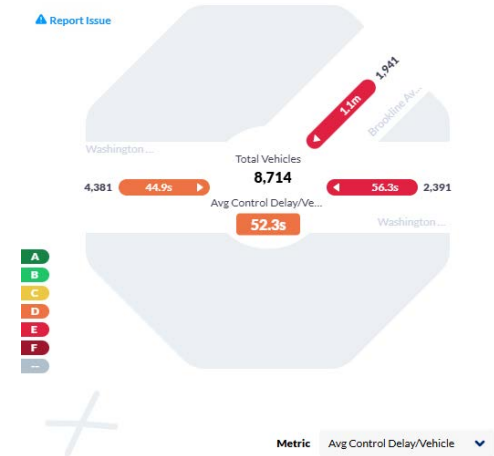
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily

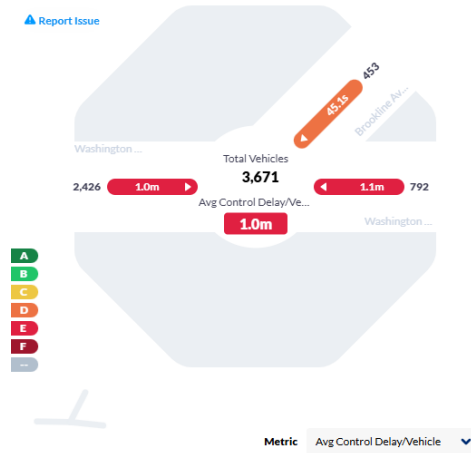


- Average intersection delay of ~50-70 seconds throughout day
- Highest delays are approaching project area
- Generally lesser delays leaving project area

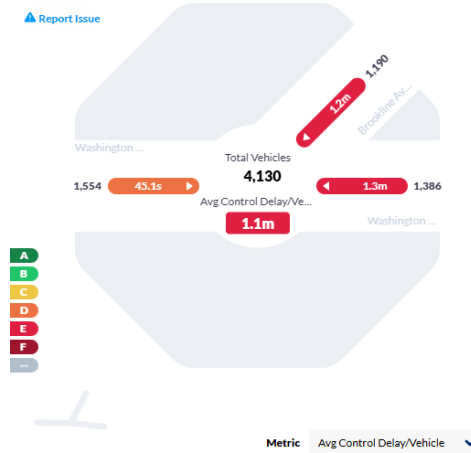
All data is from June 2024 weekdays.

#4 Washington St (Route 9) at Brookline Ave – Quarter 1

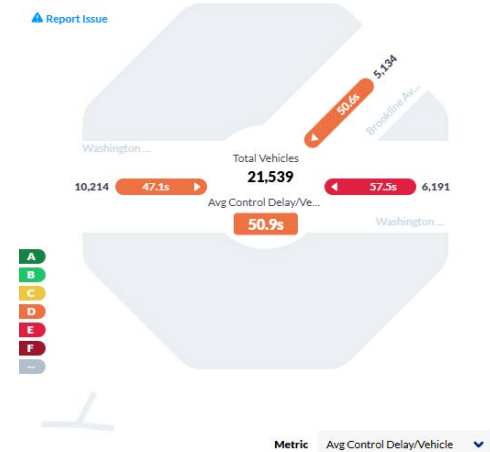
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily

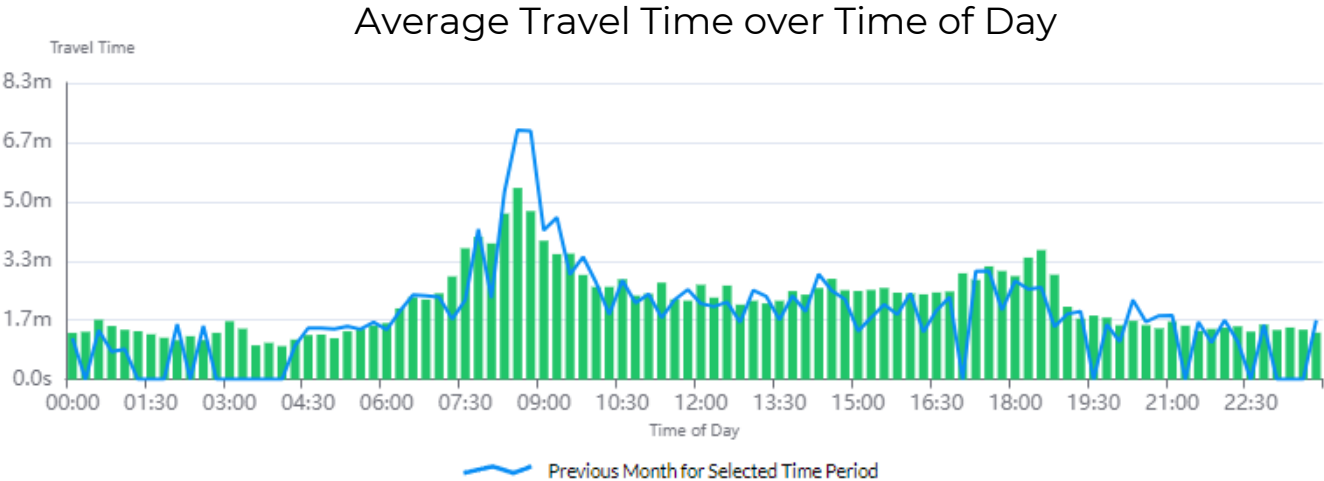


- **Generally, no change in total intersection delay**
- Delay is more evenly distributed between vehicles entering and vehicles leaving the project area

All data is from October 2024 weekdays.

**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

Q1 Travel Time - Boylston St eastbound from Cypress St to High St

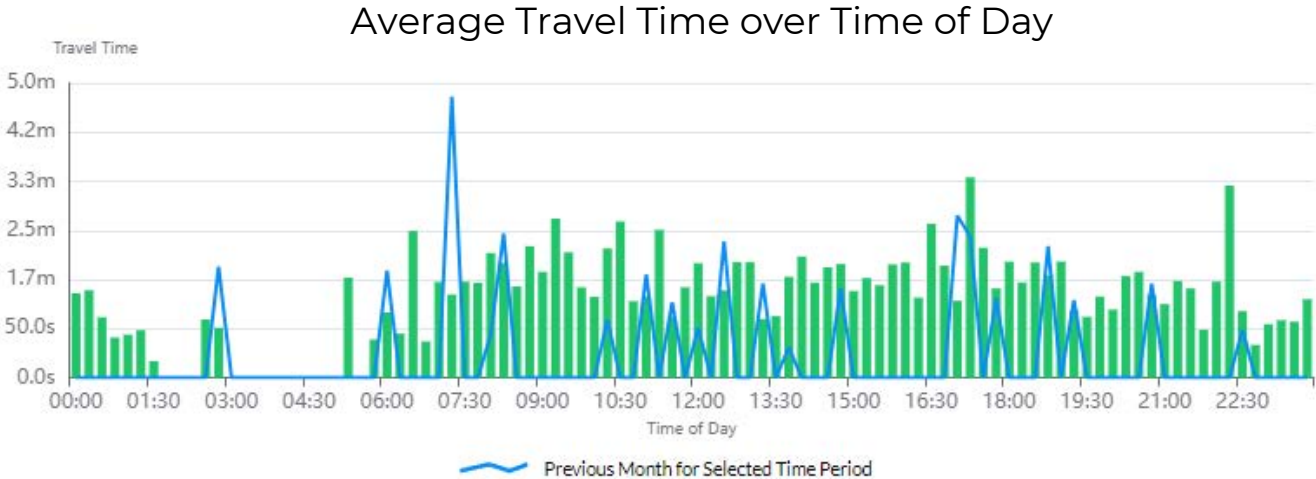


All data is from October 2024 weekdays.

Period	Travel Time	Time of Day
AM Peak Hour	4.7 minutes	8:15am-9:15am
MD Peak Hour	2.6 minutes	2:00pm-3:00pm
PM Peak Hour	3.2 minutes	4:45pm-5:45pm

**Baseline data not available from INRIX.*

Q1 Travel Time - Washington St southbound from Harvard St to Boylston St

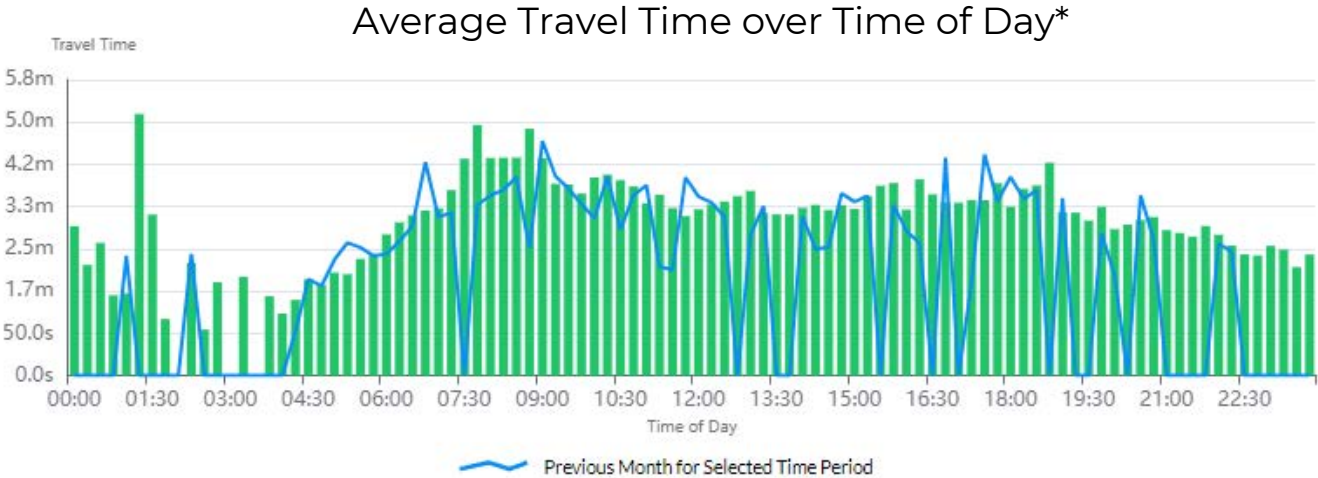


All data is from October 2024 weekdays.

Period	Travel Time	Time of Day
AM Peak Hour	2.2 minutes	8:45am-9:45am
MD Peak Hour	1.9 minutes	2:00pm-3:00pm
PM Peak Hour	2.3 minutes	4:30pm-5:30pm

**Baseline data not available from INRIX.*

Q1 Travel Time - Brookline Ave northbound from Washington St to Aspinwall Ave



All data is from October 2024 weekdays.

Period	Travel Time**	Time of Day
AM Peak Hour	4.5 minutes	7:45am-8:45am
MD Peak Hour	3.5 minutes	12:15pm-1:15pm
PM Peak Hour	3.8 minutes	6:00pm-7:00pm

*Baseline data not available from INRIX.
**Note this includes delay at the Washington St & Brookline intersection approach.

Appendix D

Queueing Data

Queue Length of Boylston St EB, west of Washington St

		Left Lane		Right Lane		Total		
		Baseline	Q1	Baseline	Q1	Baseline	Q1	Change
	10th %ile	2	16	1	5	3	20	+677%
AM	50th %ile	9	29	8	15	17	44	+159%
	90th %ile	18	40	18	33	36	73	+102%
	Longest	25	55	25	43	50	98	+96%
	10th %ile	1	8	1	1	2	9	+329%
PM	50th %ile	8	16	8	4	16	20	+25%
	90th %ile	14	25	14	12	28	37	+33%
	Longest	21	31	22	18	43	49	+14%

Queue Length of Washington St SB, north of Boylston St

		Left Lane		Center Lane		Right Lane		Total		
		Baseline	Q1	Baseline	Q1	Baseline	Q1	Baseline	Q1	Change
	10th %ile	0	2	2	0	2	3	4	5	+28%
AM	50th %ile	2	6	4	1	5	6	11	13	+18%
	90th %ile	5	17	7	3	8	12	20	32	+59%
	Longest	8	20	13	5	9	17	30	42	+40%
	10th %ile	1	3	1	0	4	4	6	7	+17%
PM	50th %ile	3	8	5	1	6	11	14	19	+36%
	90th %ile	8	15	8	3	8	23	24	41	+73%
	Longest	28	25	10	4	11	35	49	64	+31%



Bus only lane

Queue Length of Brookline Ave SB, north of Boylston St

		Left Lane		Center Lane		Right Lane		Total		
		Baseline	Q1	Baseline	Q1	Baseline	Q1	Baseline	Q1	Change
	10th %ile	0	0	0	0	1	0	1	0	-100%
AM	50th %ile	1	1	1	1	6	3	8	5	-38%
	90th %ile	3	2	3	3	11	8	17	13	-24%
	Longest	4	5	4	4	16	11	24	20	-17%
	10th %ile	0	1	1	1	4	5	5	7	+43%
PM	50th %ile	1	3	3	5	10	15	14	23	+64%
	90th %ile	4	9	5	9	17	29	26	47	+81%
	Longest	6	13	8	12	21	32	35	57	+63%

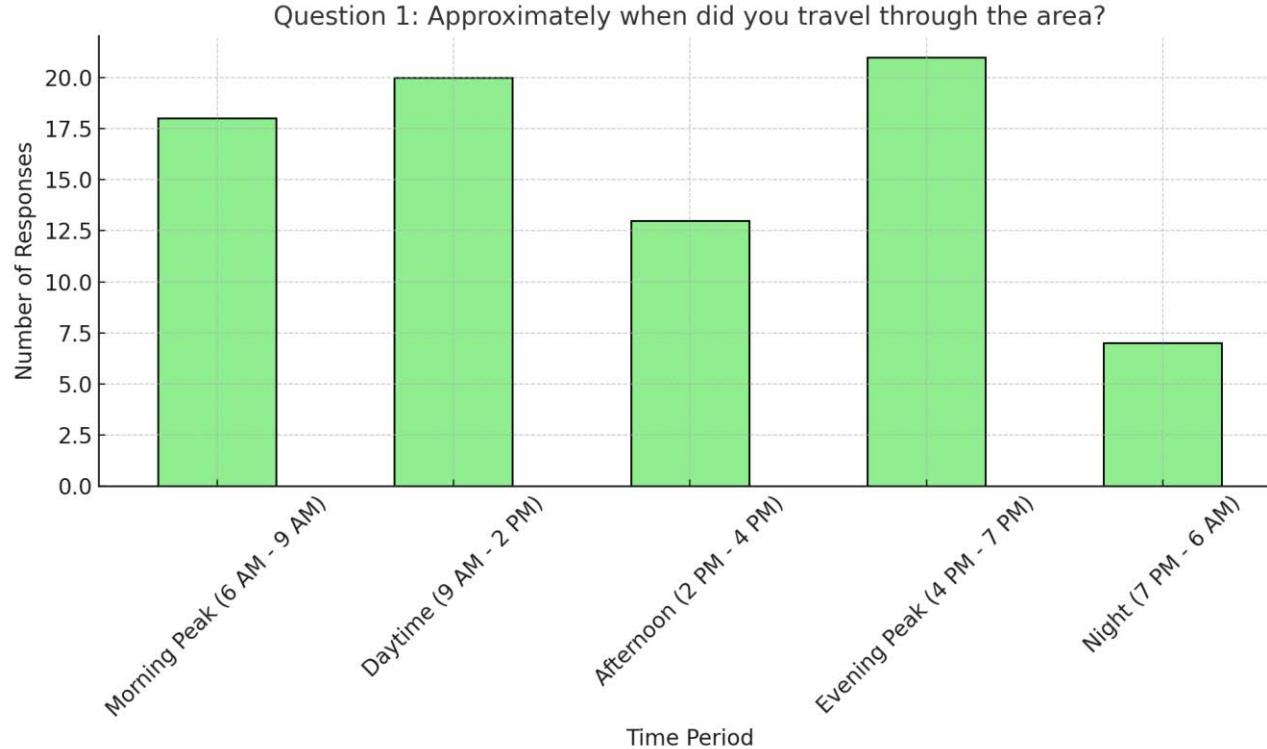
Appendix E

Survey Results as of December 4, 2024

Gateway East Bus Lanes Pilot Survey

- The survey was launched in mid-November and promoted through various channels, including:
 - DPW and Town social media
 - The Town Administrators' newsletter
 - The Longwood Collective Newsletter
 - Eye-catching yard signs along the corridor
- As of December 4th , we've received 214 responses – Thank you for your feedback!
- All Survey responses can be viewed at: https://www.surveymonkey.com/results/SM-YCTVFqgIJbu6v8ccgAYb0Q_3D_3D/
- The survey remains open for the duration of the pilot and we'd love to hear from you! Haven't taken the survey? Go to: <https://www.surveymonkey.com/r/CN3S9WZ>

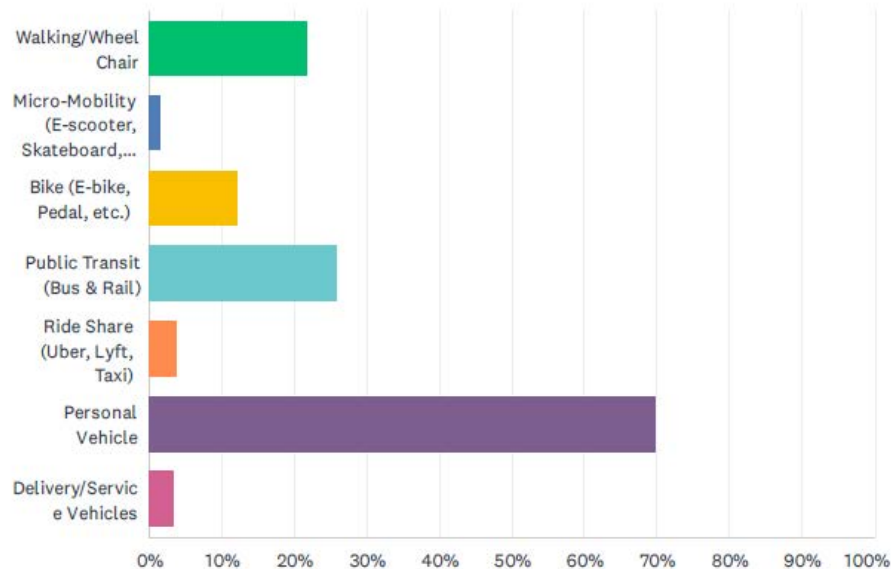
Gateway East Bus Lanes Pilot Survey: Question 1



Gateway East Bus Lanes Pilot Survey – Question 2

Q2 What modes did you use when traveling through this area?

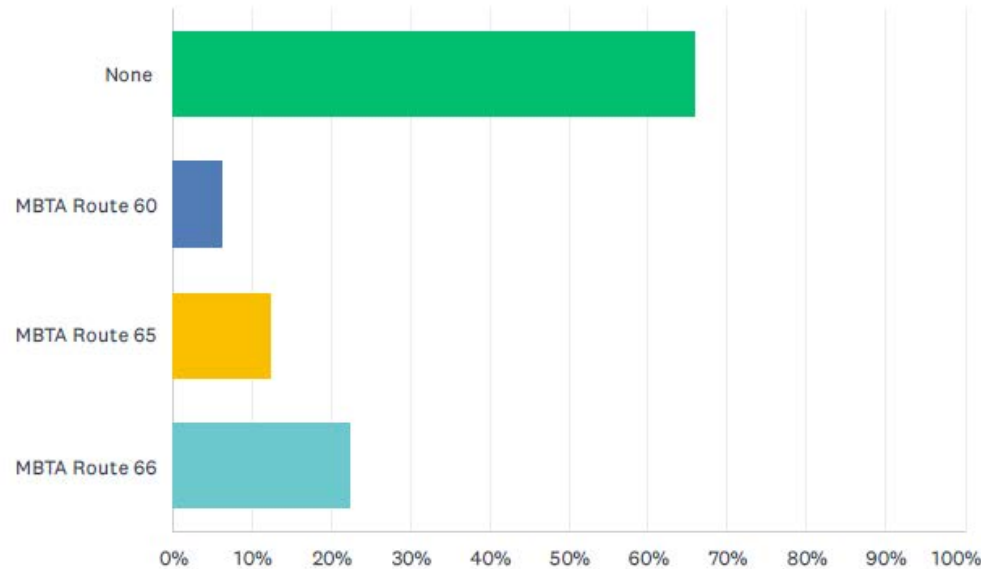
Answered: 206 Skipped: 8



Gateway East Bus Lanes Pilot Survey – Question 3

Q3 If you used MBTA bus service, which route?

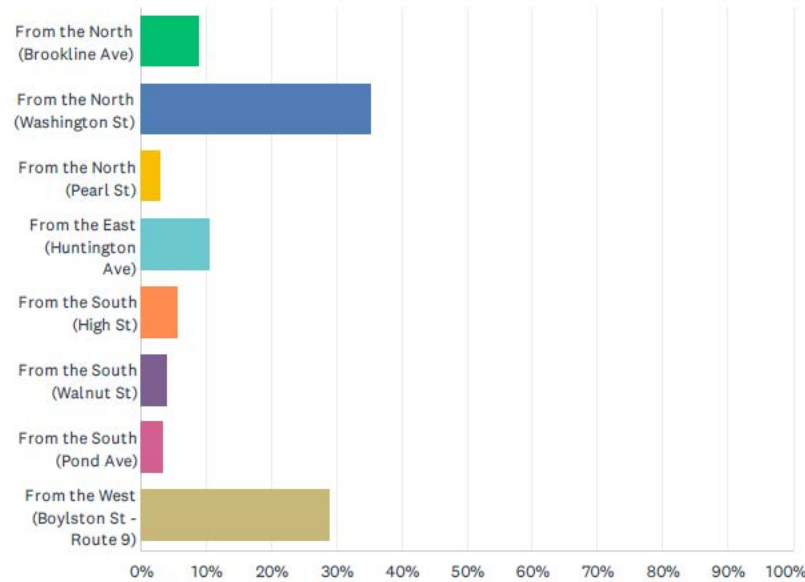
Answered: 161 Skipped: 53



Gateway East Bus Lanes Pilot Survey – Question 4

Q4 On this trip where did you come from?

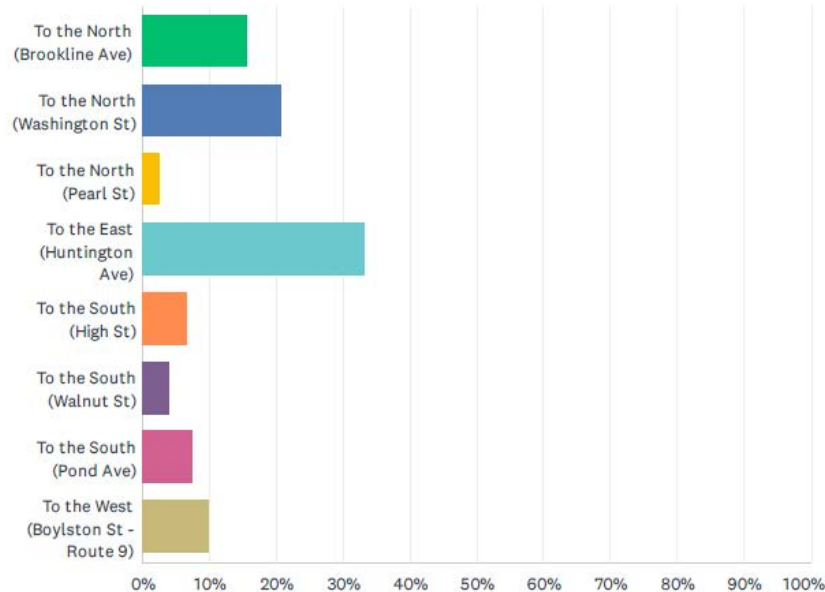
Answered: 200 Skipped: 14



Gateway East Bus Lanes Pilot Survey – Question 5

Q5 On this trip where were you going?

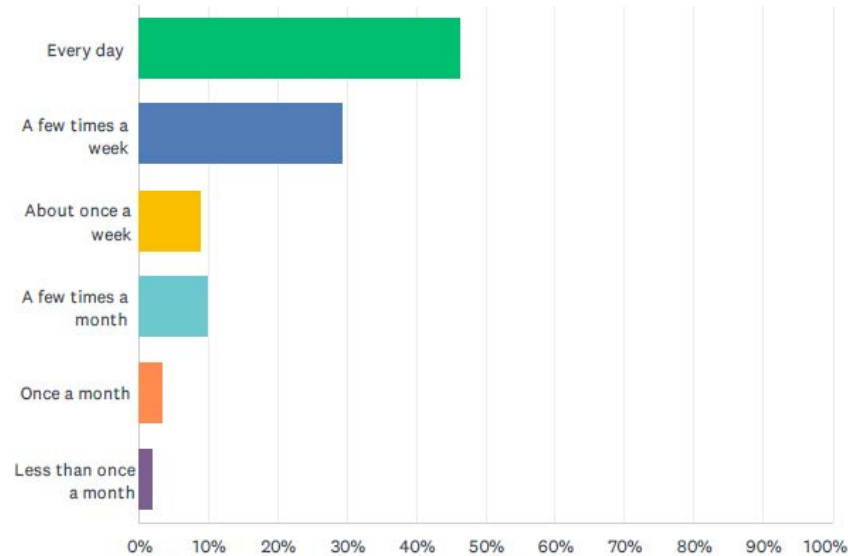
Answered: 199 Skipped: 15



Gateway East Bus Lanes Pilot Survey – Question 6

Q6 How often do you travel through this area? (Select One)

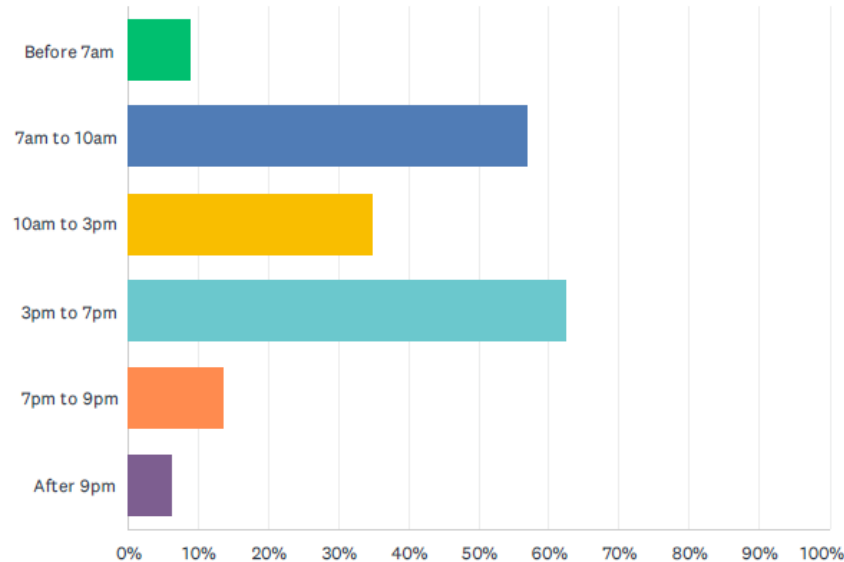
Answered: 210 Skipped: 4



Gateway East Bus Lanes Pilot Survey – Question 7

Q7 What time do you typically travel through this area?

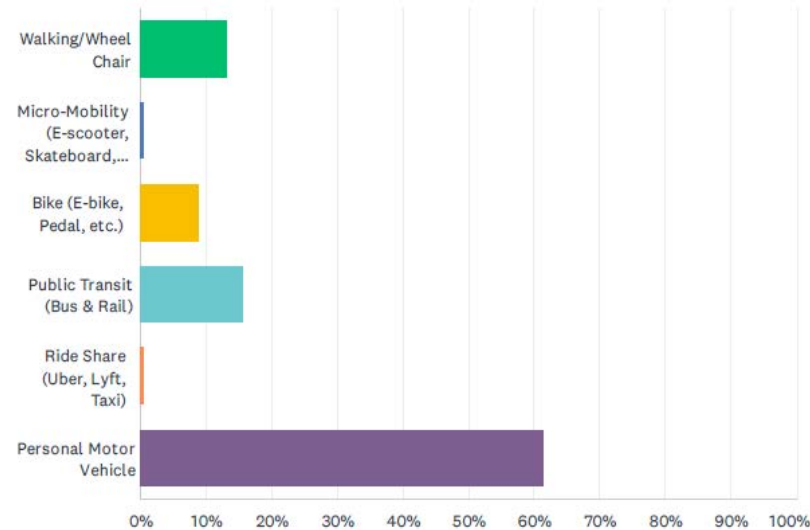
Answered: 211 Skipped: 3



Gateway East Bus Lanes Pilot Survey – Question 8

Q8 What is your primary mode of transportation when traveling through this area? (Select one)

Answered: 212 Skipped: 2



Gateway East Bus Lanes Pilot Survey – Question 9

Q9 The dedicated bus lane has improved safety for:

Answered: 212 Skipped: 2

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL
those walking through this area	37.86% 78	13.59% 28	24.76% 51	12.62% 26	11.17% 23	206
those biking or using micro-mobility devices through this area	38.92% 79	15.76% 32	20.69% 42	13.79% 28	10.84% 22	203
those taking public transit through this area.	24.75% 50	9.41% 19	26.73% 54	21.29% 43	17.82% 36	202
those driving through this area.	55.02% 115	11.00% 23	15.79% 33	11.48% 24	6.70% 14	209

Gateway East Bus Lanes Pilot Survey – Question 10

Q10 The dedicated bus lane has improved access for:

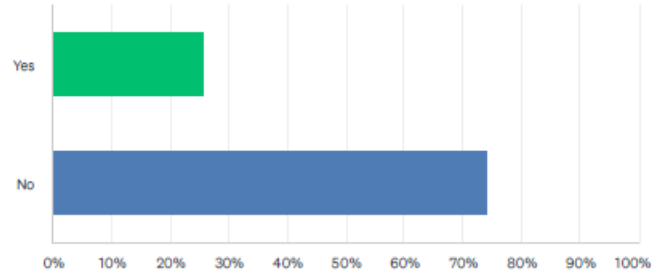
Answered: 211 Skipped: 3

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL
those walking through this area	37.68% 78	11.59% 24	29.47% 61	11.11% 23	10.14% 21	207
those biking or using micro-mobility devices through this area	34.98% 71	13.30% 27	27.59% 56	12.81% 26	11.33% 23	203
those taking public transit through this area.	23.50% 47	8.50% 17	20.00% 40	24.00% 48	24.00% 48	200
for those driving through this area.	59.90% 124	11.11% 23	20.29% 42	4.83% 10	3.86% 8	207

Gateway East Bus Lanes Pilot Survey – Question 11 & 12

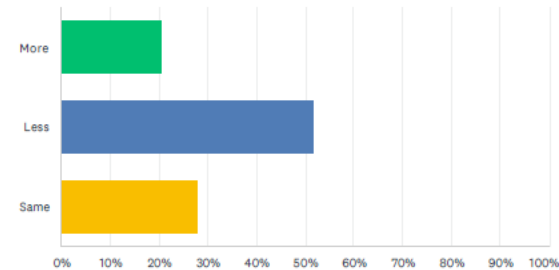
Q11 Do you feel your trip is faster with the bus lanes?

Answered: 205 Skipped: 9



Q12 Do you feel that your trip time is more or less consistent from day to day with the bus lanes?

Answered: 201 Skipped: 13



Gateway East Bus Lanes Pilot Survey – Question 13

- Q13 Has the dedicated bus lanes caused you to change how you travel through the area? (Open ended)
 - 175 responses Key Themes from the Open ended Comments:
 - Negative Feedback (~70%):
 - Increased Traffic congestion and delays.
 - Drivers feel confused and forced into last-minute lane changes.
 - Insufficient bus frequency to justify the dedicated lane.
 - Gridlock caused by poorly timed traffic signal and misuse of the lane.
 - Attempts to avoid area.
 - Positive Feedback (~10%):
 - Improved reliability and speed for buses.
 - Some responder are more likely to use buses.
 - Neutral or Unclear Feedback (~20%):
 - Observations without a clear stance (e.g., “no noticeable change”)
 - Mixed sentiments that acknowledge both pros and cons.

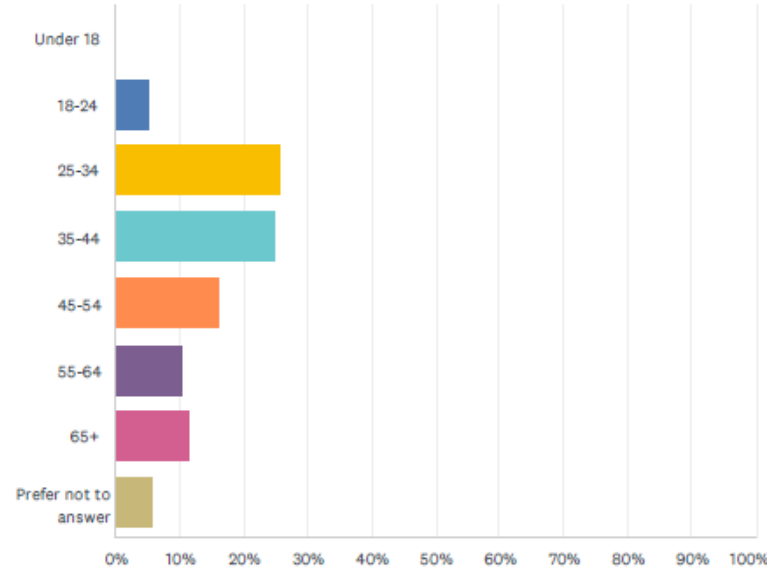
Gateway East Bus Lanes Pilot Survey – Question 14

- Q14 Should the Town and MBTA make changes to the dedicated bus lanes? (Open-ended)
 - 180 responses Key Themes from the Open ended Comments:
 - Negative Feedback (~60%):
 - Request to remove the bus lanes or restrict their hours of operation.
 - Frustration over increased congestion and poor implementation while the bus lane is empty.
 - Concerns about drivers not respecting the bus lanes and safety issues with merging and turning.
 - Positive Feedback (~20%):
 - Suggestions to adjust signal timings and improve enforcement.
 - Recognition of the potential for better transit efficiency if changes are made.
 - Neutral or Unclear Feedback (~20%)
 - Observations without a clear stance (e.g., “no noticeable change”, “lack of enforcement”)
 - Mixed sentiments that acknowledge both pros and cons.

Gateway East Bus Lanes Pilot Survey – Question 15

Q15 What is your age? (Select one)

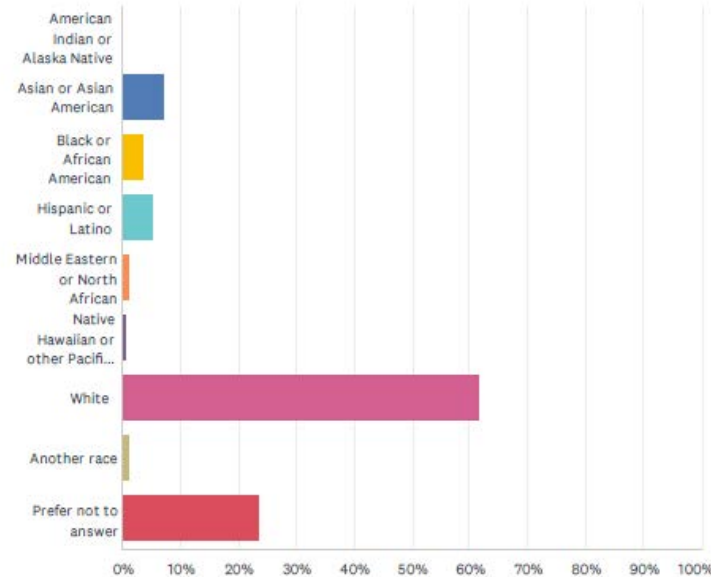
Answered: 209 Skipped: 5



Gateway East Bus Lanes Pilot Survey – Question 16

Q16 What is your ethnicity?

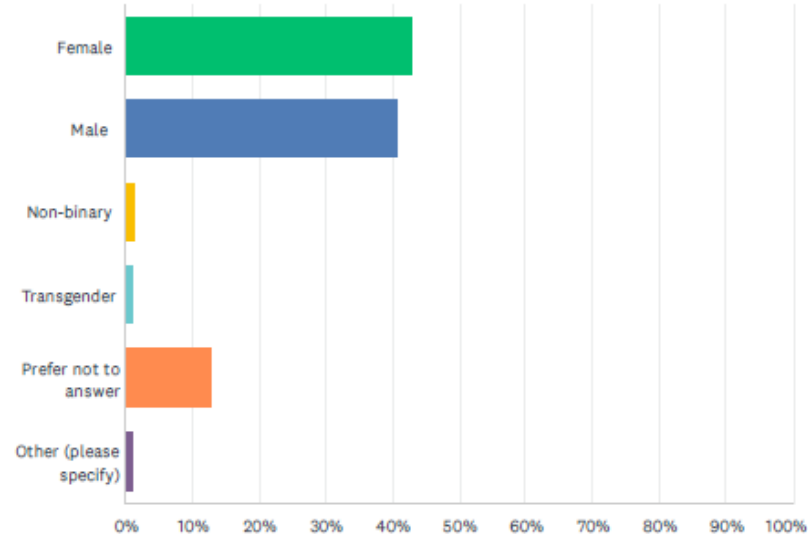
Answered: 198 Skipped: 16



Gateway East Bus Lanes Pilot Survey – Question 17

Q17 What is your gender identity? (Select one)

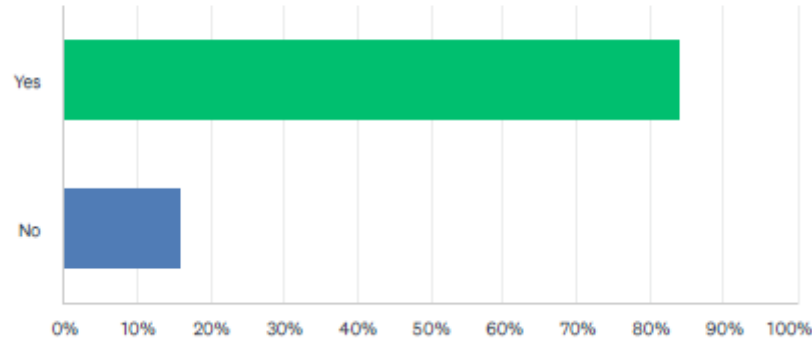
Answered: 204 Skipped: 10



Gateway East Bus Lanes Pilot Survey – Question 18

Q18 Do you live or work in Brookline? (Select one)

Answered: 212 Skipped: 2



Better Bus Project

Making transit
better together

Gateway East Bus Priority Lanes Pilot Evaluation

Quarter 2 Analysis

November 1, 2024 – January 31, 2025

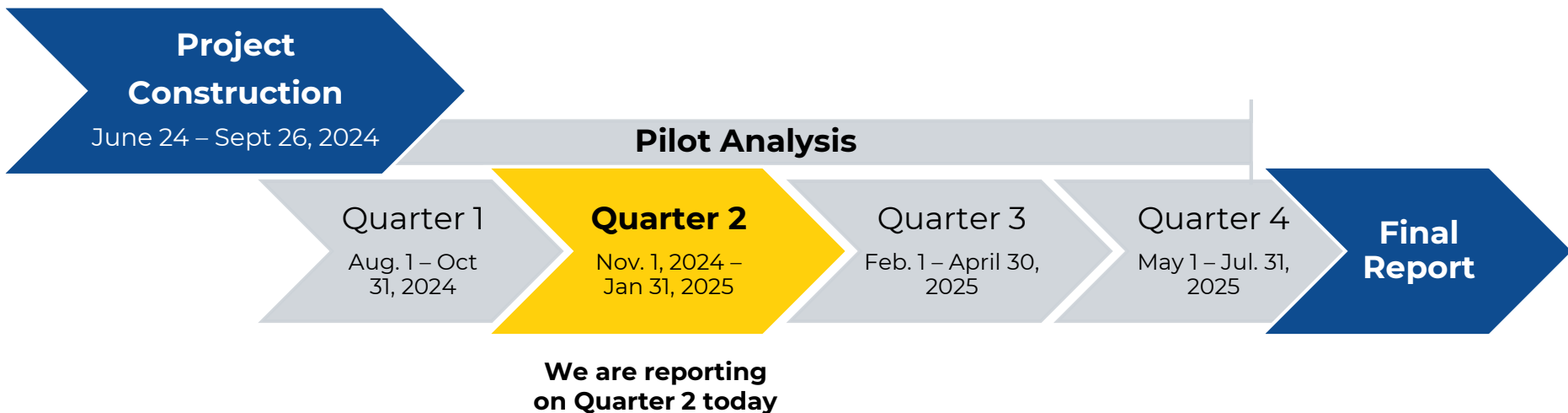
Presentation to Brookline Transportation Board
March 19, 2025

Agenda

- Project Context & Status
- Summary of Quarter 2 Analysis & Changes from Quarter 1
 - Bus Travel Times
 - Vehicle Volumes & Speeds
 - Vehicle Travel Times & Control Delay
 - Vehicle Queuing
- Key Findings
- Next Steps



Pilot Analysis Schedule



Project Status & Operations Update

Transit Signal Priority

- Due to technical difficulties, the Transit Signal Priority elements of the adaptive traffic signaling system are not currently functioning, but are being troubleshooted by the vendor

Bus Lane Enforcement

- BPD is working on an enforcement program. MBTA provided educational flyer that explains regulations & how to turn across bus lanes

Route 9 Eastbound Approach to Bus Lane

- Town reviewing opportunities for advanced warning signage to better organize queues

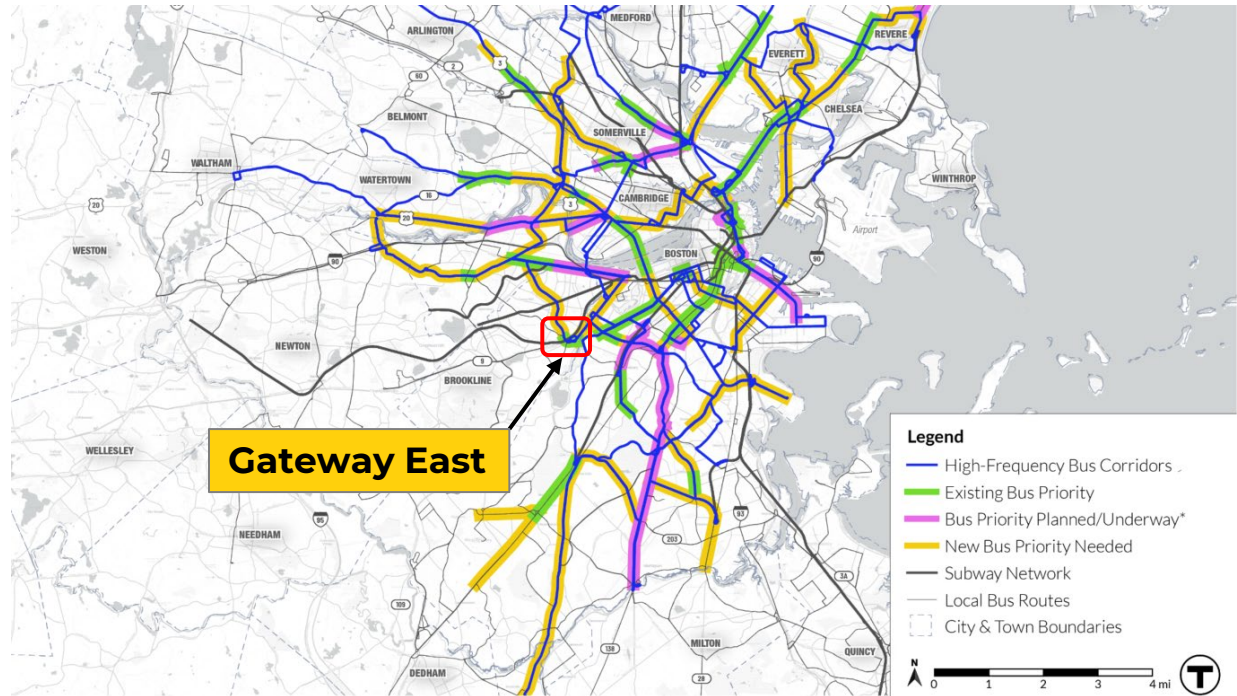
Other Factors Affecting Local Travel Patterns

- The **Pierce School closure** may explain reduced traffic on Cypress St and increased traffic on Walnut St, as the school was relocated to the old Lincoln School between Boylston St and Walnut St



MBTA's Bus Priority Vision Plan

- **Targets existing delay** and service along 26 corridors
- Improves service to **220,000 daily bus riders**
- Covers 10-15% of the bus network; **impacts 80% of all bus riders**
- 5-7+ years of implementation



Gateway East: Route 66 Network Context

Route 66 is **the 2nd busiest line in the entire MBTA bus system**

Connects Red Line, Green Line, Orange Line, Silver Line, & several Frequent Bus Routes between Harvard & Nubian Stations

Gateway East project benefits nearly **15,000 daily riders** on Routes 60, 65, 66 – half of which travel through the project

 Route 66 is a **Frequent Bus Route** (every 15 min or better)



Gateway East: Route 66 Network Context

Existing Projects

- Gateway East Bus Lanes
- Brighton Ave Bus Lanes
- Harvard Bus Tunnel Reroute
- TSP at Packard's Corner
- Huntington Ave Bus Lanes
- Tremont Street Queue Jump

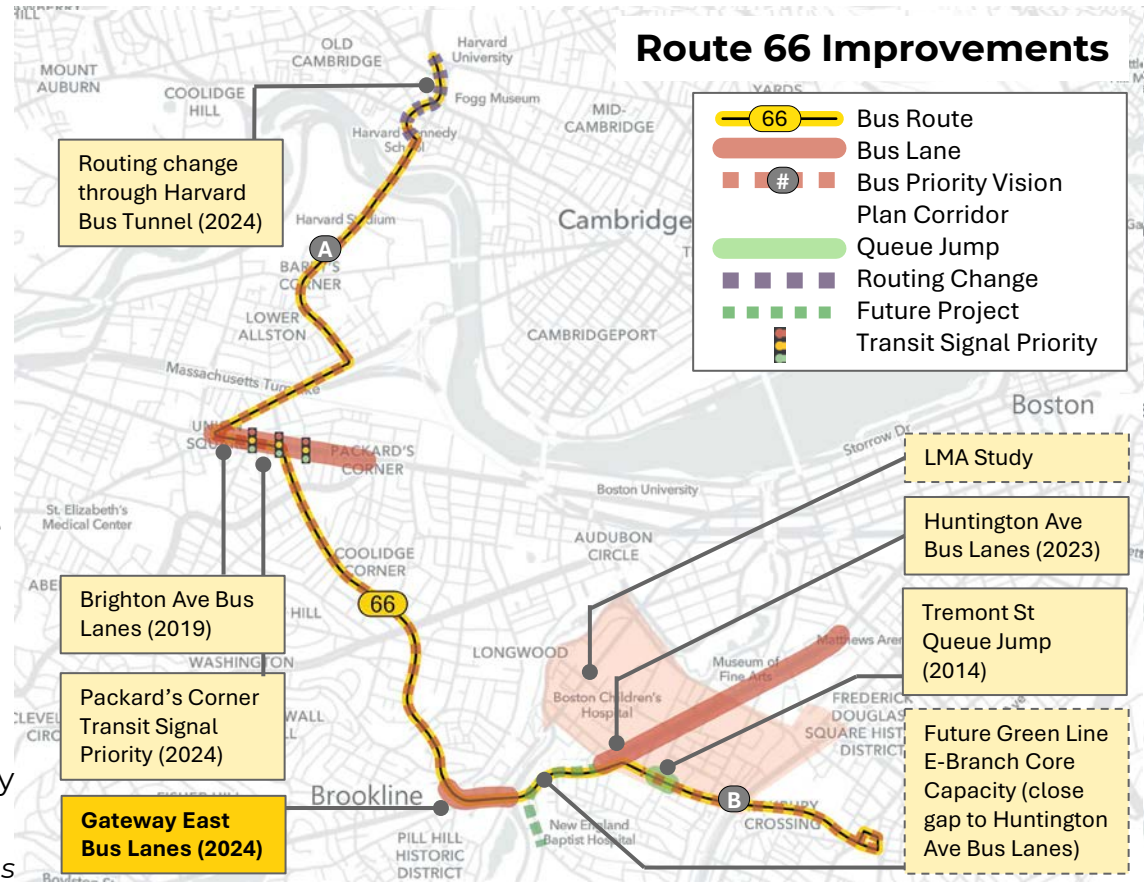
MBTA Bus Priority Vision Plan Corridors

- (A) Harvard Sq - Brookline Village
- (B) Nubian Sq - LMA (via Malcom X Blvd)

In Development

- Green Line E-Branch Core Capacity: Transit Lanes on Huntington Ave
- Longwood Medical Area Study

Future approach will address delays along the 66 by targeting key junctions



Quarter 2 Findings

Quarter 2 Summary



Bus lanes have provided consistent travel times for bus riders

Overall, bus travel times in Quarter 2 are:

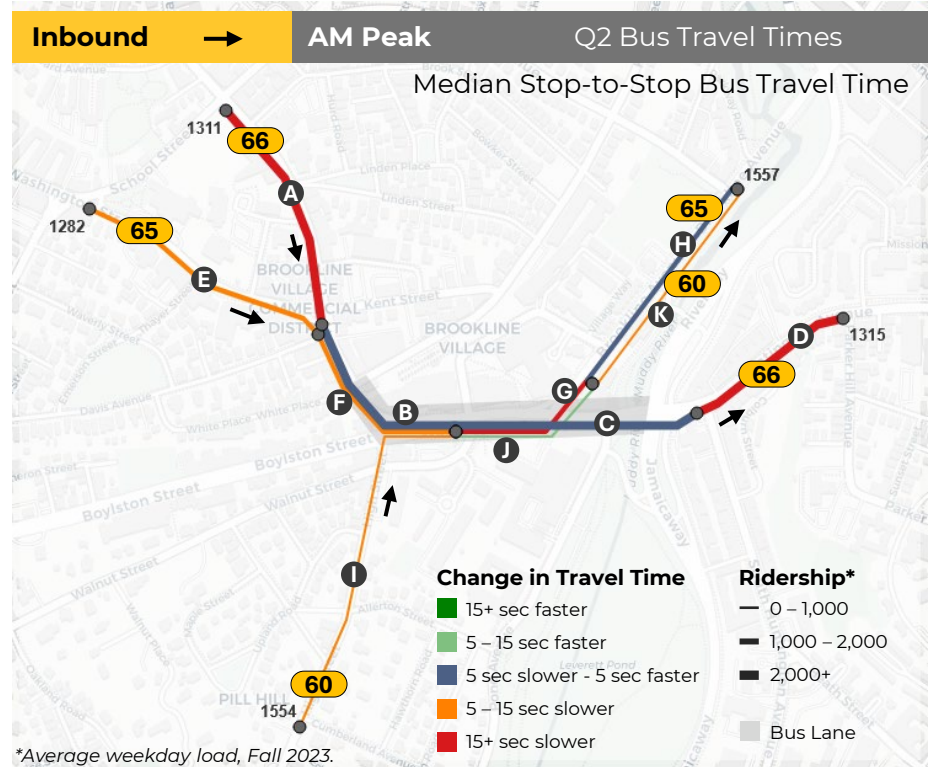
- Generally consistent from Quarter 1
- Slower outside of the bus lanes, indicating delays related to moving back into mixed traffic

During AM inbound trips, the bus lanes are **protecting bus service from getting worse**

Changes of note from Quarter 1:

- Segment A continues its trajectory and needs further investigation
- Performance worsened on segments I, F, and E - monitor through next quarter

**See Appendix B for full details of Bus Service Analysis*



Travel time has improved for bus riders

Overall, bus travel times in Quarter 2 are:

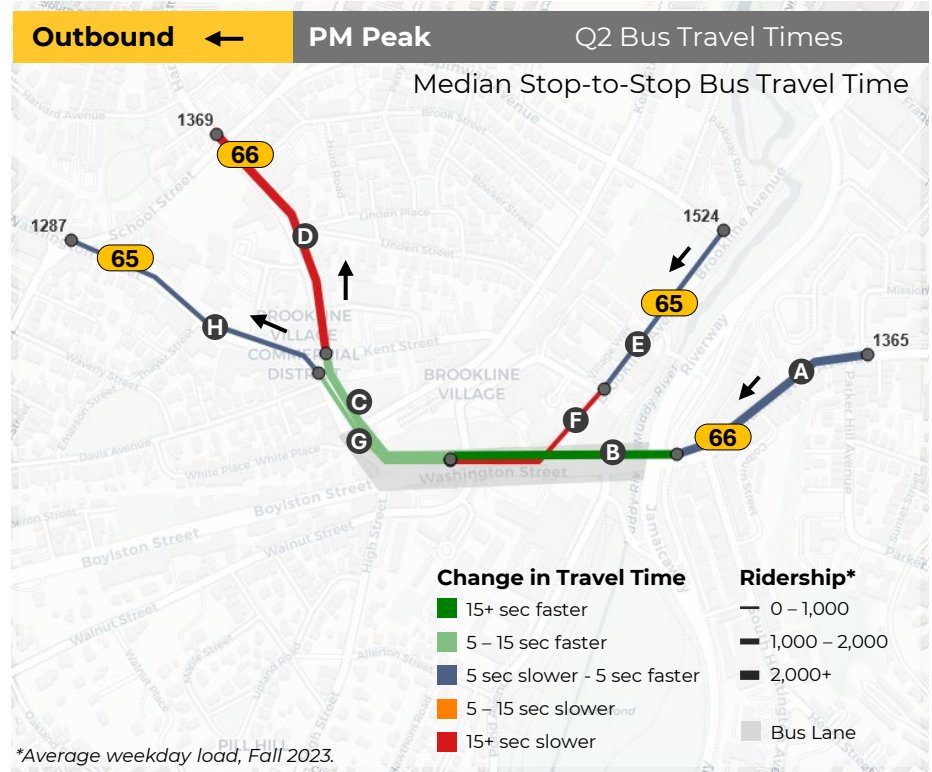
- Generally consistent from Quarter 1
- Consistent or faster in the bus lanes
- Slower outside of the bus lanes, indicating delays related to moving back into mixed traffic

During PM outbound trips, the bus lanes are performing well & **achieving significant time savings.**

Changes of note from Quarter 1:

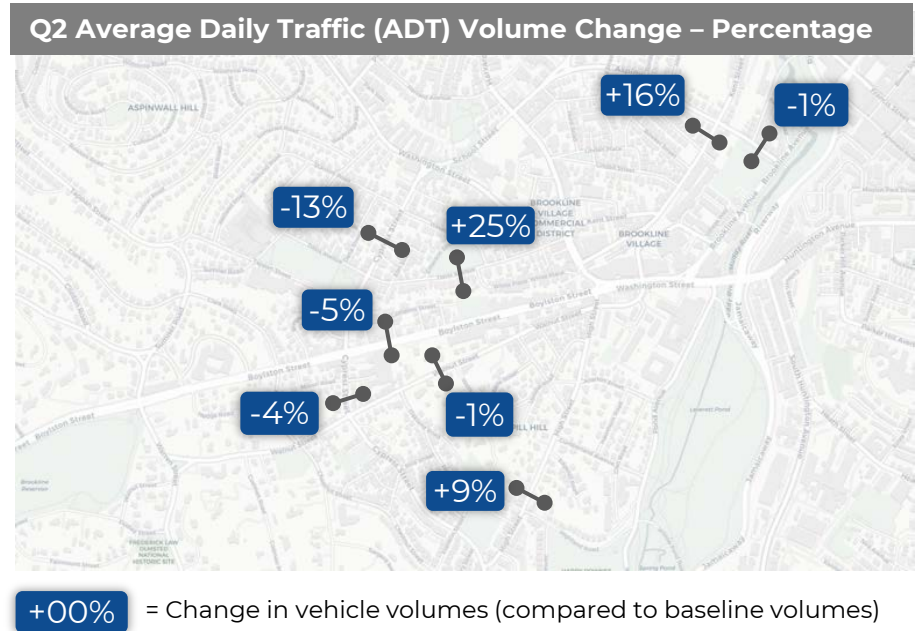
- Segment F continues its trajectory and needs further investigation
- Performance worsened on segment D - monitor through next quarter

**See Appendix B for full details of Bus Service Analysis*



Vehicle volumes & speeds have remained similar to Quarter 1

- **Volumes decreased in and around study area by approximately 3% on average**, relative to baseline
- Volumes on Route 9 **decreased slightly** with **moderate increase** of volume on side streets
- Some fluctuation with speeds, but in general **most observed speeds decreased**
- Could be options for **traffic calming** in the future if trends don't correct
- Nearby traffic patterns: **Pierce School** closed for construction and relocated to Old Lincoln School on Boylston St/Walnut St

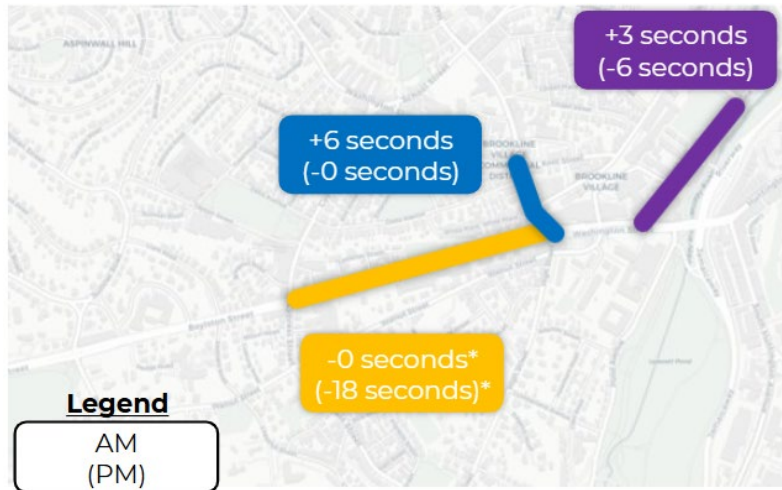


**See Appendix C for full details of Vehicle Volumes & Speeds*

Travel times for general traffic have somewhat improved, and delays have remained similar

Intersection delay either remains constant or decreases slightly

- Remain broadly similar to Quarter 1 and baseline



*See Appendix D for full details of Vehicle Travel Times & Control Delay

Corridor travel times:

- Reduced slightly from Q1
- One exception is the inbound AM peak, which increased by ~30 seconds – we will monitor through next quarter

Inbound	Period	Baseline	Quarter 1	Quarter 2
	AM Peak	9.0 minutes	9.7 minutes	10.3 minutes
	MD Peak	5.7 minutes	6.6 minutes	6.0 minutes
	PM Peak	7.0 minutes	7.5 minutes	6.4 minutes

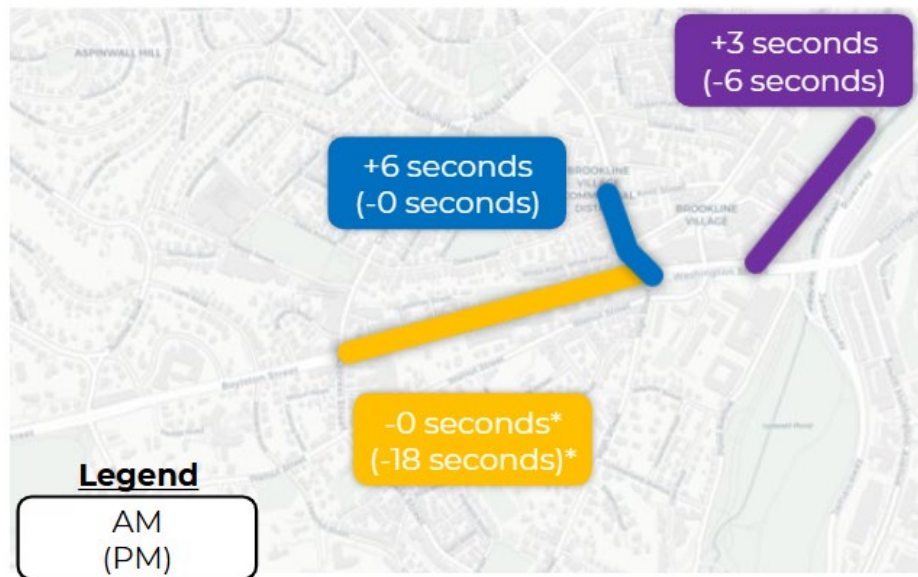
Outbound	Period	Baseline	Quarter 1	Quarter 2
	AM Peak	6.2 minutes	6.0 minutes	6.0 minutes
	MD Peak	5.5 minutes	5.9 minutes	5.7 minutes
	PM Peak	8.5 minutes	8.8 minutes	8.3 minutes

Vehicle queue lengths have seen minor increases at most approaches

Minimal increases in queue lengths at most approaches, but delays are similar to baseline and Q1

- One exception was at the Boylston Street eastbound approach, which saw a significant increase (similar to Q1)

Intersection delays



**See Appendix E for full details of Vehicle Queue Lengths*

Summary & Next Steps



Key Findings

- **Bus Travel Times & Variability** in Q2 are relatively consistent from Q1
 - Travel times are consistent or faster in the bus lanes, but are slower outside the bus lanes, indicating delays related to moving back into mixed traffic
- **Vehicle Volumes** are relatively consistent from Q1
 - Traffic decreased slightly on Route 9 and moderate increase on side streets.
- **Vehicle Speeds** mostly decreased, consistent from Q1.
- **Vehicle Travel Times** reduced slightly from Q1
 - One exception was the inbound AM peak, which increased by ~30 seconds
 - Intersection delays remain broadly similar to Quarter 1 and baseline
- **Vehicle Queue Lengths** increased minimally, while delays remained consistent
 - One exception was at the Boylston Street eastbound approach, which saw a significant increase (similar to Q1)
- **User Feedback Surveys** will remain open throughout the pilot

Next Steps

- **Continue monitoring** & reporting quarterly throughout pilot duration
 - **Next report - Spring 2025: Quarter 3 (Feb. 1, 2025 – April 30, 2025)**
 - Summer 2025: Quarter 4 (May 1, 2025 – July 31, 2025)
 - Summer/Fall 2025: Final Report
- MBTA continue coordination on Transit Signal Priority with **adaptive signal system** vendor
- Brookline continue coordination with BPD on **education & enforcement**

Appendix

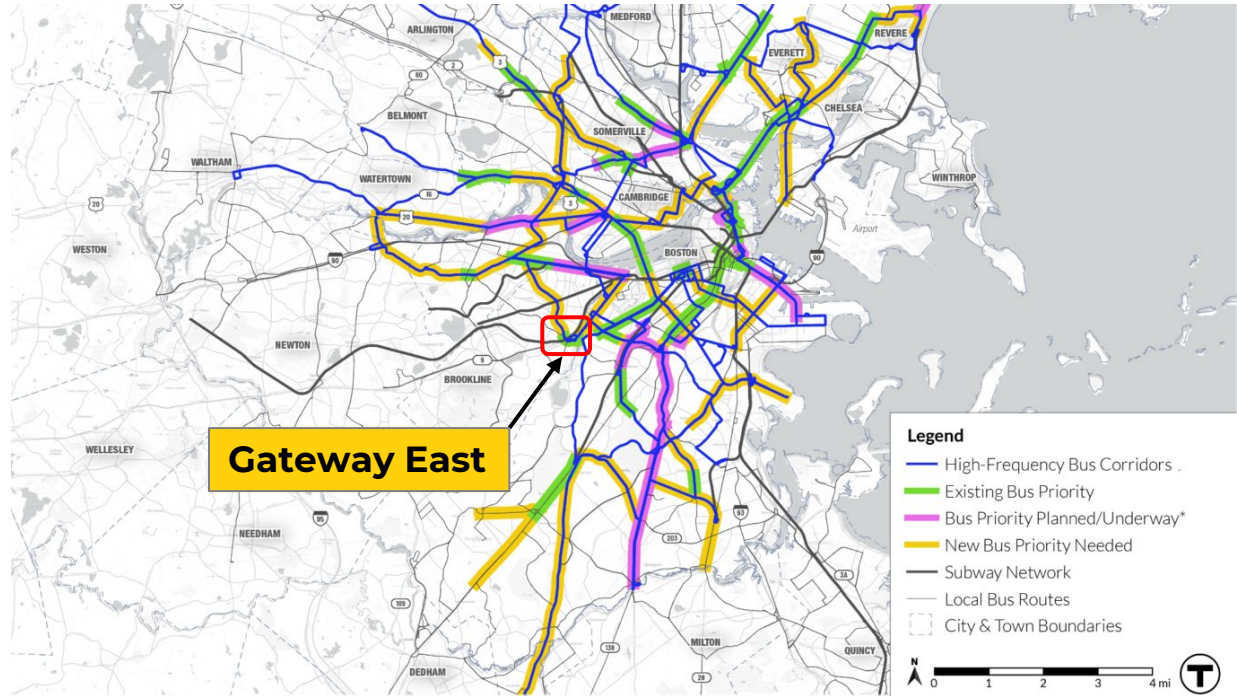
Appendix A

Project Background

MBTA Bus Priority

MBTA's Bus Priority Vision Plan

- **Targets existing delay** and service along 26 corridors
- Improves service to **220,000 daily bus riders**
- Covers 10-15% of the bus network; **impacts 80% of all bus riders**
- 5-7+ years of implementation

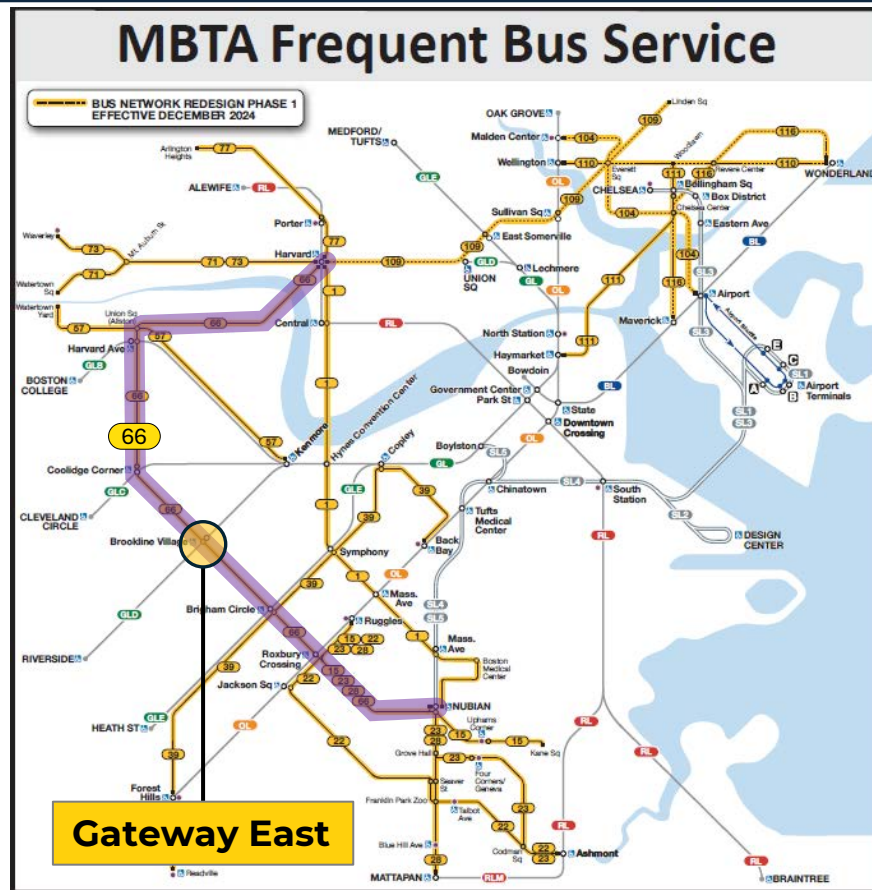


Gateway East: Route 66 Network Context

Route 66 is **the 2nd busiest line in the entire MBTA bus system**

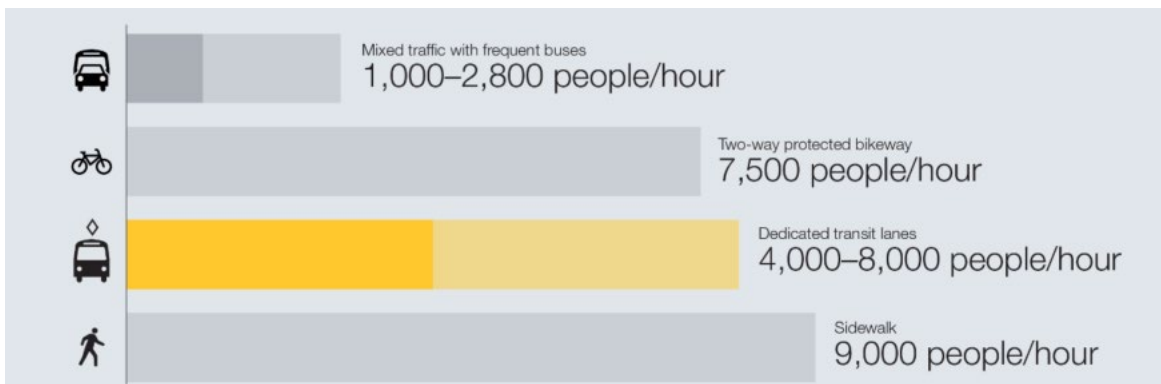
Connects Red Line, Green Line, Orange Line, Silver Line, & several Frequent Bus Routes between Harvard & Nubian Stations

Gateway East project benefits nearly **15,000 daily riders** on Routes 60, 65, 66 – half of which travel through the project



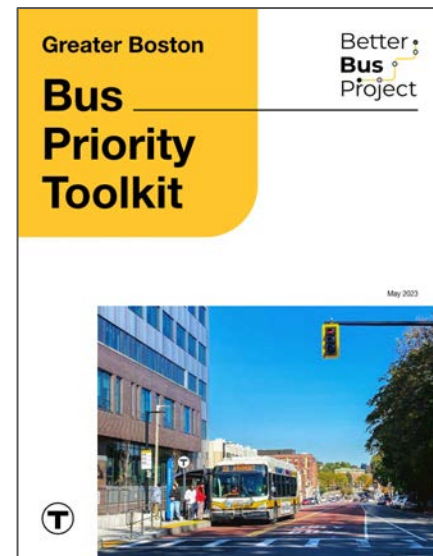
Transit Priority Moves More People

How many people can the space of one travel lane serve?



Person-Throughput Capacity (Graphic from MBTA Bus Priority Toolkit)

By repurposing space for transit, bus lanes can **increase the number of people that can travel along the corridor**, supporting future growth and mode shift to transit.



Project Goals: Why Are Bus Lanes Needed?

- **Fastest, most affordable way** to improve transit service for riders in a short time frame
- **Improving access** to Longwood Medical Area, grocery stores, and other essential services throughout the pandemic and recovery
- **Improving transit equity** by supporting the commuting needs of essential workers, low-income people, and people of color
- **Moving more people more efficiently**



Gateway East, before the bus lanes

MBTA's Bus Priority Projects

Advance the Bus Priority Vision Plan to reduce bus rider delay through projects such as

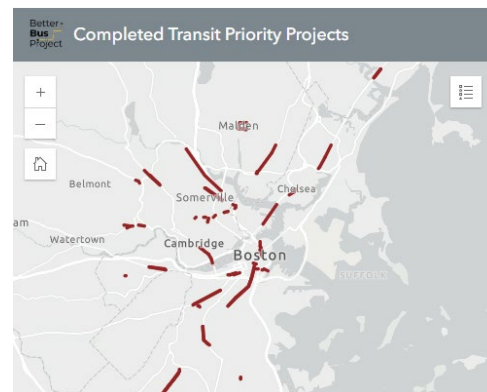
- Bus lanes
- Queue jumps
- Transit signal priority (TSP)

Growth of Bus Priority Projects in Greater Boston

- 40+ miles of bus lanes have been installed
- TSP has been activated at 85+ locations
- Collaboration is ongoing between MBTA and 12+ partner municipalities



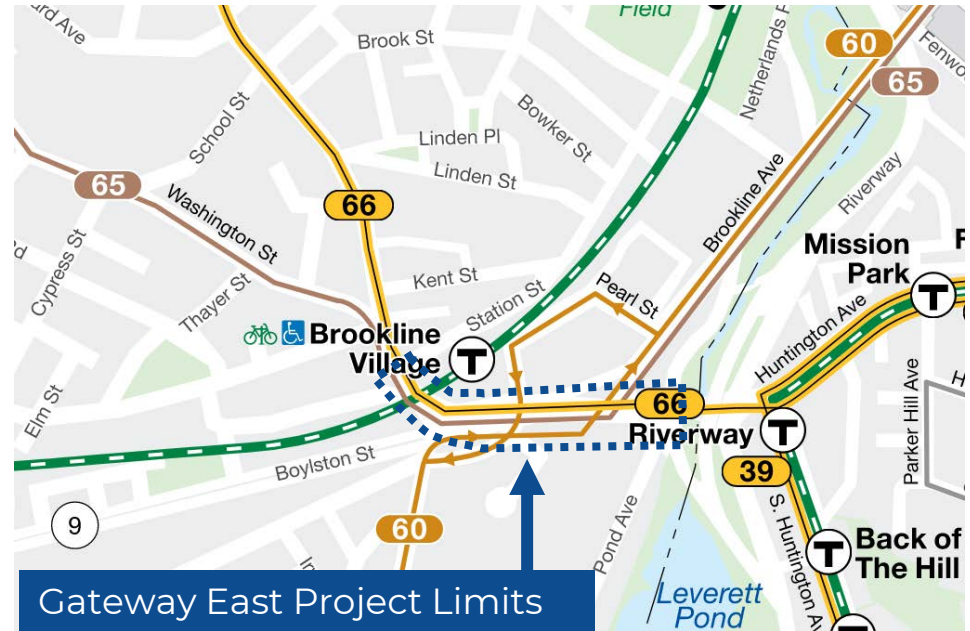
*Bus lanes completed as of **2015***



*Bus lanes completed as of **2024***

Project Motivation: Critical Transit Connection

- **Crossroads for three busiest bus routes** servicing Brookline: 60, 65, and 66 - highest bus ridership in all of Brookline
- Route 66 is **the 2nd busiest line in the entire MBTA bus system**
- Critical connections to and from the **Longwood Medical Area**, the Green Line (D and E branches), and other transit services
- Gateway East is the **busiest section of roadway** in Brookline for MBTA buses



MBTA Bus Map

Project Motivation: Bus Ridership & Equity

Typical Ridership on the Route 66 Bus

- 55% are from households without vehicles
- 40% are from households with incomes of less than \$43,500
- 40% are people of color
- 67% are women

Benefits nearly **15,000 daily riders** on Routes 60, 65, 66 – half of which travel through the Gateway East Corridor

During peak hours, the average 66 bus passing through the corridor has 35-45 riders - this means **multiple riders standing**



Route Number	Total Weekday	Through Riders
66*	11,293	5,086
65	2,396	1,833
60	873	343
Total	14,562	7,262

**Second-highest ridership in entire MBTA bus system*

Gateway East Bus Lane Pilot

Project Background

The **Gateway East Bus Lane Pilot** is a collaborative effort between MBTA, MassDOT, and The Town of Brookline to **build on the 2021 corridor reconstruction**.

One of principles the Brookline Transportation Board set for the Priority Bus Lane Pilot:

- **“To prioritize safe, space-efficient, and energy efficient movement of people and goods over the movement and parking of private vehicles when designing and improving our public ways** with particular focus on **high traffic routes connectivity and directness** consistent with Brookline Town meetings almost unanimously approval of Warrant Article 31 (WA31), titled as a **“resolution to respond to climate change by prioritizing health, access, and equity of Brookline’s public ways.”**”



Pilot Performance Indicators

- User Feedback Surveys
- MBTA Bus Travel Time
- MBTA Bus Travel Time Variability
- Volume and Speed tracked on Boylston St, Secondary Roads, and Residential Side Streets
- Vehicle Travel Times and Control Delay
- Queue Length Analysis



Project Timeline

2020: Collaborative planning effort began.

2021: Brookline Transportation Board authorized Gateway East Bus Priority Lane Pilot project, funded by the MBTA.

2024: Dedicated bus lanes were implemented on Washington St between Station St and the Town Line in both directions.

2024-2025: The pilot is expected to run for one year between August 2024 and July 2025 (note: bus lane installation occurred 6/24/2024 to 9/26/2024).

Quarterly evaluations of the pilot's impacts on bus travel times and car traffic are being conducted by Arcadis and Toole Design Group.



Gateway East, before



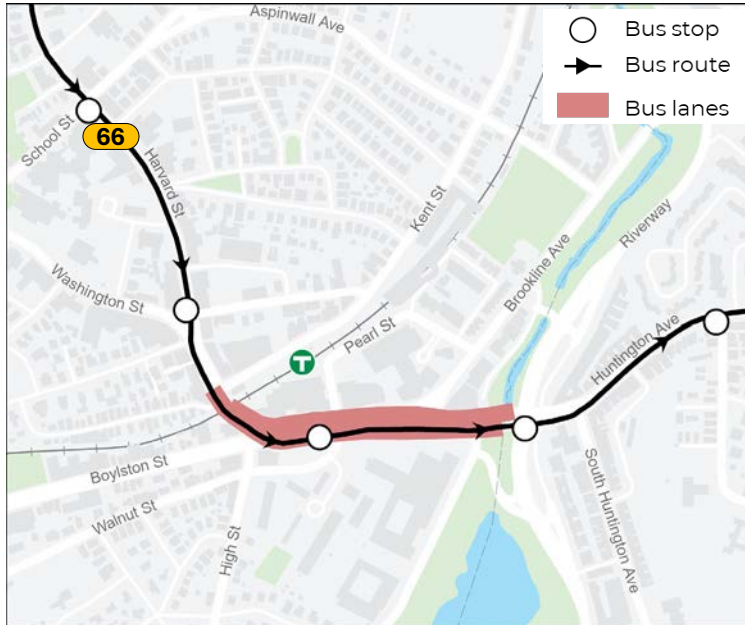
Gateway East, after



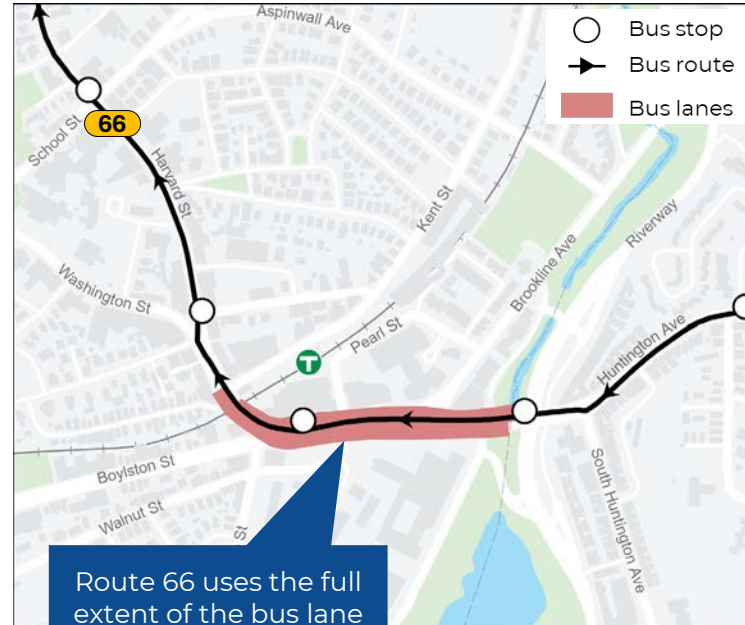
Gateway East, after
Photo Credit: Toole Design

Bus Routing Through the Project Area

66 Inbound



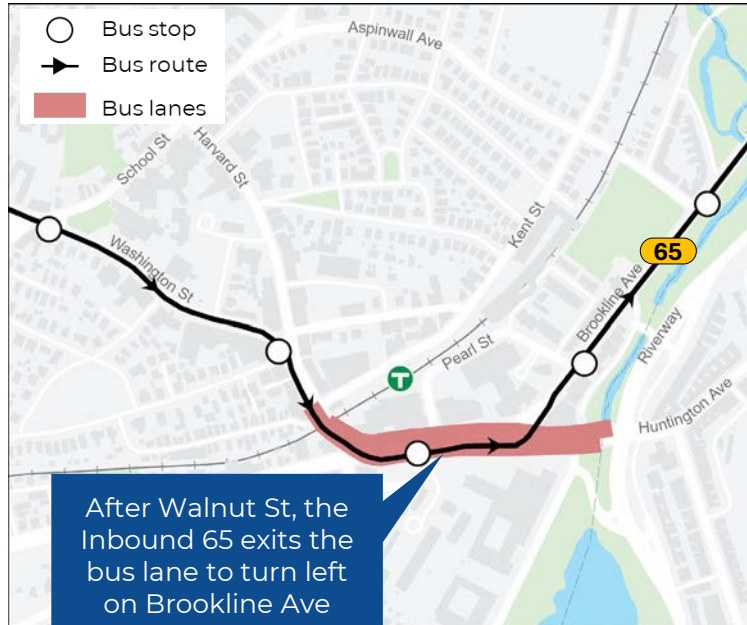
66 Outbound



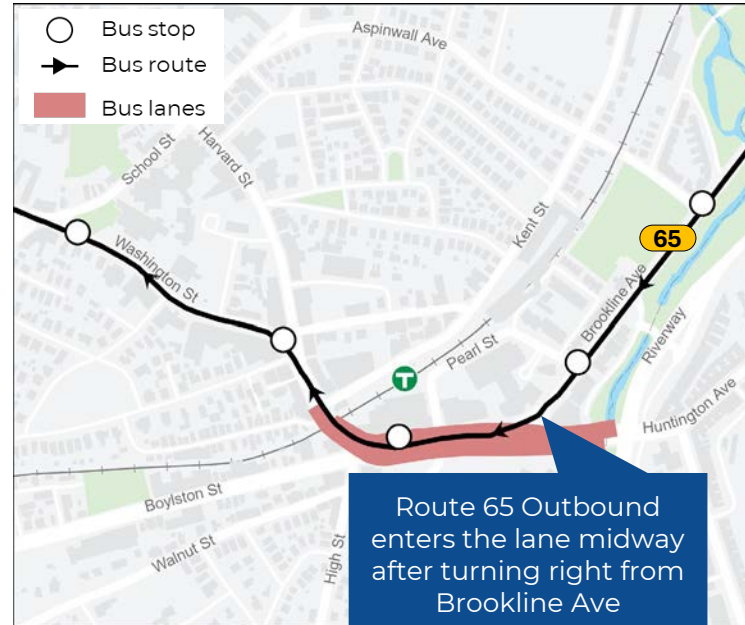
Route 66 uses the full extent of the bus lane in both directions

Bus Routing Through the Project Area

65 Inbound

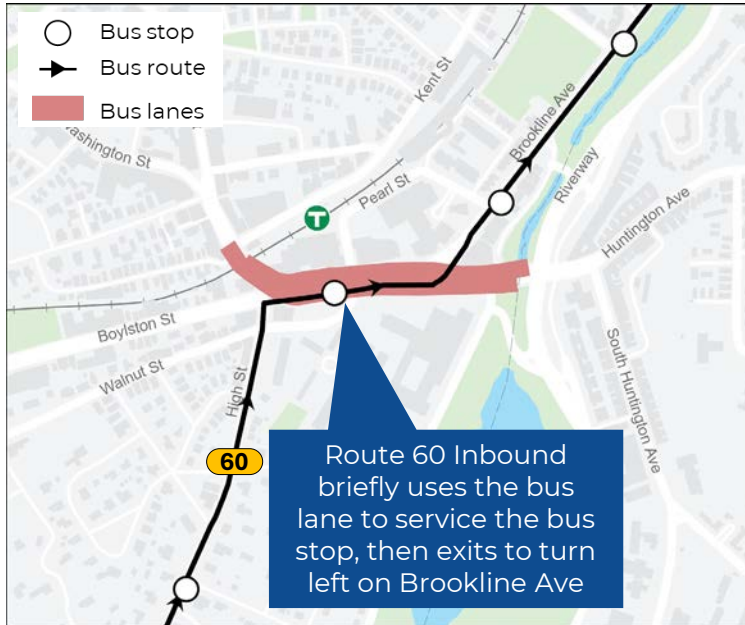


65 Outbound

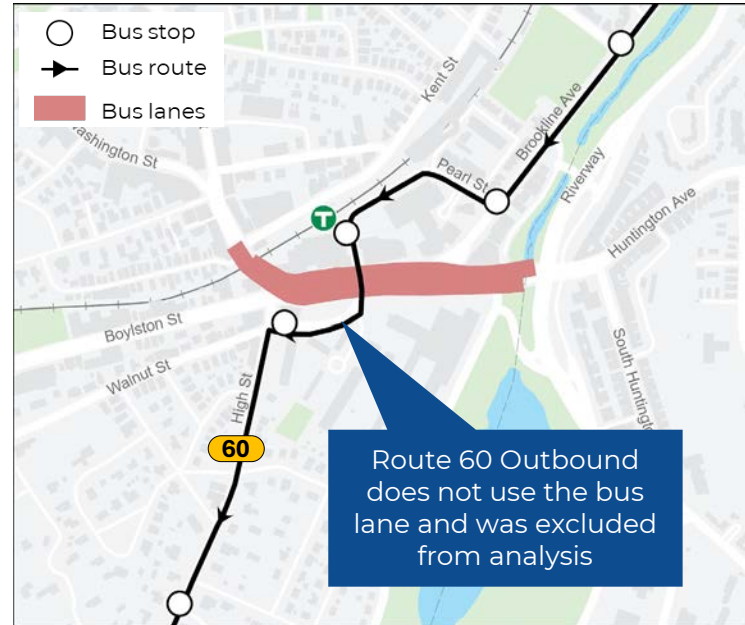


Bus Routing Through the Project Area

60 Inbound



60 Outbound



Project Status

Project Status & Operations

Construction – Markings & Signs Completed late September

- Installation period extended well into the Q1 analysis period, ending 9/26/24 due to delays with signage installation

Traffic Signals – New Signaling System Not Currently Activated

- Due to technical difficulties with the vendor, the Adaptive Signal System with Transit Signal Priority is only in partial operation.



T CEX

Project Status & Operations

Enforcement

- Start of enforcement postponed due to delays with signage installation
- Provided time for drivers to adjust
- BPD is working on an enforcement program. MBTA provided educational flyer that explains regulations & how to turn across bus lanes

Other Factors Affecting Local Travel Patterns

- The **Pierce School closure** may explain reduced traffic on Cypress St and increased traffic on Walnut St, as the school was relocated to the old Lincoln School between Boylston St and Walnut St



Quarter 1 should be viewed as an adjustment period due to the conditions listed above.

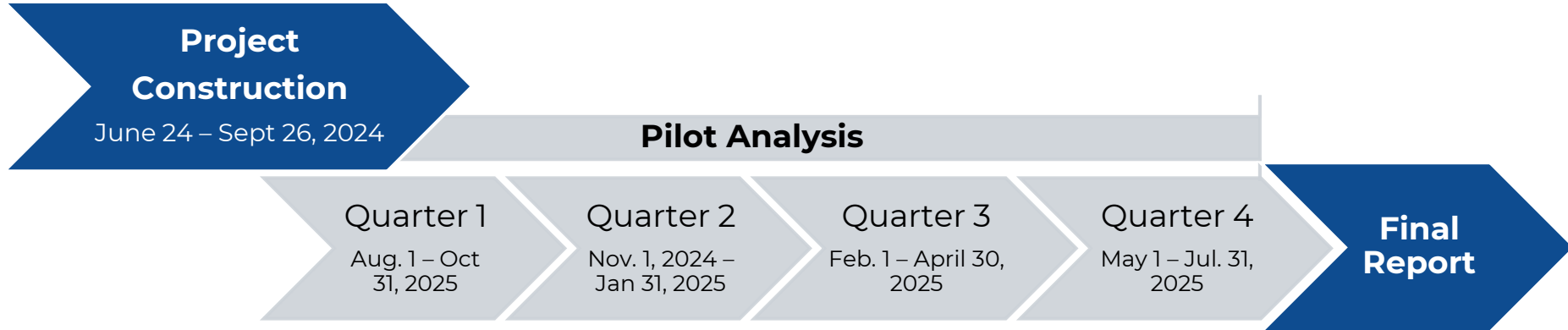
Public Feedback - Gateway East Bus Lane Pilot Survey

The survey was launched in mid-November and promoted through various channels, including:

- DPW and Town social media
- The Town Administrators' Newsletter
- The Longwood Collective Newsletter
- Eye-catching yard signs along the corridor
- The survey remains open for the duration of the pilot and we'd love to hear from you! Haven't taken the survey? Go to: <https://www.surveymonkey.com/r/CN3S9WZ>
- Survey results are included in the final Appendix.



Pilot Analysis Schedule



Data Collection Schedule

Period	Period Dates*	Traffic Count Dates	INRIX Dates	Queuing Dates
Baseline	Aug 1 – Oct 31, 2023	Sep 26-28, 2023	Jun 2024**	May 18, 2021***
Quarter 1	Aug 1 – Oct 31, 2024	Oct 8-10, 2024	Oct 2024	Dec 3, 2024
Quarter 2	Nov 1, 2024 – Jan 31, 2025	Jan 2025	Jan 2025	
Quarter 3	Feb 1 – Apr 30, 2025	Apr 2025	Apr 2025	
Quarter 4	May 1 – Jul 30, 2025	Jul 2025	Jul 2025	

**APC data for travel time analysis collected over entire period.*

***INRIX Blackout from 6/2023 – 2/2024*

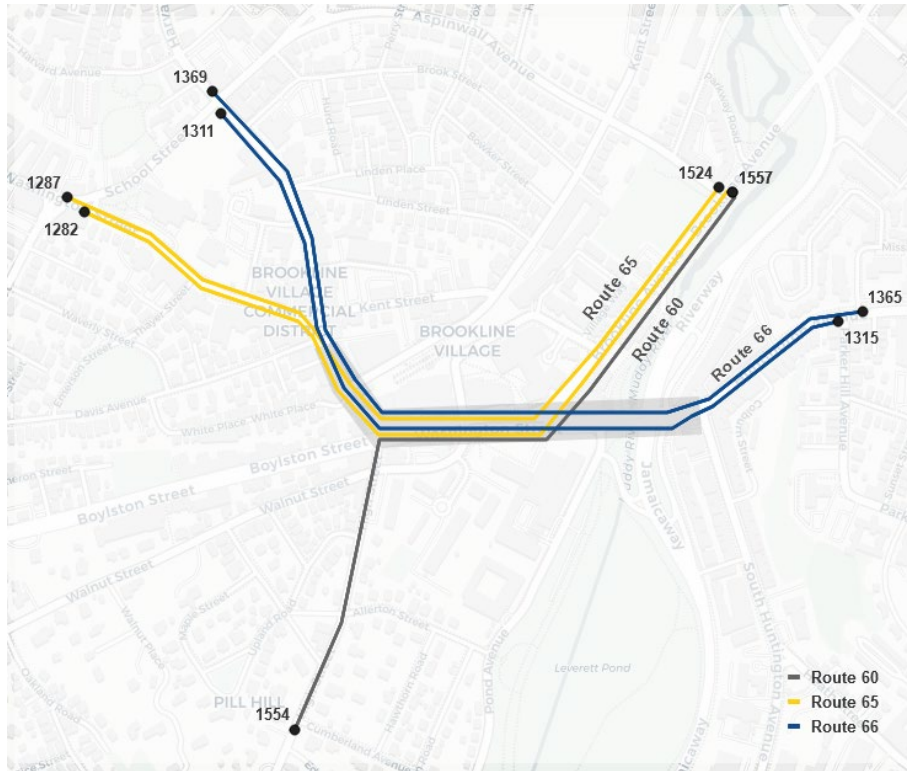
****Baseline queue data may be affected by decreased traffic in wake of COVID-19 pandemic*

Appendix B

Bus Travel Times

Methodology

Analysis Area



Route 60 inbound between High St at Cumberland Ave (1554) and Brookline Ave opposite Aspinwall Ave (1557)

Route 65 inbound between Washington St at Cypress St (1282) and Brookline Ave at Aspinwall Ave (1557)

Route 65 outbound between Brookline Ave at Aspinwall Ave (1524) and Washington St at School St (1287)

Route 66 inbound between Harvard St at School St (1311) and Huntington Ave at Parker Hill Ave (1315)

Route 66 outbound between Huntington Ave opposite Parker Hill Ave (1365) and Harvard St at Aspinwall Ave (1369)

Data

- All analysis was completed using stop arrival and departure times in **automatic passenger counter (APC)** data.
- Data was collected for **weekdays** from November 2024 through January 2025.
 - The baseline period was weekdays from November 2023 through January 2024.
- MBTA-defined **time periods**:
 - AM Peak: 7:00 AM to 9:00 AM
 - Afternoon: 2:00 PM to 4:00 PM (*corresponds with the end of school*)
 - PM Peak: 4:00 PM to 7:00 PM

Metrics

Travel Time	Variability (MBTA Metric)	Travel Time Quality of Service (TTQOS)	Travel Time Variability Quality of Service (TTVQOS)
Median travel time of a vehicle over a segment at a given time.	Relative difference between the median and 90 th percentile of travel times.	Letter grade (A to E) for how much delay vehicles experience on average over a segment at a given time.	Letter grade (A to E) for how consistent vehicle travel time is over a segment at a given time.

Metrics

TTQOS =
$$\frac{\text{average travel time (observed)}}{\text{reference travel time}^*}$$

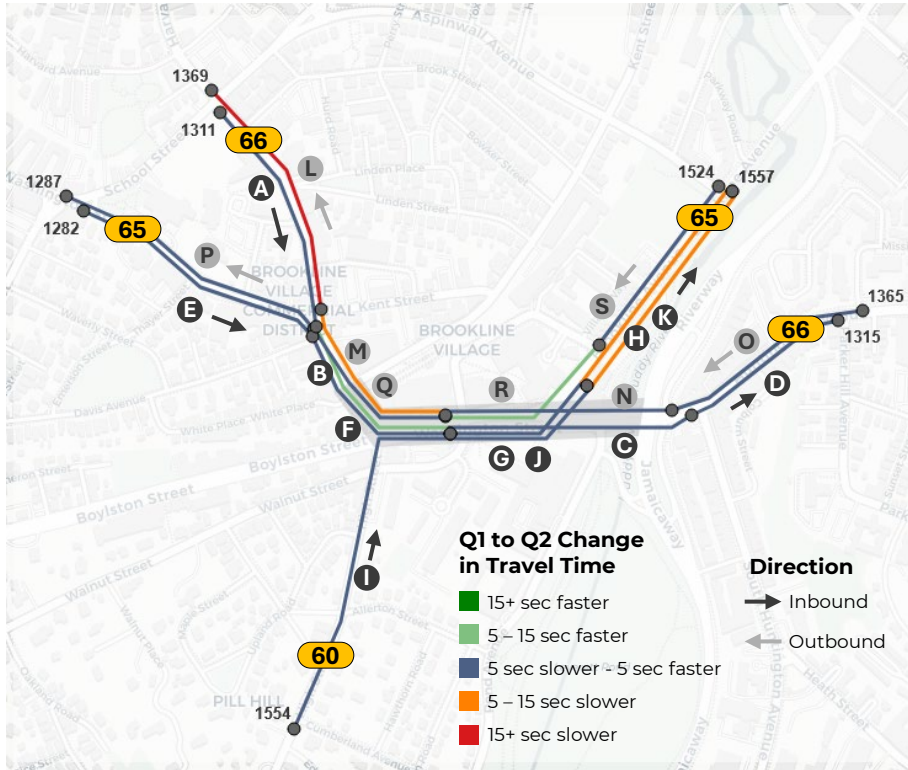
TTVQOS =
$$\frac{\text{standard deviation travel time (observed)}}{\text{average travel time (observed)}}$$

Grade	Metric Upper Threshold		Representative Bus Service
	TTQOS	TTVQOS	
A	1.4	1.4	Fully grade-separated
B	1.8	2.7	Reserved right-of-way, subject to traffic signal control
C	2.4	3.8	Mixed traffic, little to no traffic congestion
D	3.0	5.1	Mixed traffic, modest traffic congestion
E	4.0	8.0	Mixed traffic, moderate traffic congestion
F	N/A	N/A	<i>Perceived as too slow to be a good travel choice</i>

*Based on segment length.

Quarter 2 Findings

What has changed in bus travel times between Q1 and Q2?



Change in Median Stop-to-Stop Bus Travel Time* (seconds)

Represents a combination of AM, PM, and afternoon peak periods

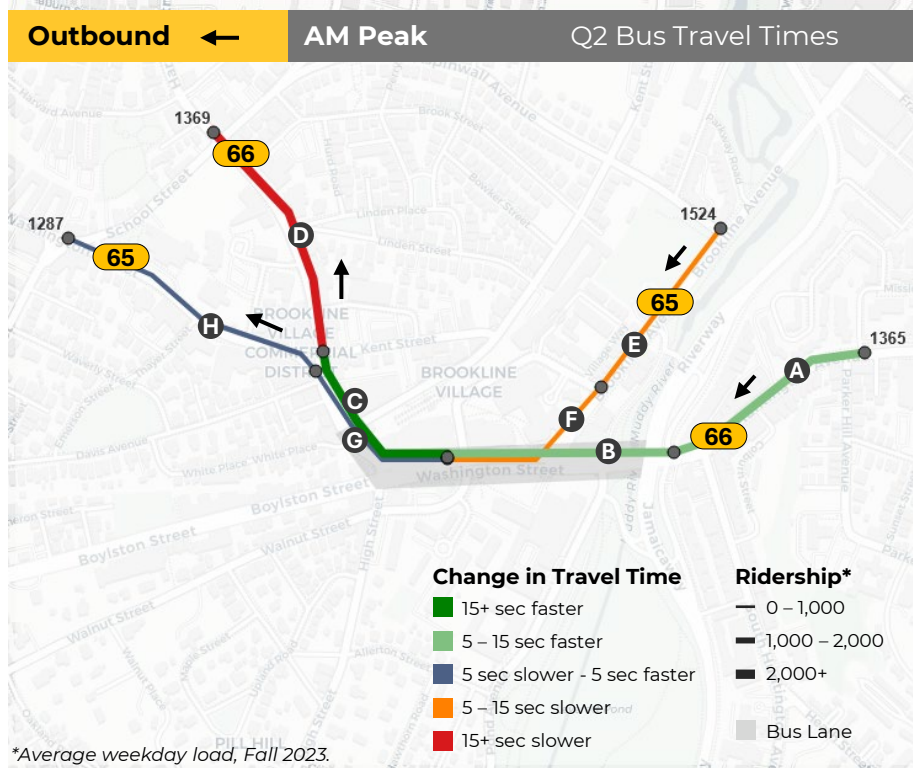
	Inbound		
	Q1 to Q2 Diff*	Baseline Diff**	
		Q1	Q2
Route 66			
A	+4	+37	+36
B	-7	-13	-13
C	-2	-5	+1
D	-2	+23	+25
Route 65			
E	+5	+1	+4
F	-3	+2	0
G	-1	+13	+10
H	+6	-13	0
Route 60			
I	-4	+11	+8
J	-3	+19	+2
K	+6	-16	+6

	Outbound		
	Q1 to Q2 Diff*	Baseline Diff**	
		Q1	Q2
Route 66			
L	+30	+7	+31
M	+10	-23	-12
N	+5	-30	-23
O	+3	-5	-2
Route 65			
P	+2	0	+1
Q	-2	-1	-2
R	-5	+19	+17
S	-2	+5	+5

*Difference in travel time (s) between Q1 and Q2.

**Difference in travel time (s) between each quarter and its baseline.

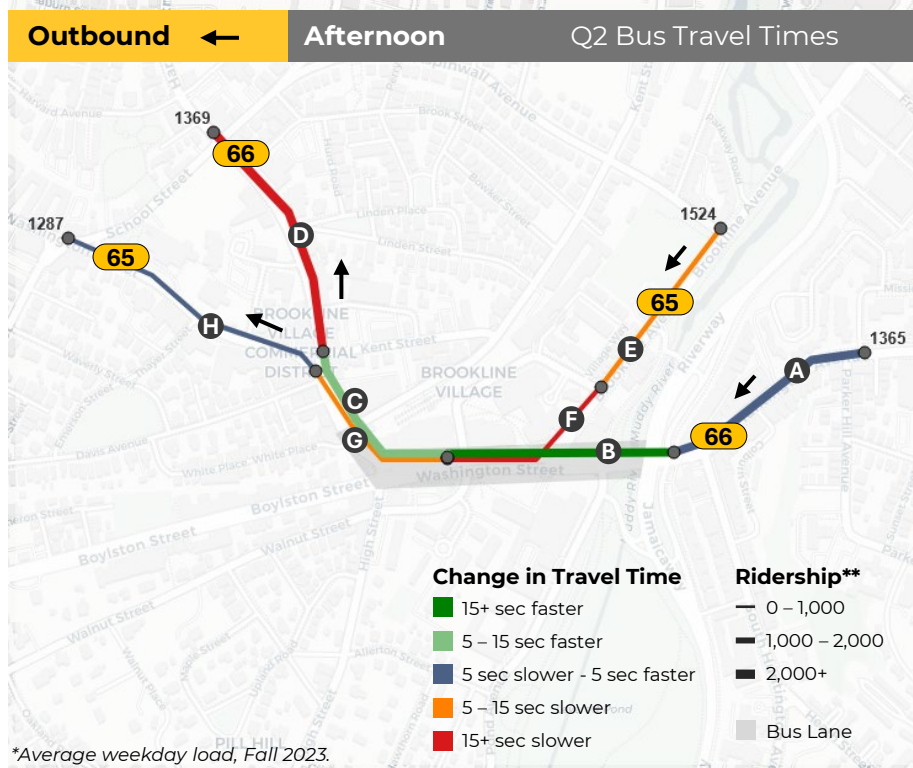
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline	Q2	Change (s)
Route 66			
Full corridor	8:33	8:39	+6
A	2:07	1:57	-10
B	2:16	2:03	-12
C	2:04	1:38	-26
D	1:59	2:37	+38
Route 65			
Full corridor	5:40	5:39	-1
E	1:04	1:10	+6
F	1:31	1:43	+12
G	1:31	1:30	-2
H	1:03	1:04	+2

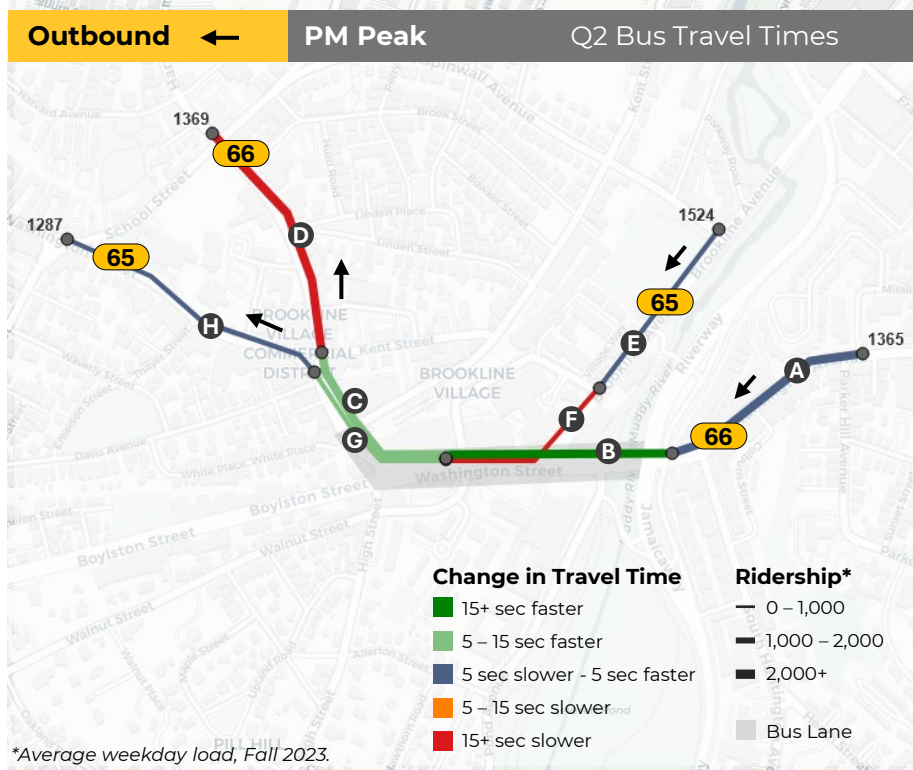
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline	Q2	Change (s)
Route 66			
Full corridor	8:31	8:46	+14
A	2:03	2:06	+3
B	2:18	2:01	-16
C	1:46	1:40	-7
D	2:07	2:39	+32
Route 65			
Full corridor	6:09	6:34	+26
E	1:14	1:21	+6
F	1:40	1:55	+16
G	1:46	1:52	+6
H	1:04	1:07	+3

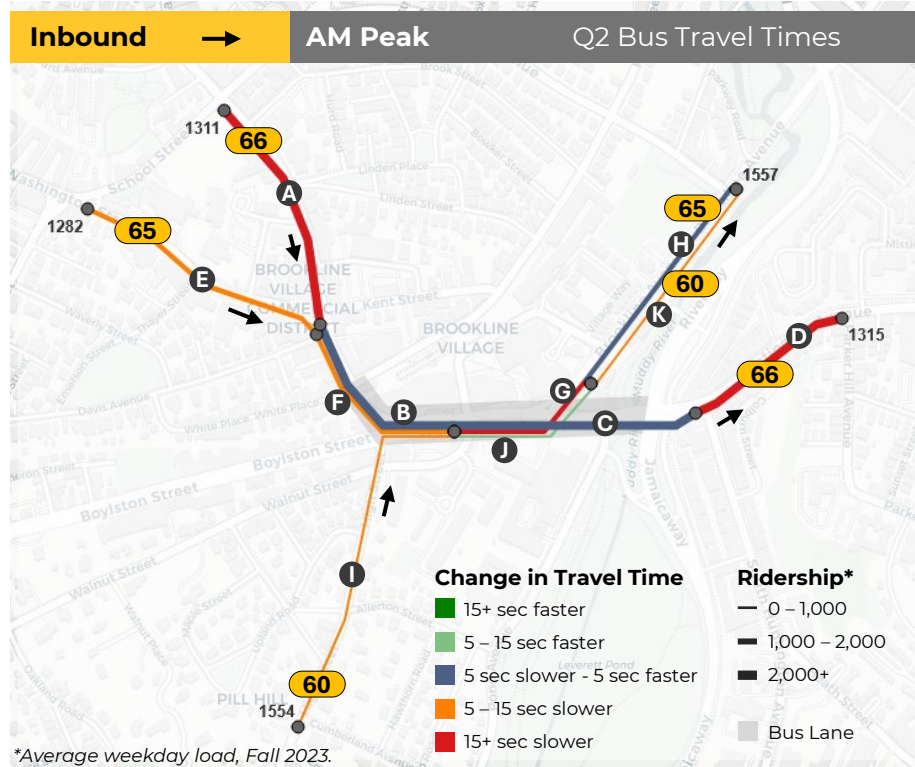
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline	Q2	Change (s)
Route 66			
Full corridor	8:42	8:30	-12
A	1:58	2:04	+5
B	2:34	2:00	-34
C	1:48	1:39	-9
D	2:06	2:31	+26
Route 65			
Full corridor	6:25	6:37	+12
E	1:13	1:18	+4
F	1:40	2:07	+26
G	1:54	1:45	-8
H	1:09	1:09	0

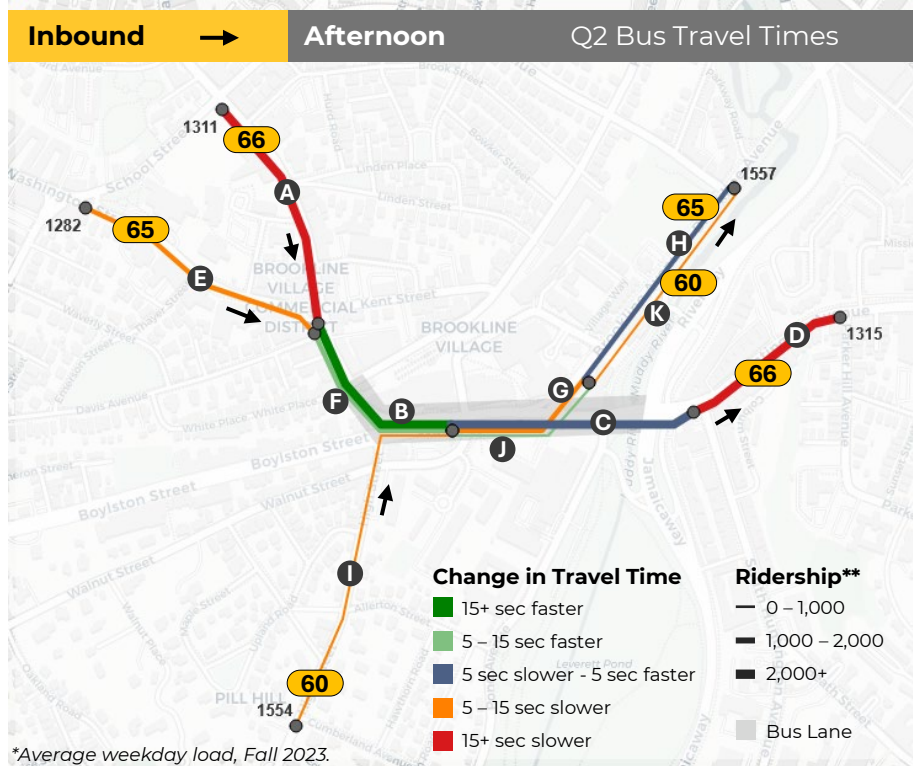
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline	Q2	Change (s)
Route 66			
Full corridor	8:16	8:54	+37
A	1:16	1:51	+34
B	2:37	2:34	-2
C	1:34	1:34	0
D	2:19	2:36	+17
Route 65			
Full corridor	6:59	7:19	+20
E	1:18	1:24	+6
F	2:21	2:29	+8
G	1:42	1:58	+16
H	0:58	0:58	+1
Route 60			
Full corridor	6:43	6:58	+15
I	3:30	3:40	+10
J	1:58	1:49	-9
K	1:03	1:13	+11

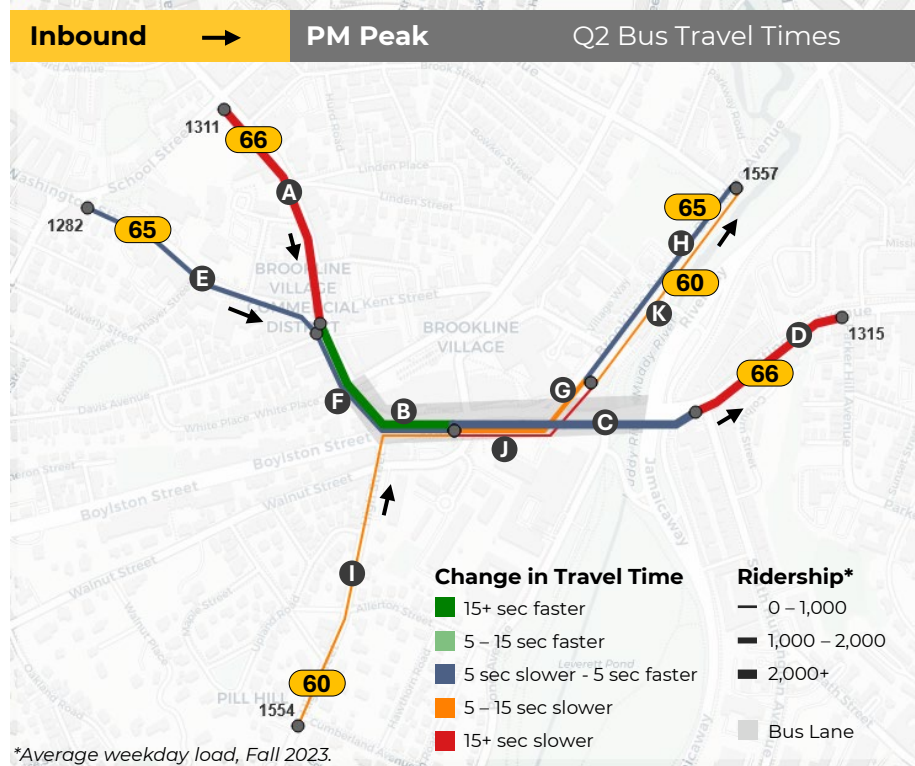
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline	Q2	Change (s)
Route 66			
Full corridor	8:21	8:52	+30
A	1:45	2:16	+31
B	2:58	2:42	-16
C	1:31	1:31	-1
D	1:45	2:09	+24
Route 65			
Full corridor	6:42	6:52	+10
E	1:20	1:27	+6
F	2:21	2:16	-6
G	1:36	1:48	+12
H	0:56	0:52	-4
Route 60			
Full corridor	5:43	5:51	+8
I	2:28	2:40	+11
J	2:00	1:52	-7
K	0:51	0:58	+8

Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline	Q2	Change (s)
Route 66			
Full corridor	8:06	8:52	+46
A	1:40	2:16	+36
B	2:55	2:40	-15
C	1:38	1:39	0
D	1:45	2:13	+28
Route 65			
Full corridor	6:40	6:48	+7
E	1:24	1:25	+1
F	2:19	2:15	-4
G	1:40	1:46	+6
H	0:55	0:57	+1
Route 60			
Full corridor	5:48	6:07	+19
I	2:34	2:42	+8
J	1:48	2:07	+19
K	0:55	1:01	+6

Quarter 2 Complete Results

Travel Times, Dwell, and QOS Ratios | Time Period: AM Peak

Q2 Baseline (Nov 2023 – Jan 2024)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	404.0	746.8	11.0	14.4	34%	0.85	4.1	F	6.1	E
		1554	1555	210.0	558.7	12.0	26.0	90%	1.66	6.0	F	8.1	F
		1555	1556	119.0	171.0	9.5	24.0	54%	0.44	3.8	E	4.3	D
		1556	1557	63.0	129.7	11.0	14.4	34%	1.06	2.0	C	5.0	D
65	inbound	1282	1557	419.5	570.5	9.0	15.0	23%	0.36	3.1	E	3.6	C
		1282	1283	78.0	128.0	13.0	31.3	68%	0.64	2.2	C	3.2	C
		1283	1555	141.0	243.0	14.0	29.0	83%	0.72	4.6	F	4.9	D
		1555	1556	102.0	208.0	9.0	16.0	57%	1.04	4.0	F	4.5	D
		1556	1557	58.0	123.0	9.0	15.0	23%	1.12	1.9	C	4.6	D
65	outbound	1524	1287	340.0	433.6	8.0	12.6	23%	0.28	2.5	D	3.1	C
		1524	1525	65.0	105.0	9.0	18.1	46%	0.62	2.0	C	3.3	C
		1525	1526	91.0	156.0	9.0	17.0	66%	0.71	2.9	D	4.1	D
		1526	1286	92.0	155.0	10.0	13.0	61%	0.68	3.2	E	3.7	C
		1286	1287	63.0	107.0	8.0	12.6	23%	0.7	1.9	C	3.6	C
66	inbound	1311	1315	497.0	695.4	22.0	61.0	88%	0.4	3.7	E	4.8	D
		1311	1313	77.0	138.0	15.0	36.0	88%	0.79	2.3	C	3.7	C
		1313	1555	157.0	255.0	16.0	40.0	86%	0.62	5.1	F	4.5	D
		1555	1314	95.0	159.0	15.0	32.0	92%	0.67	3.1	E	3.7	C
		1314	1315	139.0	216.2	22.0	61.0	88%	0.56	4.4	F	8.6	F
66	outbound	1365	1369	513.5	746.0	11.0	20.0	75%	0.45	3.7	E	5.5	E
		1365	1366	127.0	192.0	14.0	30.9	85%	0.51	3.5	E	11.0	F
		1366	1526	136.0	212.0	13.0	24.3	92%	0.56	4.0	F	4.0	D
		1526	1367	124.5	182.0	11.0	20.8	84%	0.46	3.7	E	4.0	D
		1367	1369	119.5	244.5	11.0	20.0	75%	1.05	3.7	E	5.8	E

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: Afternoon

Q2 Baseline (Nov 2023 – Jan 2024)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	343.0	479.4	9.0	12.4	5%	0.4	3.1	E	3.7	C
		1554	1555	149.0	290.4	11.0	20.5	87%	0.95	3.6	E	5.1	E
		1555	1556	120.0	185.0	9.0	14.2	55%	0.54	4.0	E	4.2	D
		1556	1557	51.0	121.0	9.0	12.4	5%	1.37	1.8	B	4.4	D
65	inbound	1282	1557	402.0	528.3	8.0	12.8	9%	0.31	2.9	D	3.3	C
		1282	1283	80.5	127.6	11.0	34.0	67%	0.59	2.3	C	3.5	C
		1283	1555	141.5	228.9	11.0	22.0	83%	0.62	4.5	F	4.4	D
		1555	1556	96.0	193.9	9.0	19.0	52%	1.02	3.5	E	4.5	D
		1556	1557	56.5	118.3	8.0	12.8	9%	1.09	1.8	B	3.9	D
65	outbound	1524	1287	369.0	479.6	10.0	19.6	52%	0.3	2.7	D	2.8	C
		1524	1525	74.5	112.0	10.0	22.8	68%	0.5	2.3	C	2.9	C
		1525	1526	100.0	171.6	13.0	29.4	83%	0.72	3.3	E	3.8	D
		1526	1286	107.0	169.0	11.0	22.0	72%	0.58	3.6	E	3.6	C
		1286	1287	64.0	104.0	10.0	19.6	52%	0.62	1.9	C	2.6	B
66	inbound	1311	1315	501.5	649.6	13.0	35.1	85%	0.3	3.7	E	3.3	C
		1311	1313	105.0	183.9	15.0	47.5	82%	0.75	3.1	E	4.0	D
		1313	1555	178.0	274.0	19.0	44.0	89%	0.54	5.6	F	3.9	D
		1555	1314	92.0	132.3	13.0	24.7	84%	0.44	2.7	D	3.3	C
		1314	1315	105.0	170.0	13.0	35.1	85%	0.62	3.3	E	4.7	D
66	outbound	1365	1369	512.0	647.0	13.0	29.0	77%	0.26	3.6	E	4.4	D
		1365	1366	123.0	164.8	16.0	38.0	81%	0.34	3.2	E	4.0	D
		1366	1526	138.0	198.8	15.5	38.0	90%	0.44	4.0	E	8.1	F
		1526	1367	107.0	173.8	15.0	30.5	84%	0.62	3.5	E	4.0	D
		1367	1369	127.0	210.8	13.0	29.0	77%	0.66	3.6	E	4.9	D

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: PM Peak

Q2 Baseline (Nov 2023 – Jan 2024)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	348.0	499.6	8.0	14.0	11%	0.44	3.2	E	4.4	D
		1554	1555	154.0	284.0	12.0	21.0	92%	0.84	3.7	E	5.9	E
		1555	1556	108.0	187.0	9.0	16.0	49%	0.73	4.0	E	4.7	D
		1556	1557	55.0	134.6	8.0	14.0	11%	1.45	2.0	C	5.3	E
65	inbound	1282	1557	401.0	544.0	8.0	16.1	7%	0.36	3.0	D	3.2	C
		1282	1283	84.0	134.0	10.0	21.0	51%	0.6	2.3	C	3.4	C
		1283	1555	139.0	227.2	11.0	22.4	70%	0.63	4.4	F	4.2	D
		1555	1556	101.0	184.0	9.0	15.0	41%	0.82	3.6	E	4.3	D
		1556	1557	56.0	122.2	8.0	16.1	7%	1.18	1.8	B	4.4	D
65	outbound	1524	1287	385.0	517.8	12.0	28.0	61%	0.34	2.9	D	3.4	C
		1524	1525	74.0	117.2	12.0	27.5	66%	0.58	2.3	C	3.5	C
		1525	1526	101.0	182.0	14.0	27.0	80%	0.8	3.4	E	4.1	D
		1526	1286	114.0	180.6	12.0	24.0	63%	0.58	3.8	E	3.9	D
		1286	1287	69.0	110.6	12.0	28.0	61%	0.6	2.1	C	2.9	C
66	inbound	1311	1315	486.5	664.3	13.0	30.2	78%	0.37	3.6	E	4.7	D
		1311	1313	100.0	170.0	15.0	51.7	80%	0.7	2.8	D	6.2	E
		1313	1555	175.0	270.3	21.0	50.0	89%	0.54	5.5	F	4.9	D
		1555	1314	98.5	154.0	14.0	31.0	89%	0.56	3.0	D	6.1	E
		1314	1315	105.0	167.0	13.0	30.2	78%	0.59	3.3	E	6.7	E
66	outbound	1365	1369	522.0	706.0	15.0	33.8	75%	0.35	3.7	E	5.5	E
		1365	1366	119.0	202.4	18.0	44.8	82%	0.7	3.4	E	6.4	E
		1366	1526	155.0	215.4	16.5	43.0	85%	0.39	4.2	F	7.4	E
		1526	1367	108.0	173.0	16.0	36.0	77%	0.6	3.5	E	6.1	E
		1367	1369	126.0	208.8	15.0	33.8	75%	0.66	3.6	E	7.8	E

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: AM Peak

Q2 (Nov 2024 – Jan 2025)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	419.0	711.0	10.0	14.0	33%	0.7	3.9	E	5.3	E
		1554	1555	220.0	494.6	12.0	23.0	96%	1.25	5.5	F	7.0	E
		1555	1556	110.0	167.0	10.0	23.0	35%	0.52	3.8	E	4.1	D
		1556	1557	74.0	124.2	10.0	14.0	33%	0.68	2.1	C	3.6	C
65	inbound	1282	1557	440.0	618.3	9.0	12.3	26%	0.41	3.2	E	3.9	D
		1282	1283	84.0	138.3	12.0	27.0	72%	0.65	2.4	C	4.2	D
		1283	1555	149.5	250.0	13.0	22.0	89%	0.67	4.8	F	4.8	D
		1555	1556	118.0	207.0	9.0	14.6	54%	0.75	4.2	F	4.2	D
		1556	1557	59.0	114.0	9.0	12.3	26%	0.93	1.8	C	4.4	D
65	outbound	1524	1287	339.0	430.6	8.0	11.0	18%	0.27	2.5	D	2.7	C
		1524	1525	70.5	105.0	9.0	14.8	47%	0.49	2.1	C	3.0	C
		1525	1526	103.0	158.3	11.0	19.0	76%	0.54	3.1	E	3.7	C
		1526	1286	90.0	155.0	9.0	14.7	47%	0.72	3.1	E	3.6	C
		1286	1287	65.0	101.0	8.0	11.0	18%	0.55	1.9	C	2.7	B
66	inbound	1311	1315	534.0	747.0	18.0	48.0	88%	0.4	3.9	E	3.8	D
		1311	1313	111.0	169.0	14.0	29.8	89%	0.52	3.1	E	3.8	C
		1313	1555	155.0	261.6	15.0	33.2	88%	0.69	5.0	F	4.8	D
		1555	1314	95.0	156.8	13.0	29.0	95%	0.65	3.0	D	3.7	C
		1314	1315	156.0	249.8	18.0	48.0	88%	0.6	4.7	F	4.2	D
66	outbound	1365	1369	519.0	778.4	11.0	21.1	73%	0.5	3.9	E	4.8	D
		1365	1366	117.0	201.1	13.0	26.0	81%	0.72	3.5	E	4.1	D
		1366	1526	123.5	199.0	13.0	21.0	89%	0.61	3.8	E	7.1	E
		1526	1367	98.5	165.1	12.0	21.0	72%	0.68	3.2	E	4.5	D
		1367	1369	158.0	326.3	11.0	21.1	73%	1.07	4.8	F	6.0	E

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: Afternoon

Q2 (Nov 2024 – Jan 2025)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	351.0	448.0	8.0	11.4	7%	0.28	3.2	E	5.8	E
		1554	1555	160.0	238.0	13.0	22.0	95%	0.49	3.6	E	5.1	D
		1555	1556	113.0	179.0	9.0	14.9	39%	0.58	4.0	F	5.4	E
		1556	1557	59.0	114.0	8.0	11.4	7%	0.93	1.9	C	5.8	E
65	inbound	1282	1557	412.0	541.4	8.0	11.0	7%	0.31	3.0	E	3.0	C
		1282	1283	87.0	146.0	11.0	31.4	68%	0.68	2.5	D	3.3	C
		1283	1555	136.0	219.0	11.0	19.0	88%	0.61	4.4	F	4.5	D
		1555	1556	108.0	189.0	9.0	13.4	44%	0.75	3.8	E	3.7	C
		1556	1557	53.0	114.8	8.0	11.0	7%	1.17	1.7	B	4.2	D
65	outbound	1524	1287	394.5	510.0	10.0	24.0	49%	0.29	3.0	D	3.4	C
		1524	1525	81.0	123.4	10.5	20.5	61%	0.52	2.5	D	3.3	C
		1525	1526	116.0	185.4	13.0	23.0	86%	0.6	3.7	E	4.3	D
		1526	1286	113.0	186.4	11.0	19.0	74%	0.65	3.7	E	3.6	C
		1286	1287	67.0	109.0	10.0	24.0	49%	0.63	2.1	C	4.1	D
66	inbound	1311	1315	532.0	677.4	13.0	34.0	81%	0.27	3.9	E	5.0	D
		1311	1313	136.0	207.6	13.0	50.0	83%	0.53	3.7	E	3.9	D
		1313	1555	162.0	253.6	16.5	37.0	84%	0.57	5.1	F	4.7	D
		1555	1314	91.0	142.0	13.0	25.0	83%	0.56	2.8	D	3.3	C
		1314	1315	129.0	199.2	13.0	34.0	81%	0.54	4.0	F	10.9	F
66	outbound	1365	1369	526.5	676.5	13.0	26.0	79%	0.28	3.7	E	5.5	E
		1365	1366	126.0	195.7	16.0	30.0	84%	0.55	3.6	E	8.1	F
		1366	1526	122.0	191.0	15.0	31.0	92%	0.57	3.6	E	6.8	E
		1526	1367	100.0	150.0	14.0	30.0	81%	0.5	3.0	E	11.9	F
		1367	1369	159.5	272.7	13.0	26.0	79%	0.71	4.6	F	6.7	E

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: PM Peak

Q2 (Nov 2024 – Jan 2025)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	367.0	511.4	8.0	11.2	13%	0.39	3.3	E	3.2	C
		1554	1555	162.0	284.4	14.0	23.0	91%	0.76	3.9	E	4.3	D
		1555	1556	127.0	188.4	9.0	15.0	38%	0.48	4.3	F	3.8	C
		1556	1557	61.0	108.2	8.0	11.2	13%	0.77	1.8	C	4.1	D
65	inbound	1282	1557	408.0	541.0	8.0	12.8	13%	0.33	3.0	D	3.4	C
		1282	1283	85.0	141.0	9.0	15.3	51%	0.66	2.4	C	3.7	C
		1283	1555	135.0	218.5	11.0	19.0	77%	0.62	4.3	F	4.3	D
		1555	1556	106.5	186.5	9.0	13.0	36%	0.75	3.9	E	4.0	D
		1556	1557	57.0	110.0	8.0	12.8	13%	0.93	1.7	B	3.7	C
65	outbound	1524	1287	397.0	532.0	11.0	23.0	54%	0.34	3.0	D	3.6	C
		1524	1525	78.0	127.0	12.0	25.0	66%	0.63	2.5	D	4.2	D
		1525	1526	127.0	196.9	13.0	25.0	84%	0.55	3.8	E	4.1	D
		1526	1286	105.5	169.0	11.0	20.0	70%	0.6	3.5	E	3.7	C
		1286	1287	69.0	112.9	11.0	23.0	54%	0.64	2.1	C	3.1	C
66	inbound	1311	1315	532.0	689.3	12.0	26.0	81%	0.3	3.9	E	5.6	E
		1311	1313	136.0	201.0	14.0	44.0	84%	0.48	3.7	E	4.7	D
		1313	1555	160.0	260.0	18.0	42.0	89%	0.62	5.1	F	4.8	D
		1555	1314	99.0	143.1	14.0	28.7	93%	0.45	3.0	D	4.2	D
		1314	1315	133.5	180.0	12.0	26.0	81%	0.35	4.0	F	10.6	F
66	outbound	1365	1369	510.5	750.9	13.0	27.1	78%	0.47	3.7	E	7.1	E
		1365	1366	124.0	238.7	16.0	39.0	82%	0.92	3.6	E	15.3	F
		1366	1526	120.5	194.0	15.0	31.0	89%	0.61	3.6	E	5.2	E
		1526	1367	99.0	165.9	14.0	30.0	77%	0.68	3.5	E	9.6	F
		1367	1369	152.0	261.0	13.0	27.1	78%	0.72	4.1	F	11.2	F

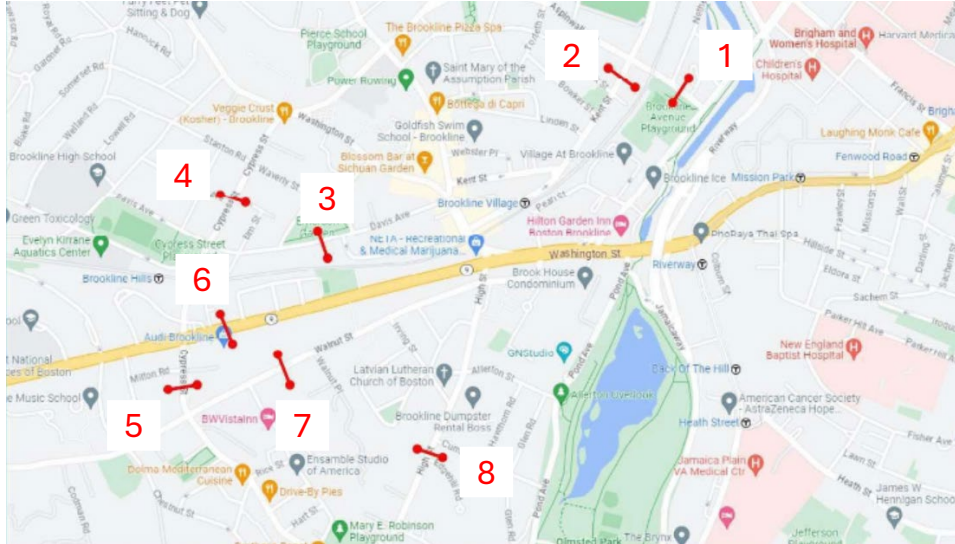
*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Appendix C

Highway Volumes



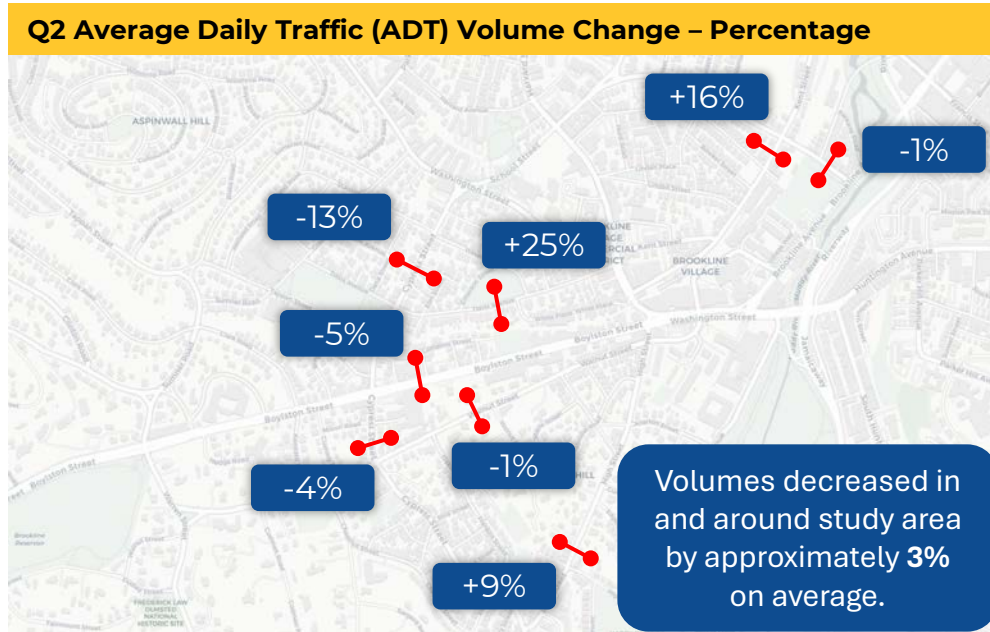
Data Collection Locations



1. Aspinwall Ave, between Brookline Ave & Kent St
2. Kent St, between Aspinwall Ave & Brook St
3. Davis Ave, between Cypress St & Washington St
4. Cypress St, between Tappan St & Davis Ave
5. Cypress St, between Boylston St & Walnut St
6. Boylston St (Route 9), between Cypress St & High St
7. Walnut St, between Cypress St & High St
8. High St, between Cumberland Ave & Edgehill Rd

Quarter 2 Findings

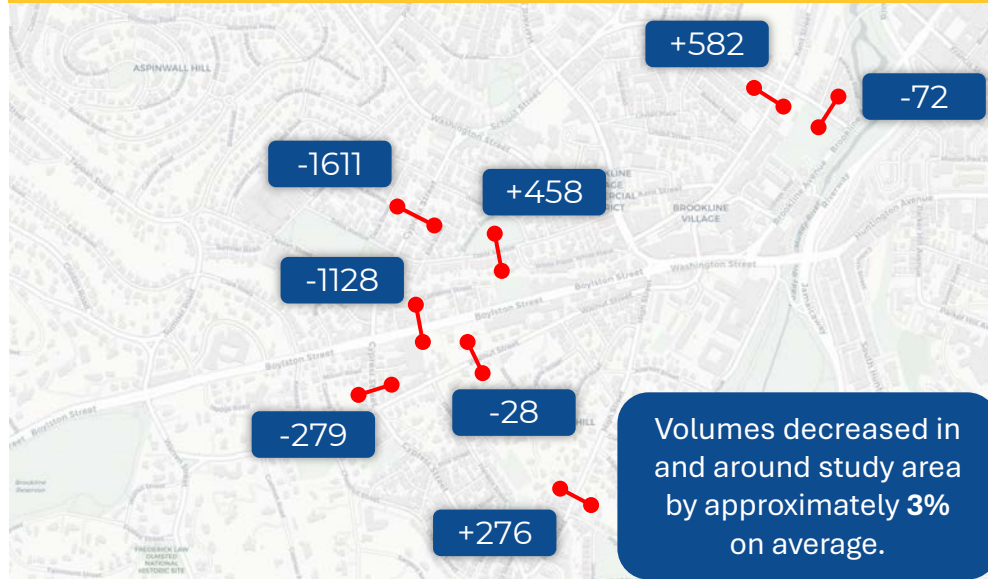
Has the project impacted traffic on secondary streets and residential side streets?



- Traffic on Route 9 **decreased slightly** with **moderate increase** of traffic on side streets
- Some fluctuation with speeds, but in general **most observed speeds decreased**
- Could be options for **traffic calming** in the future if trends don't correct
- Nearby traffic patterns: **Pierce School** closed for construction and relocated to Old Lincoln School on Boylston St/Walnut St

Has the project impacted traffic on secondary streets and residential side streets?

Q2 Average Daily Traffic (ADT) Volume Change - Volumes



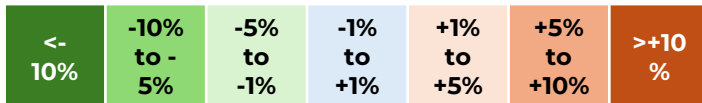
- Traffic on Route 9 **decreased slightly** with **moderate increase** of traffic on side streets
- Some fluctuation with speeds, but in general **most observed speeds decreased**
- Could be options for **traffic calming** in the future if trends don't correct
- Nearby traffic patterns: **Pierce School** closed for construction and relocated to Old Lincoln School on Boylston St/Walnut St

Has the project impacted speed on side streets?

Northbound/Eastbound

Location	NB/EB 50th Percentile Speeds (MPH)			NB/EB 85th Percentile speeds (MPH)		
	Baseline Sept 2023	Q2 Speeds Feb 2025	Change	Baseline Sept 2023	Q2 Speeds Feb 2025	Change
Aspinwall Ave, between Brookline Ave & Kent St	20.2	18.5	-8.6%	24.7	23.7	-4.0%
Kent St, between Aspinwall Ave & Brook St	18.0	16.7	-7.4%	24.1	22.7	-6.0%
Davis Ave, between Cypress St & Washington St	22.7	19.9	-12.0%	27.7	24.6	-11.2%
Cypress St, between Davis Ave & Gorham Ave	21.4	19.8	-7.4%	26.4	24.3	-7.8%
Cypress St, between Boylston St & Walnut St	19.5	21.3	9.3%	24.1	25.1	+4.1%
Boylston St (Rt 9), between Cypress St & High St	28.8	27.3	-5.3%	34.6	34.2	-1.2%
Walnut St, between Cypress St & High St	23.5	21.5	-8.8%	28.4	25.7	-9.6%
High St, between Cumberland Ave & Edgehill Rd	22.6	26.2	+15.7%	27.4	29.8	+8.9%

Speed % Change Key:



Some fluctuation with speeds, but in general most observed speeds have decreased

Has the project impacted speed on side streets?

Southbound/Westbound

Location	NB/EB 50th Percentile Speeds (MPH)			NB/EB 85th Percentile speeds (MPH)		
	Baseline Sept 2023	Q2 Speeds Feb 2025	Change	Baseline Sept 2023	Q2 Speeds Feb 2025	Change
Aspinwall Ave, between Brookline Ave & Kent St	20.2	20.8	+1.3%	24.7	24.5	-1.7
Kent St, between Aspinwall Ave & Brook St	18.0	21.3	-2.0%	24.1	24.9	-4.9
Davis Ave, between Cypress St & Washington St	22.7	17.5	-17.8%	27.7	22.6	-13.3
Cypress St, between Davis Ave & Gorham Ave	21.4	19.7	+1.9%	26.4	24.8	+0.0
Cypress St, between Boylston St & Walnut St	19.5	19.0	+5.0%	24.1	24.5	+3.5
Boylston St (Rt 9), between Cypress St & High St	28.8	27.9	-4.4%	34.6	34.9	-2.4
Walnut St, between Cypress St & High St	23.5	21.1	-6.6%	28.4	25.0	-8.4
High St, between Cumberland Ave & Edgehill Rd	22.6	24.7	+4.6%	27.4	29.1	+2.4

Speed % Change Key:

<- 10%	-10% to - 5%	-5% to -1%	-1% to +1%	+1% to +5%	+5% to +10%	>+10 %
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Some fluctuation with speeds, but in general most observed speeds have decreased

Quarter 2 Complete Results

Baseline Volumes – Sept 2023

Location	ADT	Peak AM	Peak PM
Aspinwall Ave, between Brookline Ave & Kent St	5,484	465	501
Kent St, between Aspinwall Ave & Brook St	3,605	364	292
Davis Ave, between Cypress St & Washington St	1,840	264	177
Cypress St, between Davis Ave & Gorham Ave	12,553	1113	932
Cypress St, between Boylston St & Walnut St	7,730	879	585
Boylston St (Rt 9), between Cypress St & High St	22,520	1777	1765
Walnut St, between Cypress St & High St	3,193	472	435
High St, between Cumberland Ave & Edgehill Rd	3,224	321	310
Total Volumes	60,149	5,655	4,997

Q2 Volumes – Feb 2025

Location	ADT	Change	Peak AM	Change	Peak PM	Change
Aspinwall Ave, between Brookline Ave & Kent St	5,412	-1.3%	626	+34.6%	559	+11.6%
Kent St, between Aspinwall Ave & Brook St	4,187	+16.1%	565	+55.2%	412	+41.1%
Davis Ave, between Cypress St & Washington St	2,298	+24.9%	336	+27.3%	248	+40.1%
Cypress St, between Davis Ave & Gorham Ave	10,942	-12.8%	877	-21.2%	980	+5.2%
Cypress St, between Boylston St & Walnut St	7,451	-3.6%	814	-7.4%	718	+22.7%
Boylston St (Rt 9), between Cypress St & High St	21,392	-5.0%	1,666	-6.2%	1,662	-5.8%
Walnut St, between Cypress St & High St	3,165	-0.9%	527	+11.7%	459	+5.5%
High St, between Cumberland Ave & Edgehill Rd	3,500	+8.6%	372	+15.9%	353	+13.9%
Total Volumes / Average % Change	58,347	-3.0%	5,783	+2.3%	5,391	+7.9%

Appendix D

Highway Travel Times and Control Delays

Study Locations

Intersections

1. Washington St at Station St
2. Boylston St (Route 9) at High St and Washington St
3. Washington St (Route 9) at Pearl St and Walnut St
4. Washington St (Route 9) at Brookline Ave

Corridors

1. Boylston St eastbound between Cypress St and High St
2. Washington St southbound between Boylston St and Harvard St
3. Brookline Ave northbound between Aspinwall Ave and Washington St.

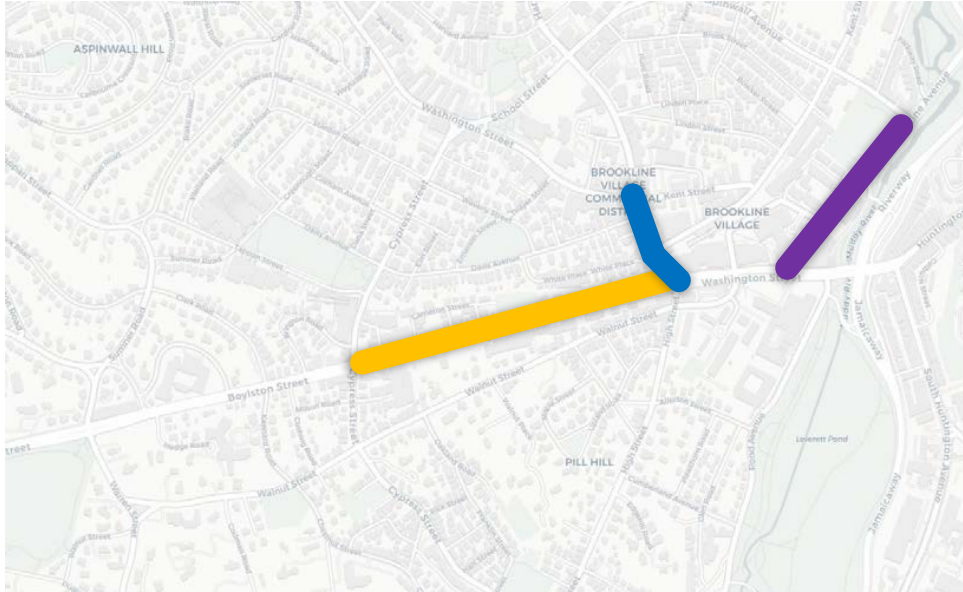
Intersections

1. Washington St at Station St
2. Boylston St (Route 9) at High St and Washington St
3. Washington St (Route 9) at Pearl St and Walnut St
4. Washington St (Route 9) at Brookline Ave



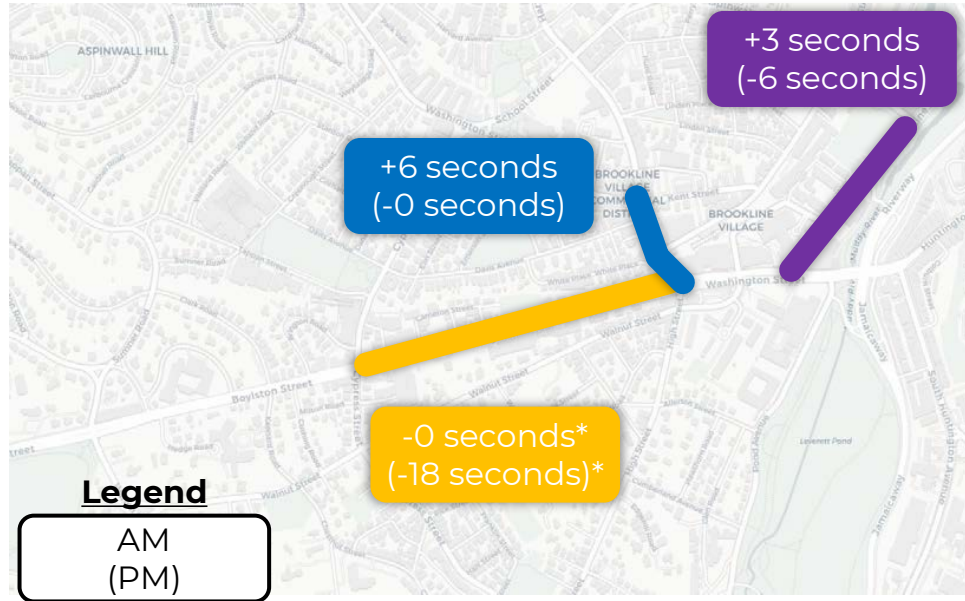
Quarter 2 Findings

Has the project created impacts to general purpose traffic?



1. Boylston St eastbound between Cypress St and High St (**orange**)
2. Washington St southbound between Boylston St and Harvard St (**blue**)
3. Brookline Ave northbound between Aspinwall Ave and Washington St (**purple**)

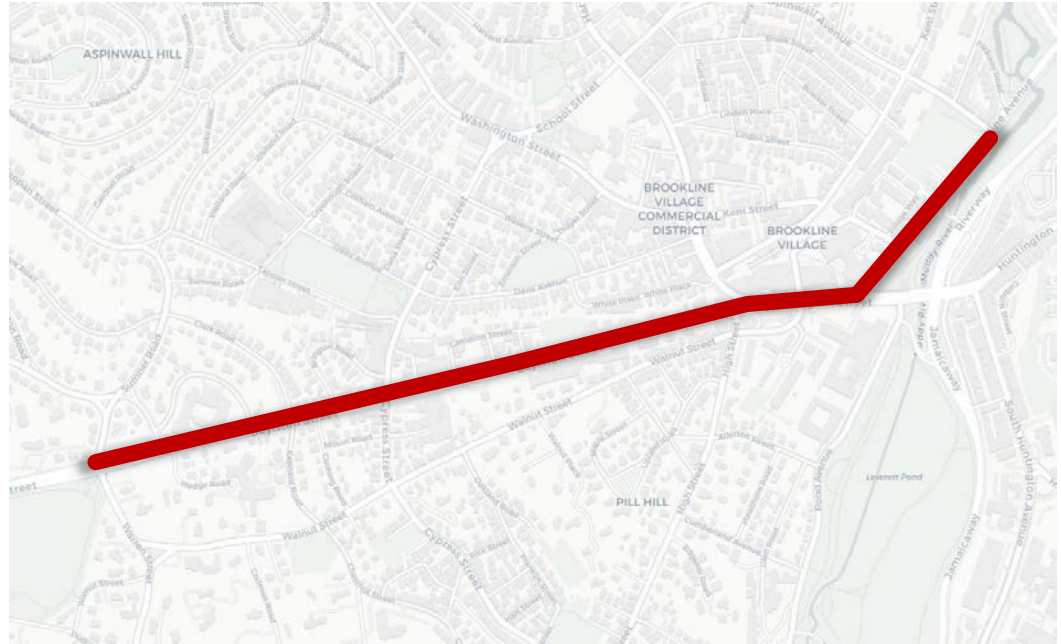
Has the project created impacts to general purpose traffic? Comparing Q2 to Baseline



- Intersection delay either remains constant or fluctuates slightly.
- *Data may be affected by INRIX platform limitations, but does not indicate significant increases in vehicle delay

Corridor Travel Time

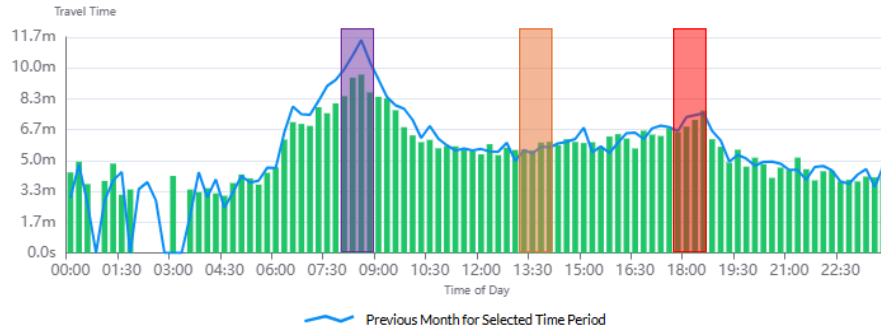
- Boylston Street & Brookline Avenue between Sumner Street and Aspinwall Avenue
- Approximately 1.2 miles
- Includes all three intersections in project area



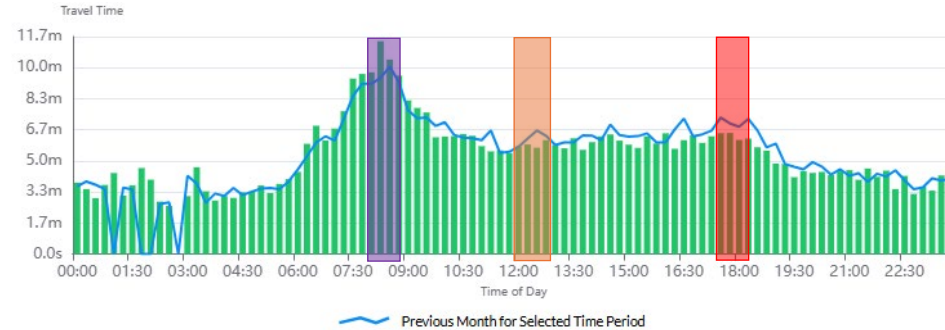
Q2 Travel Time - Boylston Street and Brookline Avenue inbound between Sumner Road and Aspinwall Avenue

Average Travel Time over Time of Day

Baseline



Quarter 2



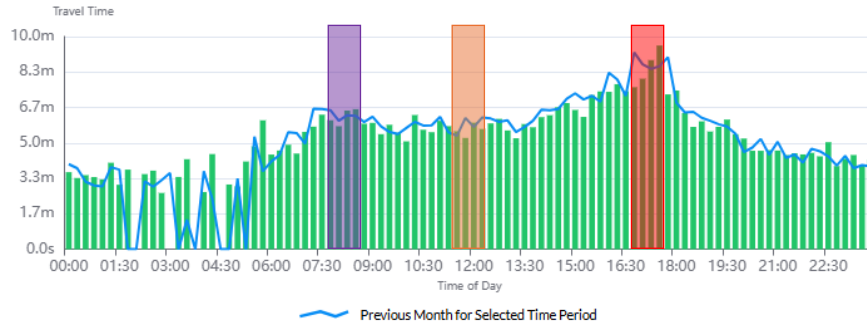
Period	Baseline Travel Time	Quarter 2 Travel Time
AM Peak Hour	9.0 minutes	10.3 minutes
MD Peak Hour	5.7 minutes	6.0 minutes
PM Peak Hour	7.0 minutes	6.4 minutes

Approximately 70 second increase in AM Peak travel time for vehicles travelling through all project area intersections, with MD and PM travel times remaining fairly constant

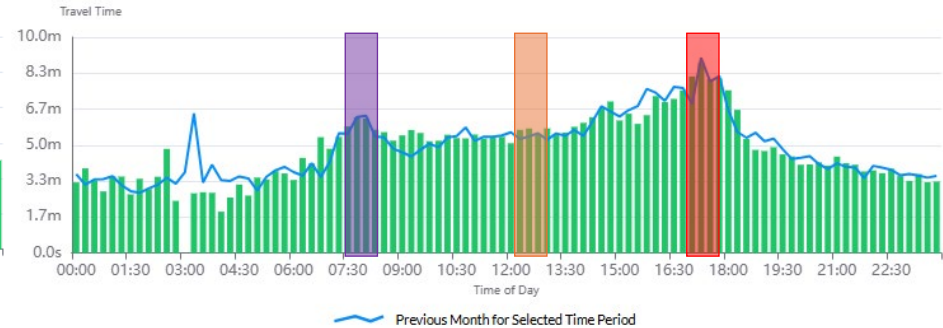
Q2 Travel Time - Boylston Street and Brookline Avenue outbound between Sumner Road and Aspinwall Avenue

Average Travel Time over Time of Day

Baseline



Quarter 2



Period	Baseline Travel Time	Quarter 2 Travel Time
AM Peak Hour	6.2 minutes	6.0 minutes
MD Peak Hour	5.5 minutes	5.7 minutes
PM Peak Hour	8.5 minutes	8.3 minutes

Travel time remains relatively constant, increasing and decreasing by approximately 10 seconds for vehicles travelling through all project area intersections

Quarter 2 Complete Results

#1 Washington St at Station St – Baseline

Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



- Average intersection delay of about 40 seconds
- Average intersection delay varies from ~30-60 seconds during peak periods
- Most significant delay is Washington St southbound, in the PM peak (about 1.2 minutes)

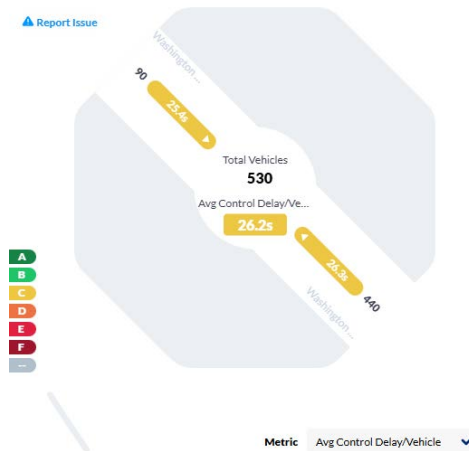
All data is from June 2024 weekdays.

#1 Washington St at Station St – Quarter 2

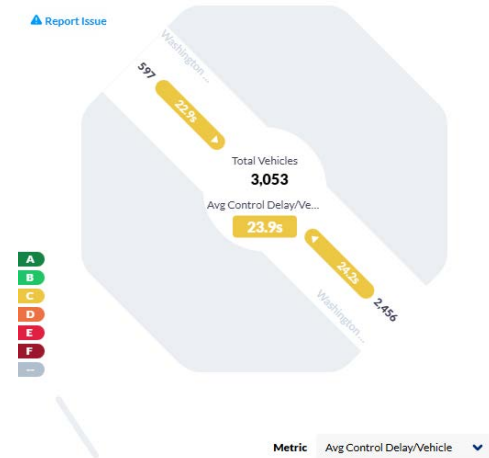
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



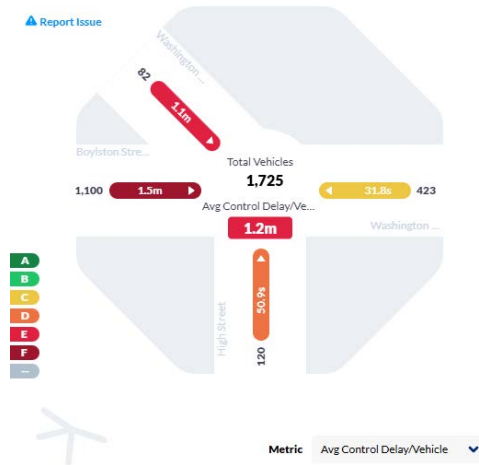
- **9-29 second decrease in total intersection delay compared to Baseline**
- Delay reduced for Washington St southbound at all times of day.

All data is from January 2025 weekdays.

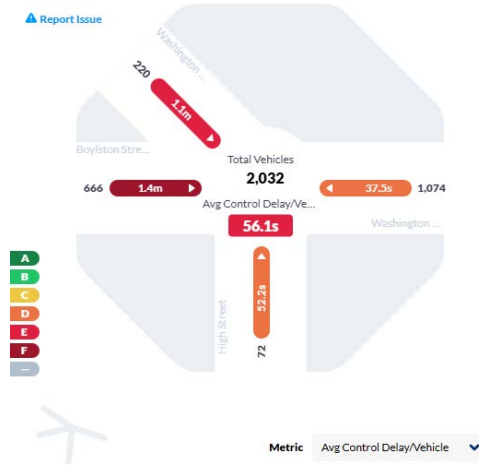
**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

#2 Boylston St (Route 9) at High St and Washington St – Baseline

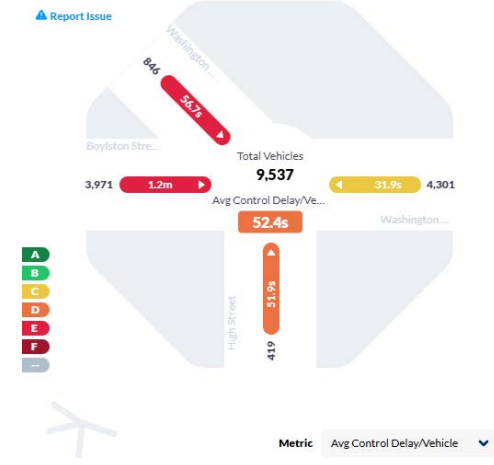
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily

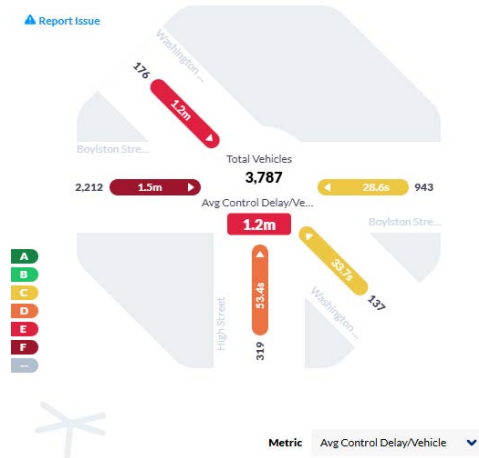


All data is from June 2024 weekdays.

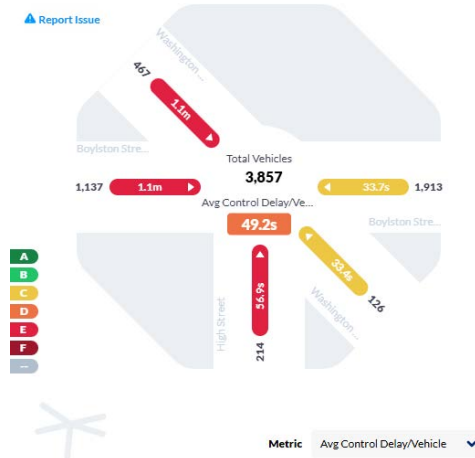
- Average intersection delay of about 1 minute throughout day
- Highest delay on Boylston St (Route 9), approximately 1.5 minutes during peak periods

#2 Boylston St (Route 9) at High St and Washington St – Quarter 2

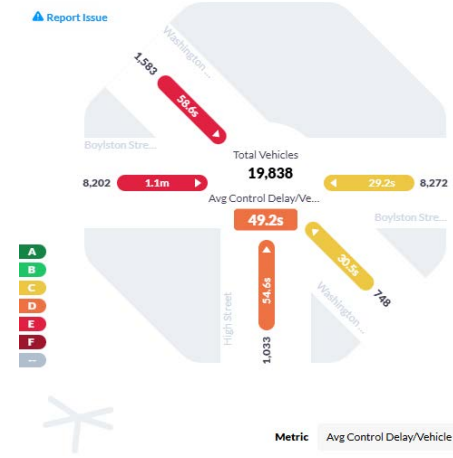
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



All data is from January 2025 weekdays.

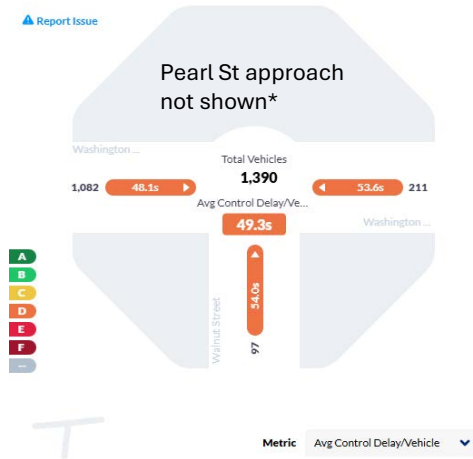
**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

**Note Washington St northwest-bound approach represents westbound right turning movements. INRIX has changed how the approaches are displayed*

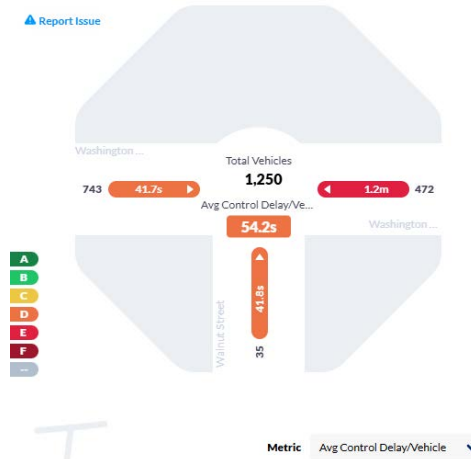
- **Inrix shows slight decrease in total intersection delay compared to Baseline**
- Long queue lengths extend past the 500' approach distance INRIX uses to collect data, so actual intersection delay is likely higher

#3 Washington St (Route 9) at Pearl St and Walnut St – Baseline

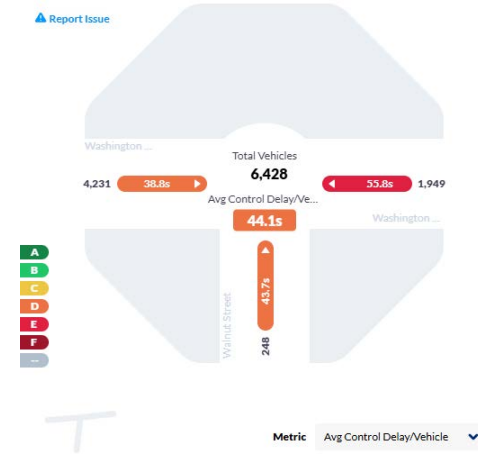
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



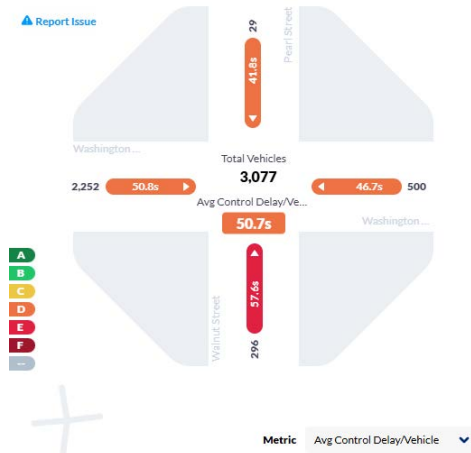
- Average intersection delay of 45-55 seconds throughout day
- Washington St (Route 9) through movements typically see highest delay

All data is from June 2024 weekdays.

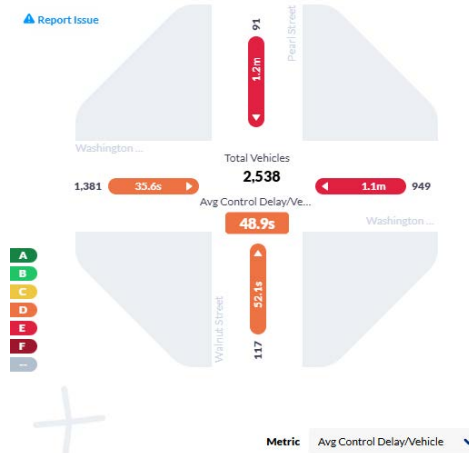
**Intersection diagram is missing the Pearl St approach because no volumes were recorded by INRIX at this approach during June 2024*

#3 Washington St (Route 9) at Pearl St and Walnut St – Quarter 2

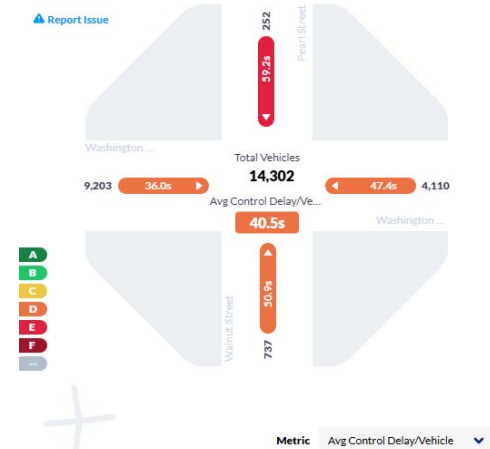
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily

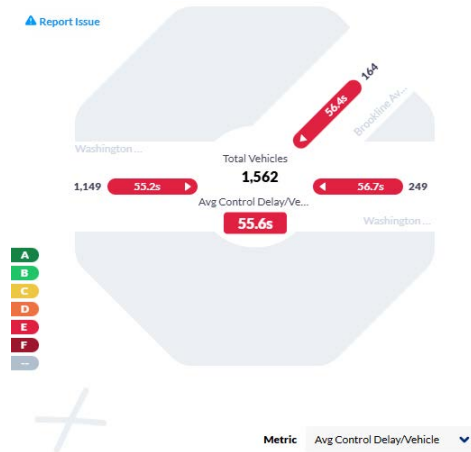


- **~4 second decrease in average intersection delay compared to Baseline** All data is from January 2025 weekdays.
- All movements see slight fluctuations in delay

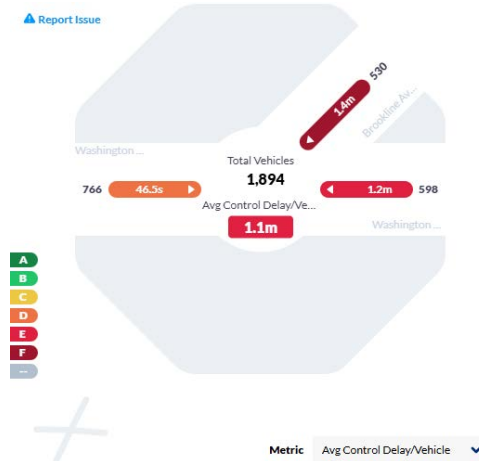
**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

#4 Washington St (Route 9) at Brookline Ave - Baseline

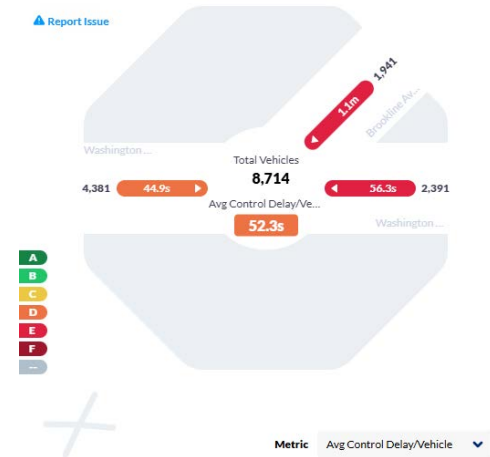
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



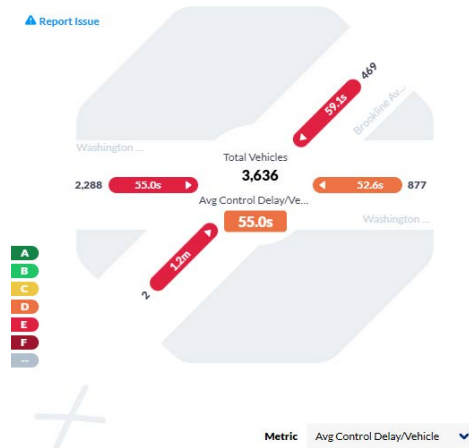
- Average intersection delay of ~50-70 seconds throughout day
- Highest delays are approaching project area
- Generally lesser delays leaving project area

All data is from June 2024 weekdays.

**Intersection diagram is missing the northbound approach because no volumes were recorded by INRIX at this approach during June 2024*

#4 Washington St (Route 9) at Brookline Ave – Quarter 2

Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily

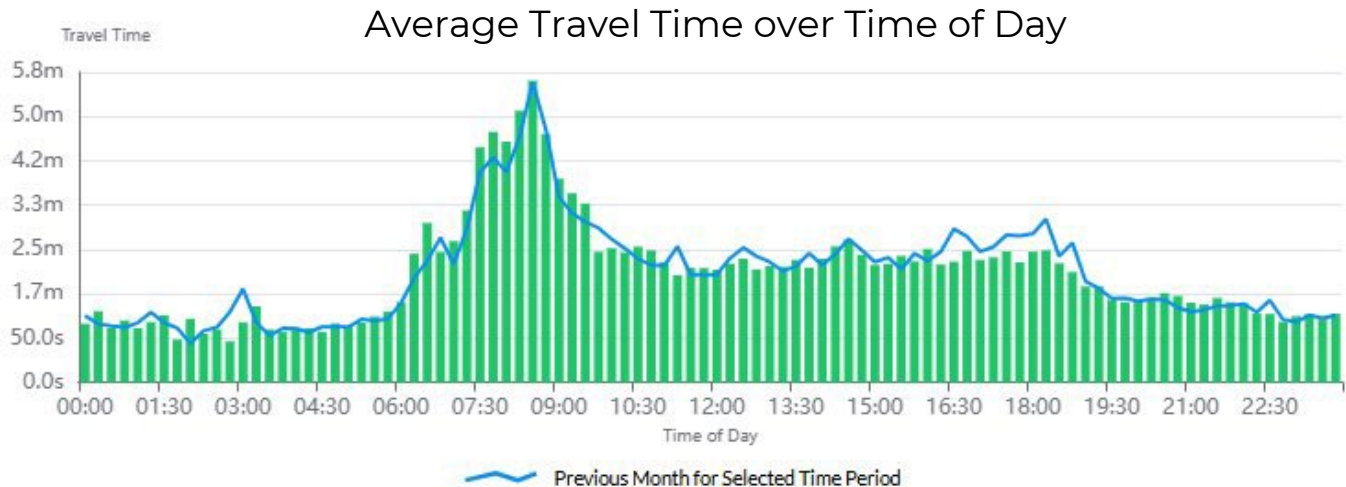


- **Generally, no change in total intersection delay**
- All movements see slight fluctuations in delay

All data is from January 2025 weekdays.

**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

Q2 Travel Time - Boylston St eastbound from Cypress St to High St

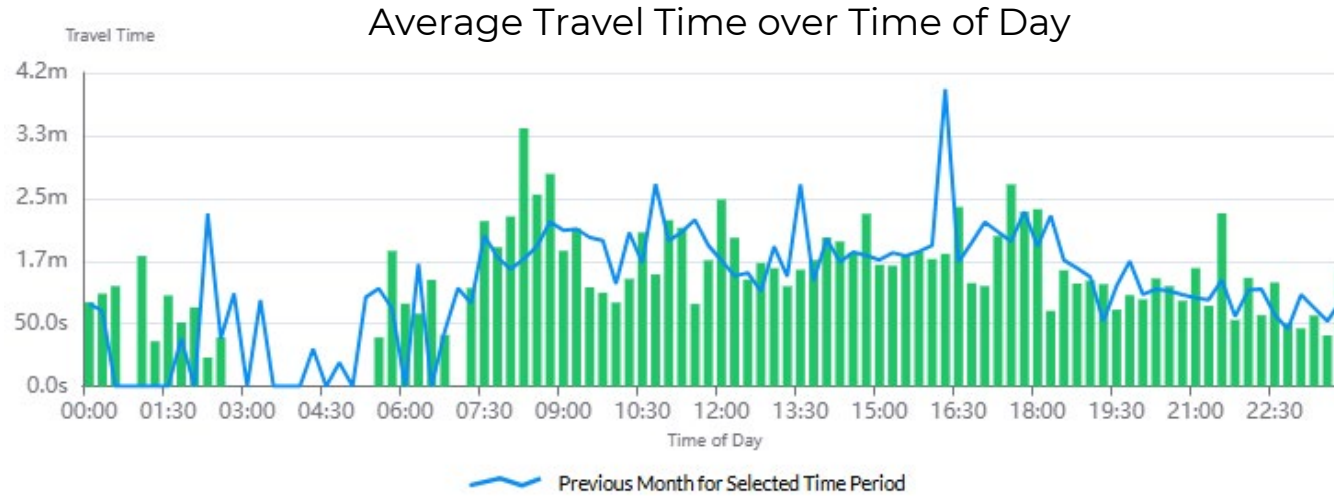


All data is from January 2025 weekdays.

Period	Travel Time	Time of Day
AM Peak Hour	5.0 minutes	8:00am-9:00am
MD Peak Hour	2.5 minutes	2:00pm-3:00pm
PM Peak Hour	2.5 minutes	5:30pm-6:30pm

*Baseline data not available from INRIX.

Q2 Travel Time - Washington St southbound from Harvard St to Boylston St

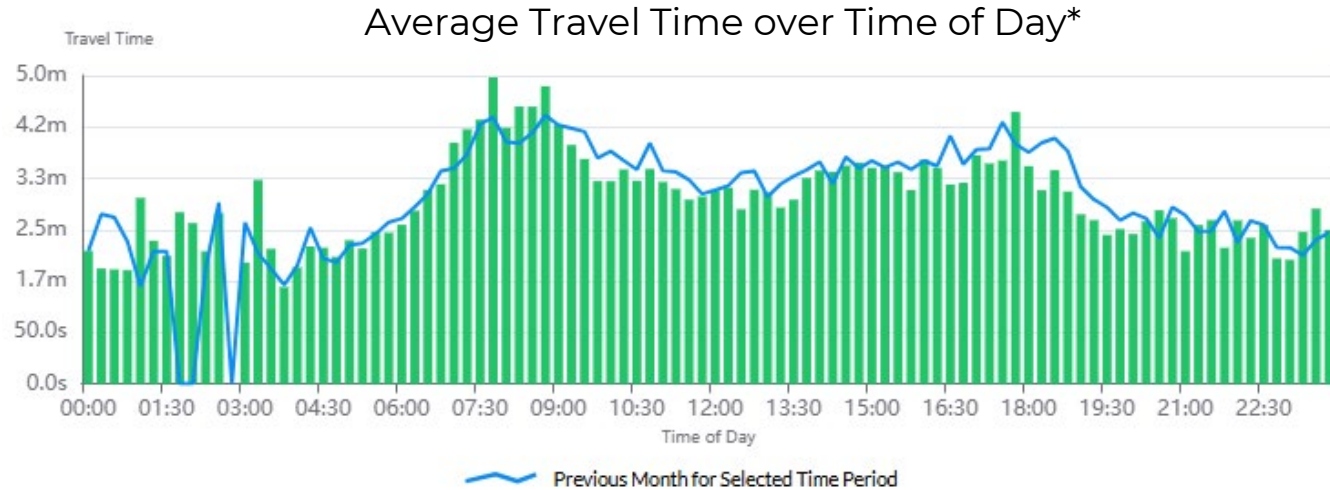


All data is from
January 2025
weekdays.

Period	Travel Time	Time of Day
AM Peak Hour	2.8 minutes	8:00am-9:00am
MD Peak Hour	2.0 minutes	2:00pm-3:00pm
PM Peak Hour	2.4 minutes	5:15pm-6:15pm

**Baseline data not available from INRIX.*

Q2 Travel Time - Brookline Ave northbound from Washington St to Aspinwall Ave



All data is from
January 2025
weekdays.

Period	Travel Time**	Time of Day
AM Peak Hour	4.6 minutes	7:45am-8:45am
MD Peak Hour	3.5 minutes	2:00pm-3:00pm
PM Peak Hour	3.8 minutes	5:00pm-6:00pm

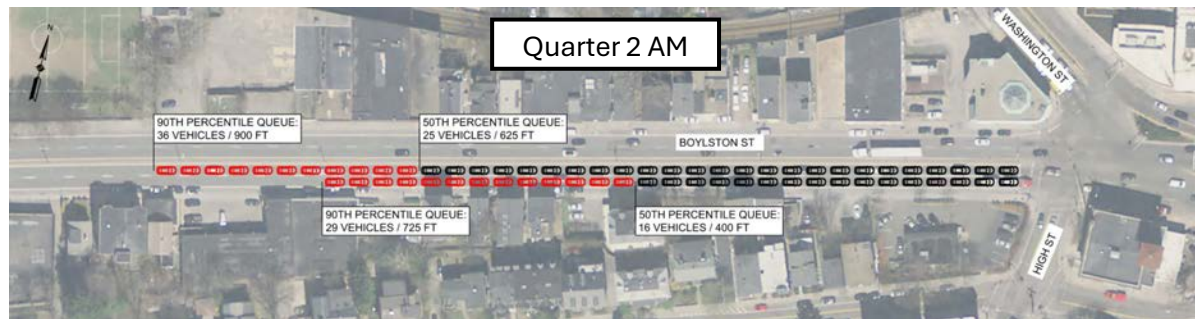
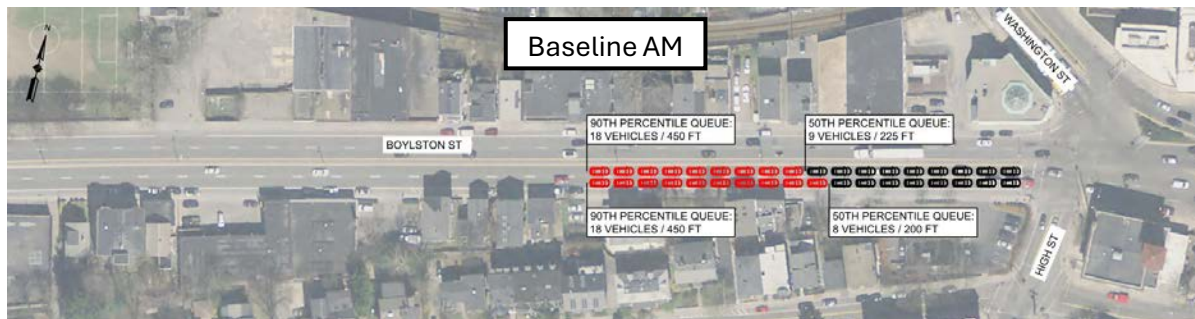
*Baseline data not available from INRIX.
**Note this includes delay at the
Washington St & Brookline intersection
approach.

Appendix E

Queueing Data

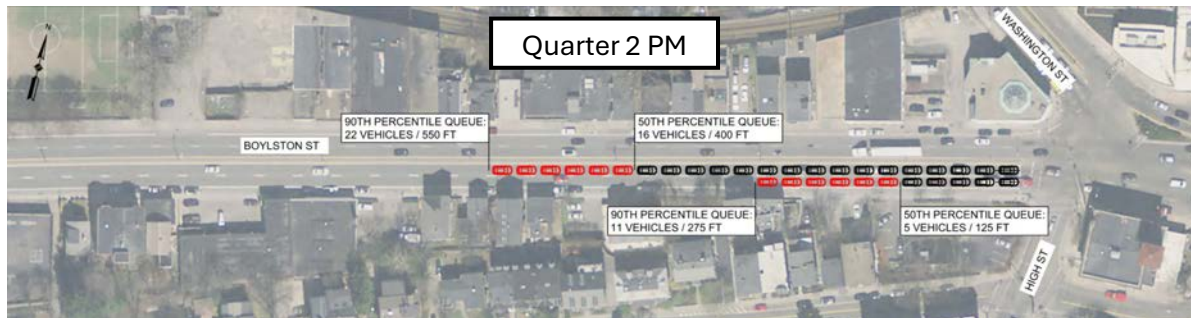
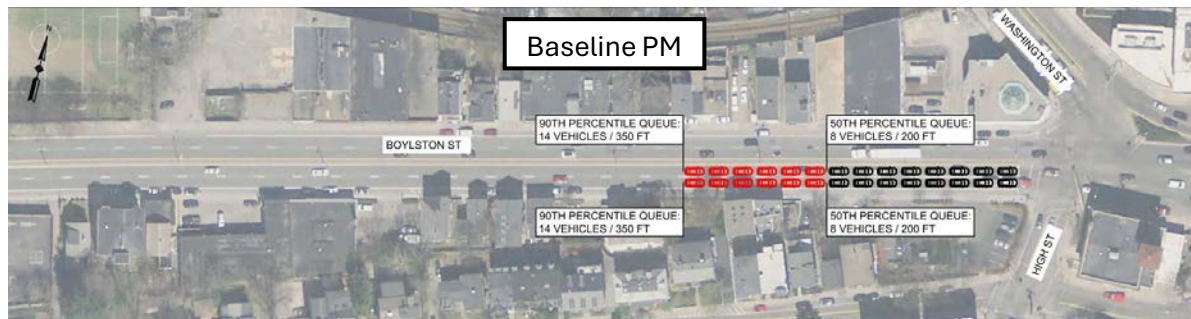
Q2 Findings

Boylston Street (Rt 9), approaching Washington Street, AM



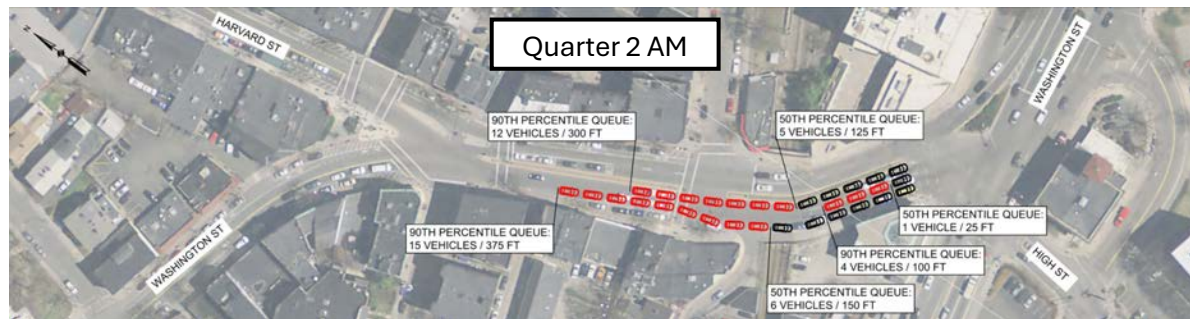
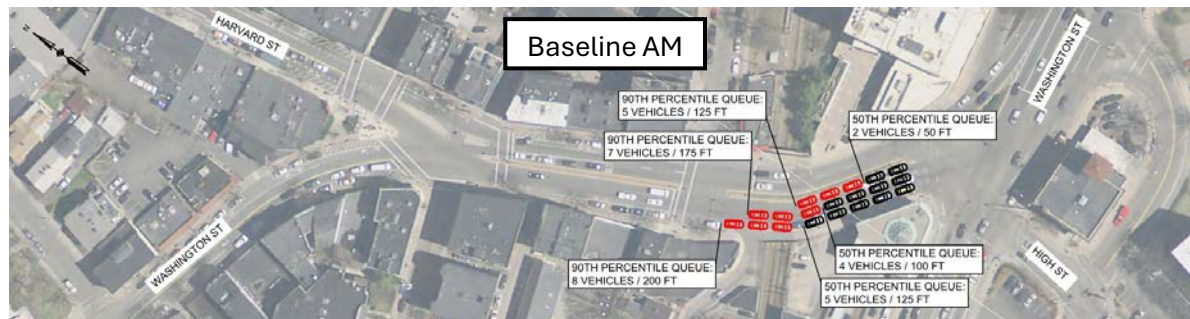
- Significant increase in AM vehicle queues

Boylston Street (Rt 9), approaching Washington Street, PM



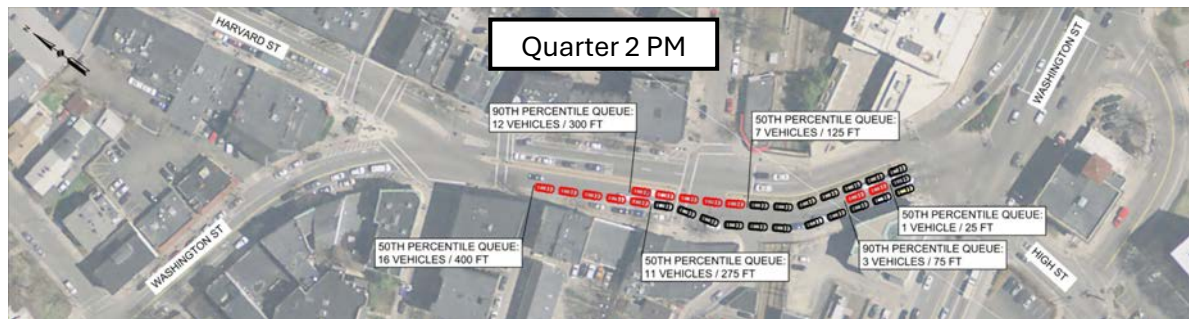
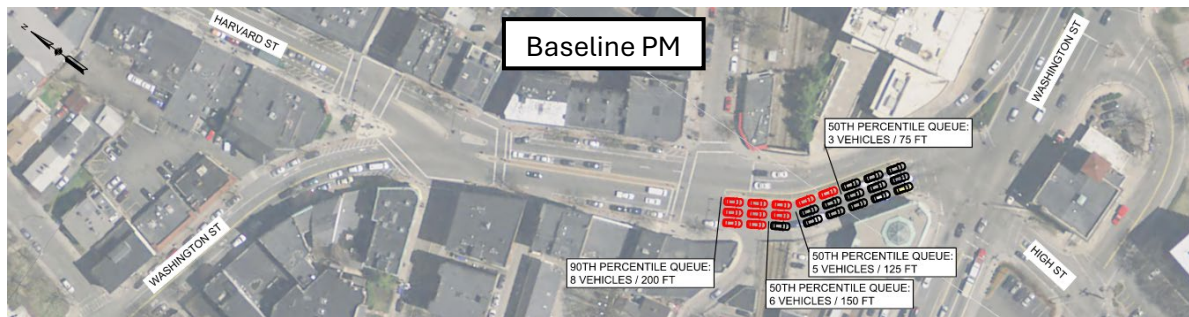
- Slight increase in PM vehicle queues

Washington Street, approaching Boylston Street (Rt 9), AM



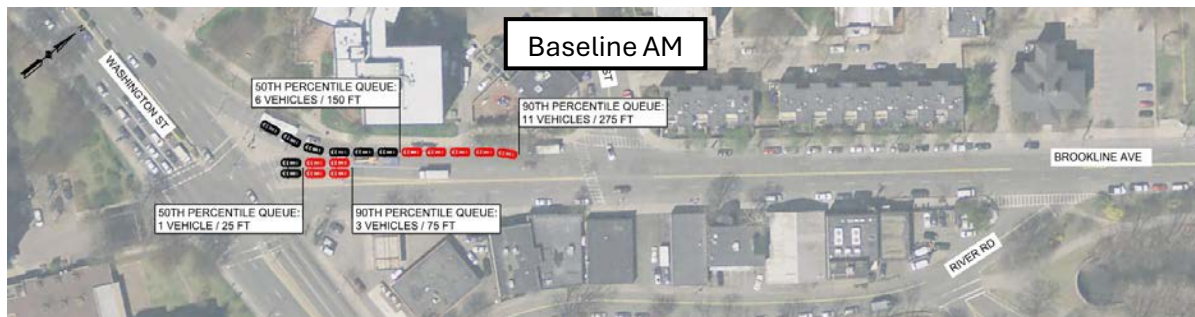
- Increase in AM vehicle queues

Washington Street, approaching Boylston Street (Rt 9), PM



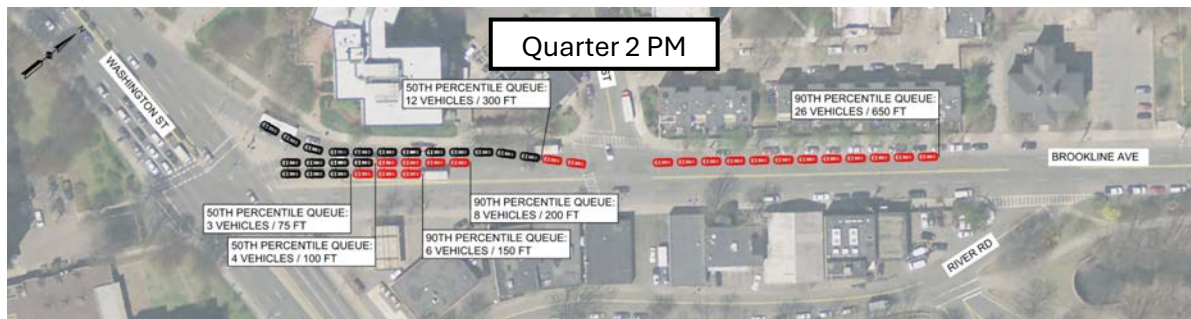
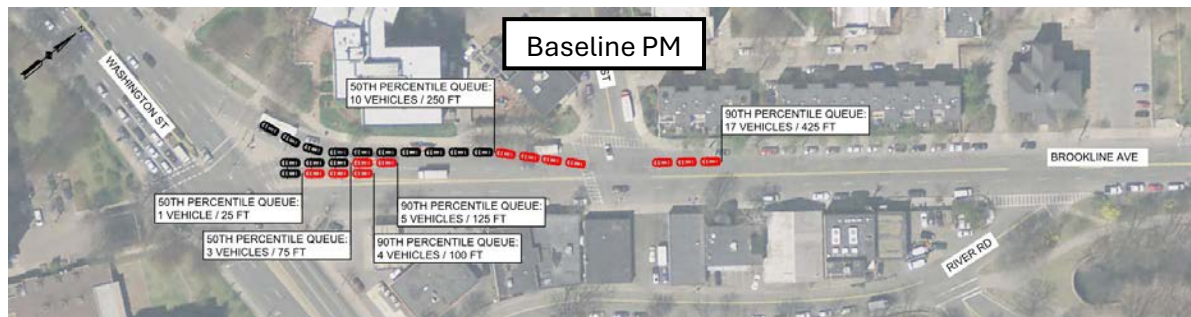
- Increase in PM vehicle queues

Brookline Avenue, approaching Washington Street (Rt 9), AM



- Slight decrease in AM vehicle queues

Brookline Avenue, approaching Washington Street (Rt 9), PM



- Increase in PM vehicle queues

Quarter 2 Complete Results

Queue Length of Boylston St EB, west of Washington St

		Left Lane		Right Lane		Total		
		Baseline	Q2	Baseline	Q2	Baseline	Q2	Change
	10th %ile	2	12	1	3	3	15	+485%
AM	50th %ile	9	25	8	16	17	41	+141%
	90th %ile	18	36	18	29	36	65	+80%
	Longest	25	39	25	37	50	76	+52%
	10th %ile	1	6	1	1	2	7	+229%
PM	50th %ile	8	16	8	5	16	21	+28%
	90th %ile	14	22	14	11	28	33	+19%
	Longest	21	25	22	17	43	42	-2%

Queue Length of Washington St SB, north of Boylston St

		Left Lane		Center Lane		Right Lane		Total		
		Baseline	Q2	Baseline	Q2	Baseline	Q2	Baseline	Q2	Change
	10th %ile	0	1	2	0	2	1	4	2	-50%
AM	50th %ile	2	5	4	1	5	6	11	12	+9%
	90th %ile	5	12	7	4	8	15	20	31	+55%
	Longest	8	17	13	6	9	21	30	44	+47%
	10th %ile	1	3	1	0	4	5	6	8	+35%
PM	50th %ile	3	7	5	1	6	11	14	19	+36%
	90th %ile	8	12	8	3	8	16	24	31	+29%
	Longest	28	16	10	4	11	20	49	40	-18%

↑
Bus only lane

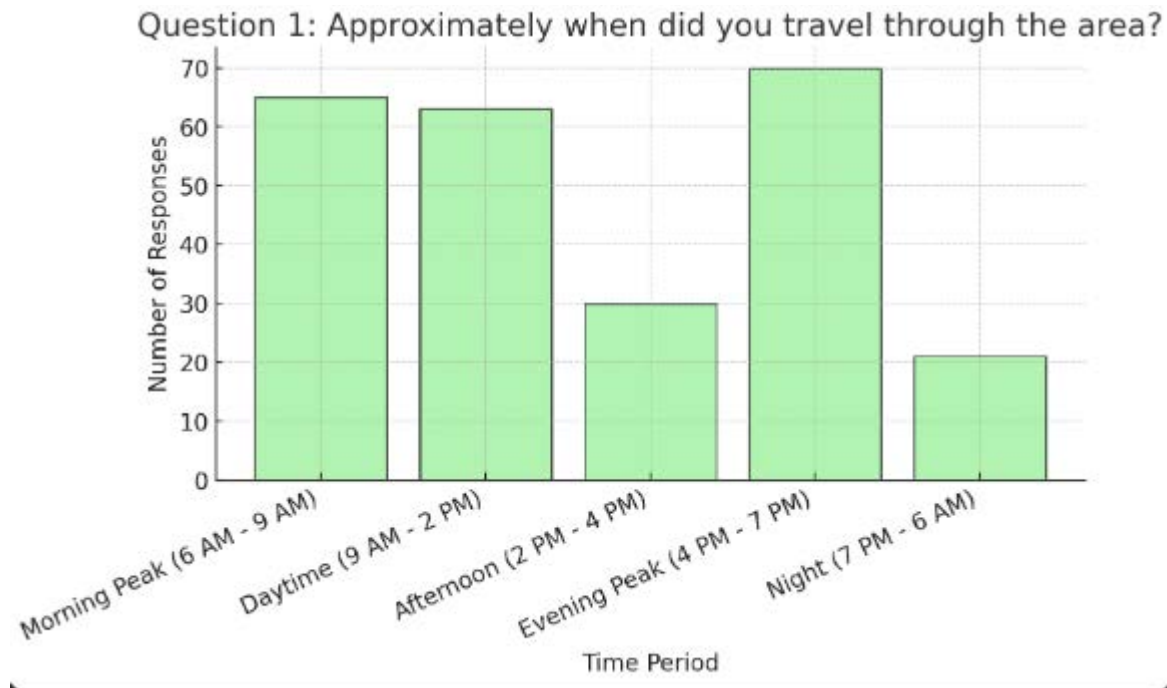
Queue Length of Brookline Ave SB, north of Boylston St

		Left Lane		Center Lane		Right Lane		Total		
		Baseline	Q2	Baseline	Q2	Baseline	Q2	Baseline	Q2	Change
	10th %ile	0	0	0	0	1	2	1	2	+100%
AM	50th %ile	1	1	1	2	6	8	8	11	+38%
	90th %ile	3	3	3	4	11	15	17	22	+27%
	Longest	4	6	4	7	16	16	24	29	+21%
	10th %ile	0	1	1	2	4	5	5	7	+51%
PM	50th %ile	1	3	3	4	10	12	14	19	+32%
	90th %ile	4	6	5	8	17	26	26	40	+55%
	Longest	6	10	8	11	21	41	35	62	+77%

Appendix F

Survey Results as of March 5, 2025

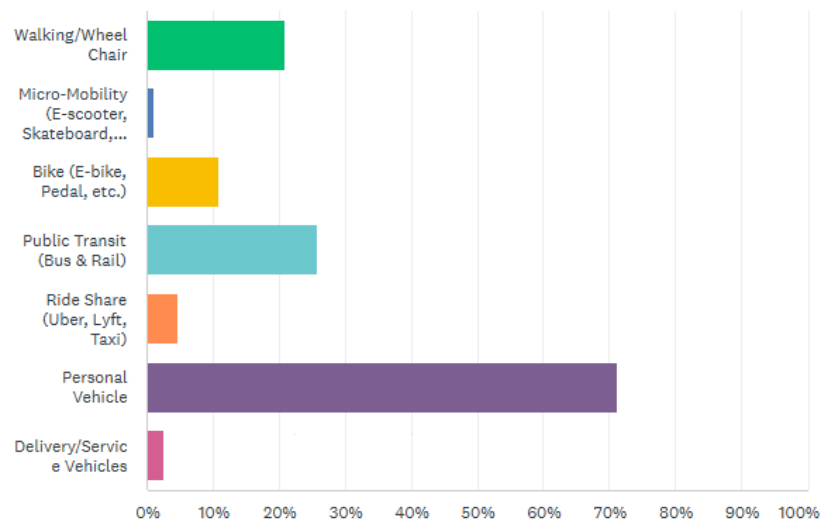
Gateway East Bus Lanes Pilot Survey: Question 1



Gateway East Bus Lanes Pilot Survey – Question 2

What modes did you use when traveling through this area?

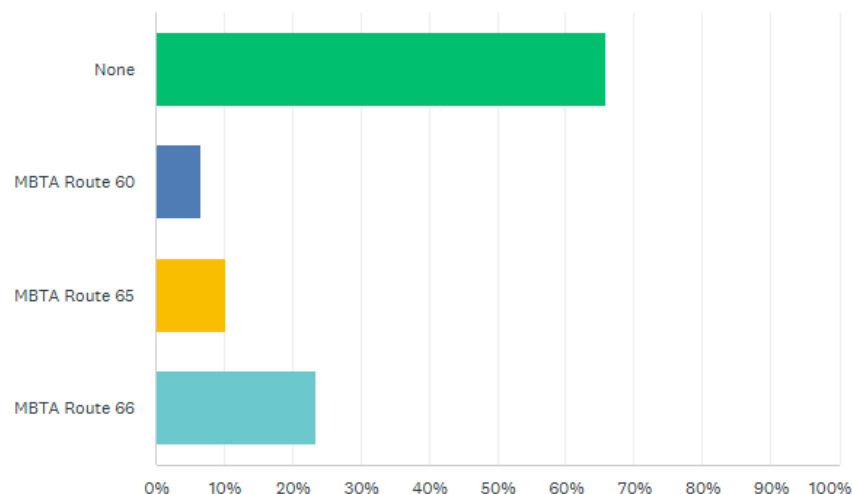
Answered: 278 Skipped: 9



Gateway East Bus Lanes Pilot Survey – Question 3

If you used MBTA bus service, which route?

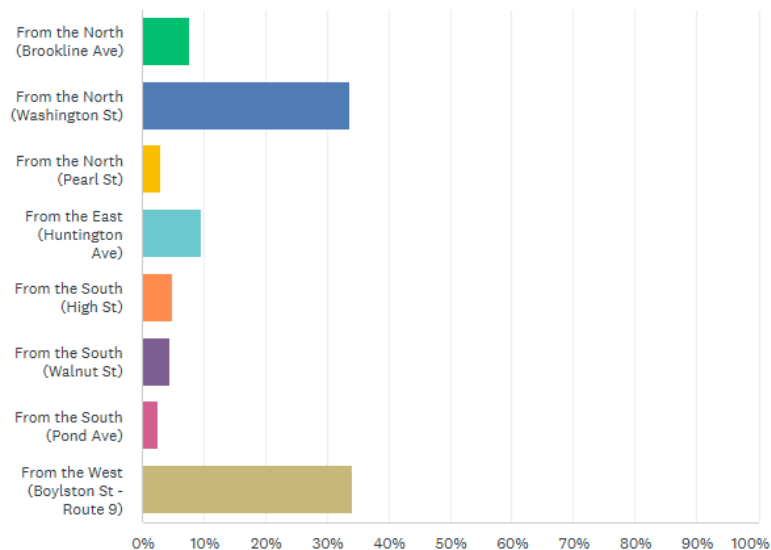
Answered: 214 Skipped: 73



Gateway East Bus Lanes Pilot Survey – Question 4

On this trip where did you come from?

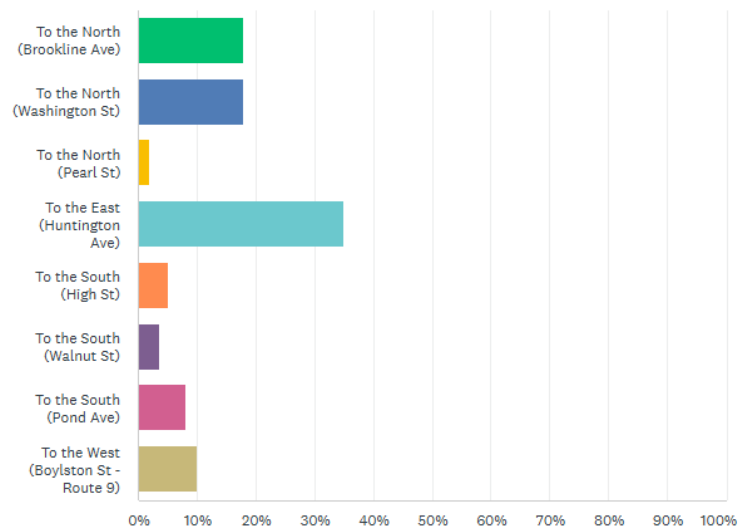
Answered: 270 Skipped: 17



Gateway East Bus Lanes Pilot Survey – Question 5

On this trip where were you going?

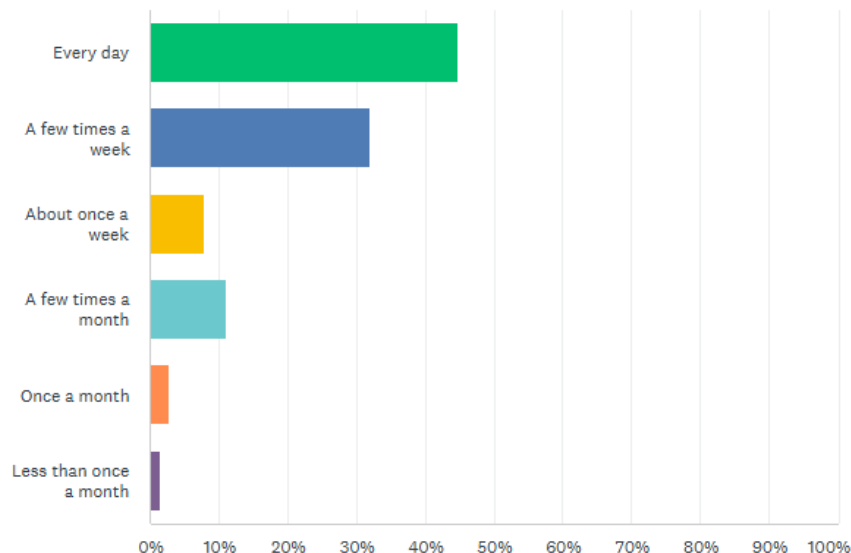
Answered: 268 Skipped: 19



Gateway East Bus Lanes Pilot Survey – Question 6

How often do you travel through this area? (Select One)

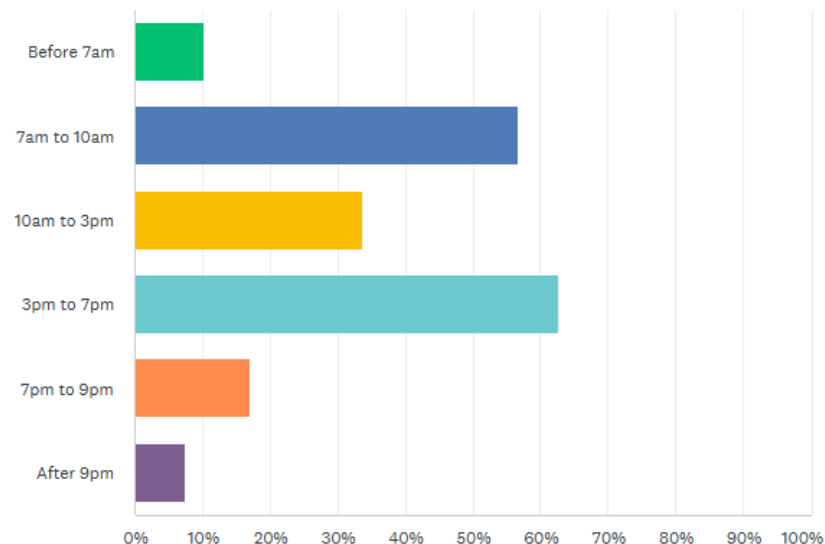
Answered: 281 Skipped: 6



Gateway East Bus Lanes Pilot Survey – Question 7

What time do you typically travel through this area?

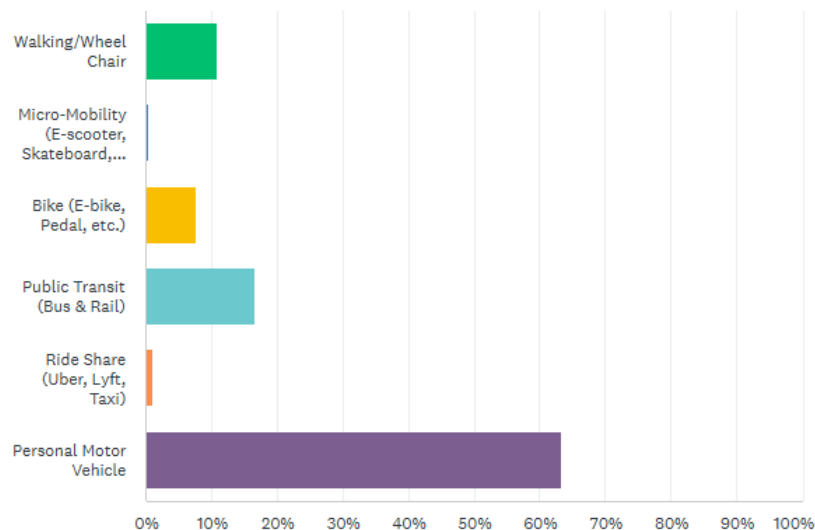
Answered: 282 Skipped: 5



Gateway East Bus Lanes Pilot Survey – Question 8

What is your primary mode of transportation when traveling through this area? (Select one)

Answered: 283 Skipped: 4



Gateway East Bus Lanes Pilot Survey – Question 9

The dedicated bus lane has improved safety for:

Answered: 283 Skipped: 4

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL
▼ those walking through this area	38.18% 105	13.82% 38	25.45% 70	11.27% 31	11.27% 31	275
▼ those biking or using micro-mobility devices through this area	37.50% 102	16.18% 44	23.16% 63	12.13% 33	11.03% 30	272
▼ those taking public transit through this area.	24.72% 67	8.49% 23	28.41% 77	20.66% 56	17.71% 48	271
▼ those driving through this area.	54.64% 153	12.50% 35	16.07% 45	10.00% 28	6.79% 19	280

Gateway East Bus Lanes Pilot Survey – Question 10

The dedicated bus lane has improved access for:

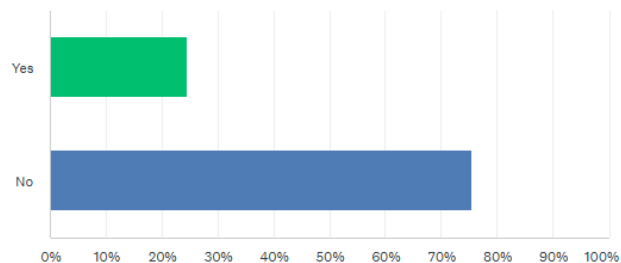
Answered: 282 Skipped: 5

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL
▼ those walking through this area	36.59% 101	13.41% 37	29.35% 81	9.78% 27	10.87% 30	276
▼ those biking or using micro-mobility devices through this area	33.46% 91	15.44% 42	26.47% 72	13.60% 37	11.03% 30	272
▼ those taking public transit through this area.	23.33% 63	9.63% 26	21.48% 58	22.59% 61	22.96% 62	270
▼ for those driving through this area.	58.27% 162	12.95% 36	20.14% 56	4.32% 12	4.32% 12	278

Gateway East Bus Lanes Pilot Survey – Question 11 & 12

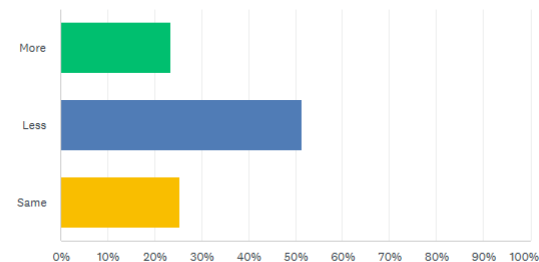
Do you feel your trip is faster with the bus lanes?

Answered: 274 Skipped: 13



Do you feel that your trip time is more or less consistent from day to day with the bus lanes?

Answered: 269 Skipped: 18



Gateway East Bus Lanes Pilot Survey – Question 13

- Q13 Has the dedicated bus lanes caused you to change how you travel through the area? (Open ended)
 - 175 responses Key Themes from the Open ended Comments:
 - Negative Feedback (~75%):
 - Increased Traffic congestion and delays.
 - Drivers feel confused and forced into last-minute lane changes.
 - Insufficient bus frequency to justify the dedicated lane.
 - Gridlock caused by poorly timed traffic signal and misuse of the lane.
 - Attempts to avoid area.
 - Positive Feedback (~10%):
 - Improved reliability and speed for buses.
 - Some responder are more likely to use buses.
 - Neutral or Unclear Feedback (~15%):
 - Observations without a clear stance (e.g., “no noticeable change”)
 - Mixed sentiments that acknowledge both pros and cons.

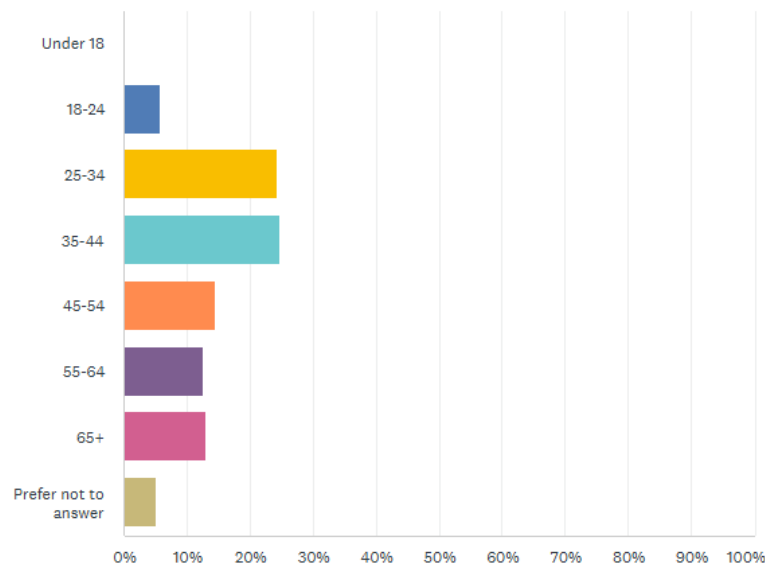
Gateway East Bus Lanes Pilot Survey – Question 14

- Q14 Should the Town and MBTA make changes to the dedicated bus lanes? (Open-ended)
 - 180 responses Key Themes from the Open ended Comments:
 - Negative Feedback (~60%):
 - Strong calls to remove remove the bus lanes or restrict their hours of operation.
 - Frustration over increased congestion and poor implementation while the bus lane is empty.
 - Concerns about drivers not respecting the bus lanes and safety issues with merging and turning.
 - Concerns about unsafe merging, turning conflicts, and widespread driver disregard for bus lane restrictions.
 - Positive Feedback (~20%):
 - Suggestions to adjust signal timings and improve enforcement.
 - Recognition of the potential for better transit efficiency if changes are made.
 - Neutral or Unclear Feedback (~20%)
 - Observations without a clear stance (e.g., “no noticeable change”, “lack of enforcement”)
 - Mixed sentiments that acknowledge both pros and cons.

Gateway East Bus Lanes Pilot Survey – Question 15

What is your age? (Select one)

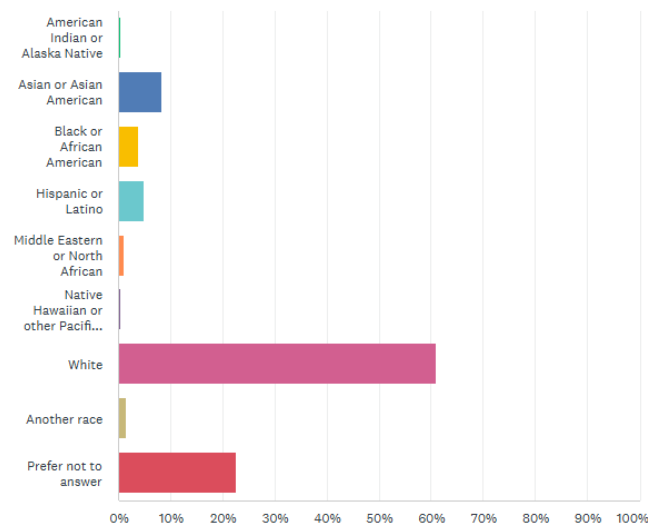
Answered: 276 Skipped: 11



Gateway East Bus Lanes Pilot Survey – Question 16

What is your ethnicity?

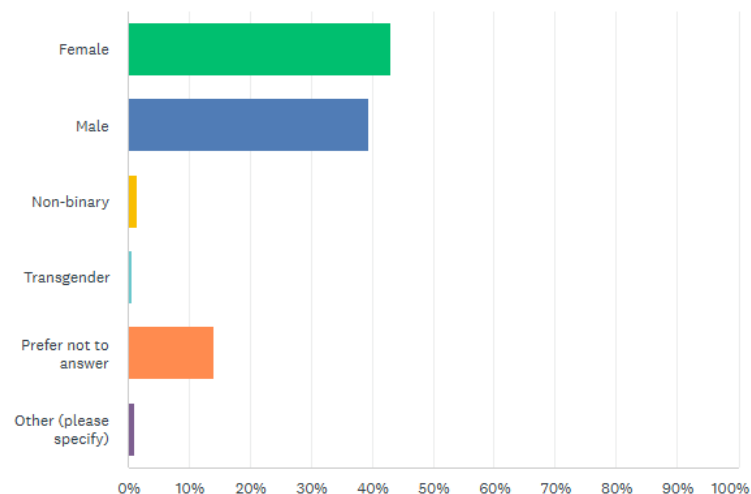
Answered: 262 Skipped: 25



Gateway East Bus Lanes Pilot Survey – Question 17

What is your gender identity? (Select one)

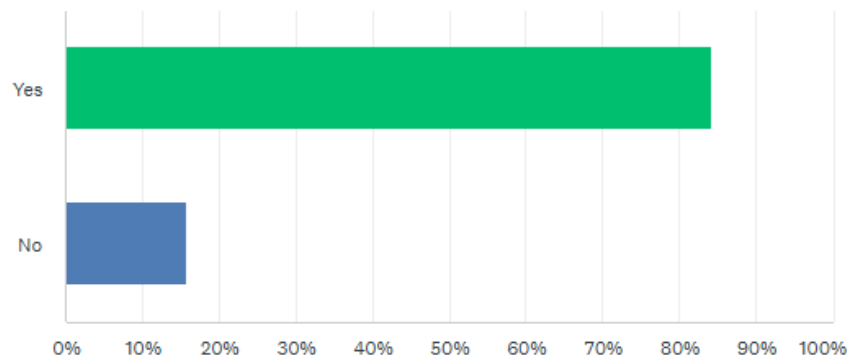
Answered: 269 Skipped: 18



Gateway East Bus Lanes Pilot Survey – Question 18

Do you live or work in Brookline? (Select one)

Answered: 285 Skipped: 2



Better Bus Project

Making transit
better together

Gateway East Bus Priority Lanes Pilot Evaluation

Quarter 3 Analysis
February 1, 2025 – April 30, 2025

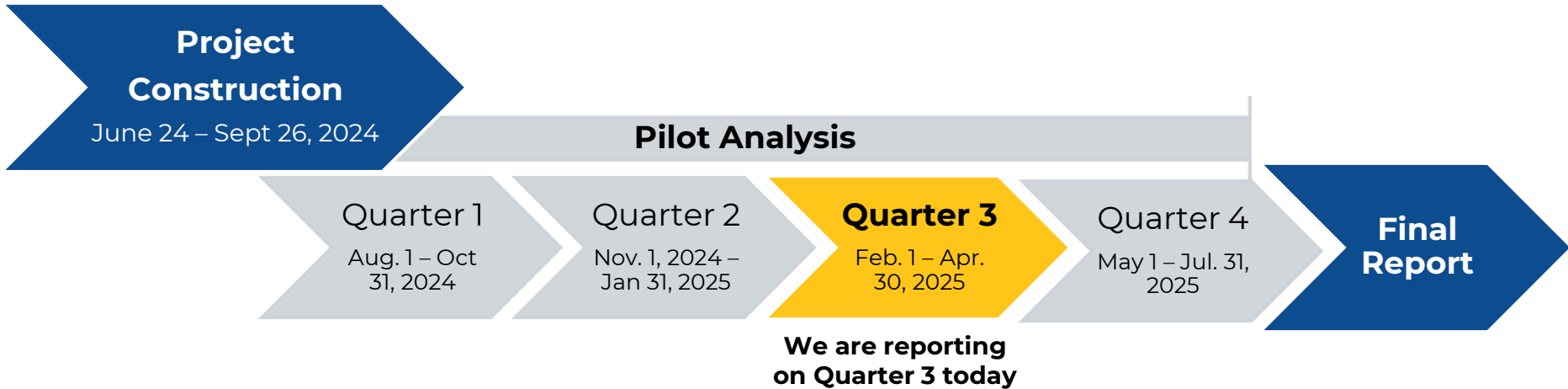
Presentation to Brookline Transportation Board
June 25, 2025

Agenda

- Project Status
- Summary of Quarter 3 Analysis
 - Bus Travel Times
 - Vehicle Volumes & Speeds
 - Vehicle Travel Times & Control Delay
 - Vehicle Queuing
- Key Findings
- Next Steps



Pilot Analysis Schedule



Project Status & Operations Update

Transit Signal Priority

- Due to technical difficulties, the Transit Signal Priority (TSP) elements of the adaptive traffic signaling system are not currently functioning, but are being troubleshooted by the vendor – activation currently anticipated in late June

Bus Lane Enforcement

- BPD is working on an enforcement program. MBTA provided educational flyer that explains regulations & how to turn across bus lanes

Route 9 Eastbound Approach to Bus Lane

- Town reviewing opportunities for advanced warning signage to better organize queues

Other Factors Affecting Local Travel Patterns

- The **Pierce School closure** may explain reduced traffic on Cypress St and increased traffic on Walnut St, as the school was relocated to the old Lincoln School between Boylston St and Walnut St



Quarter 3 Findings

Quarter 3 Summary



Bus lanes have provided consistent travel times for bus riders

Overall, in the *morning inbound peak*, bus travel times in Q3 compared to Q2 are:

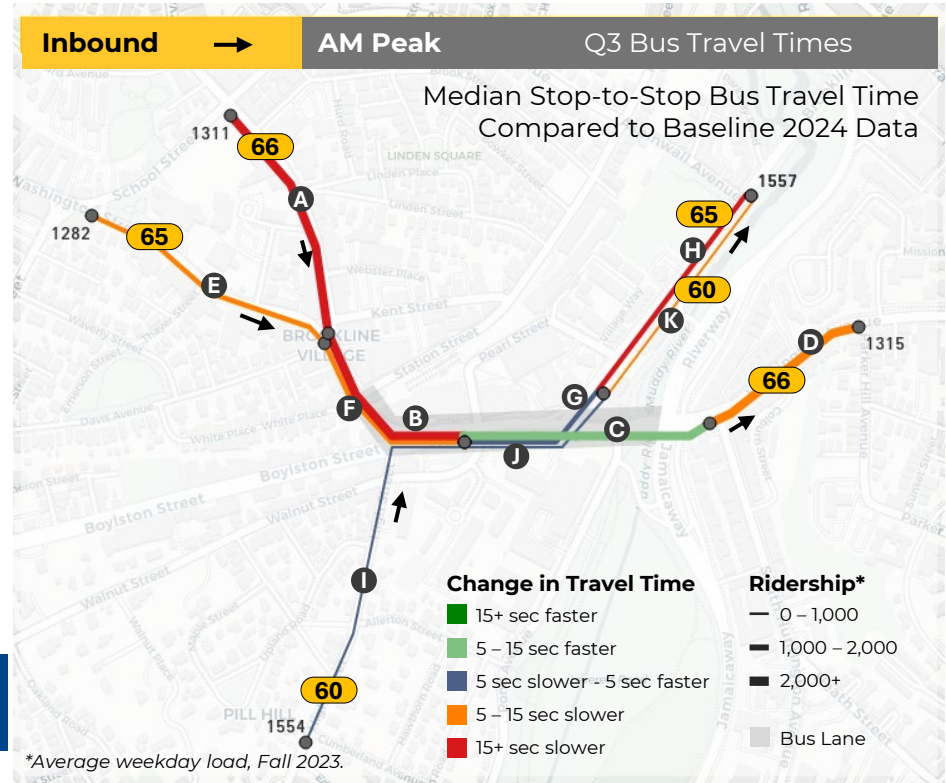
- Improving within the bus lane
- Consistent or slightly slower outside the bus lane
- Segment A continues its trajectory, and performance worsened on segments B, H, G

Compared to the same time-period in 2024:

- Continued congestion leading into and exiting the bus lane
- Improvements in travel time within the bus lane, especially for Route 66 (segment C)

During AM inbound trips, most bus lanes are **protecting bus service from worsening**

*See Appendix B for full details of Bus Service Analysis



Travel time has improved for bus riders

Overall, in the evening outbound peak, bus travel times in Q3 compared to Q2 are:

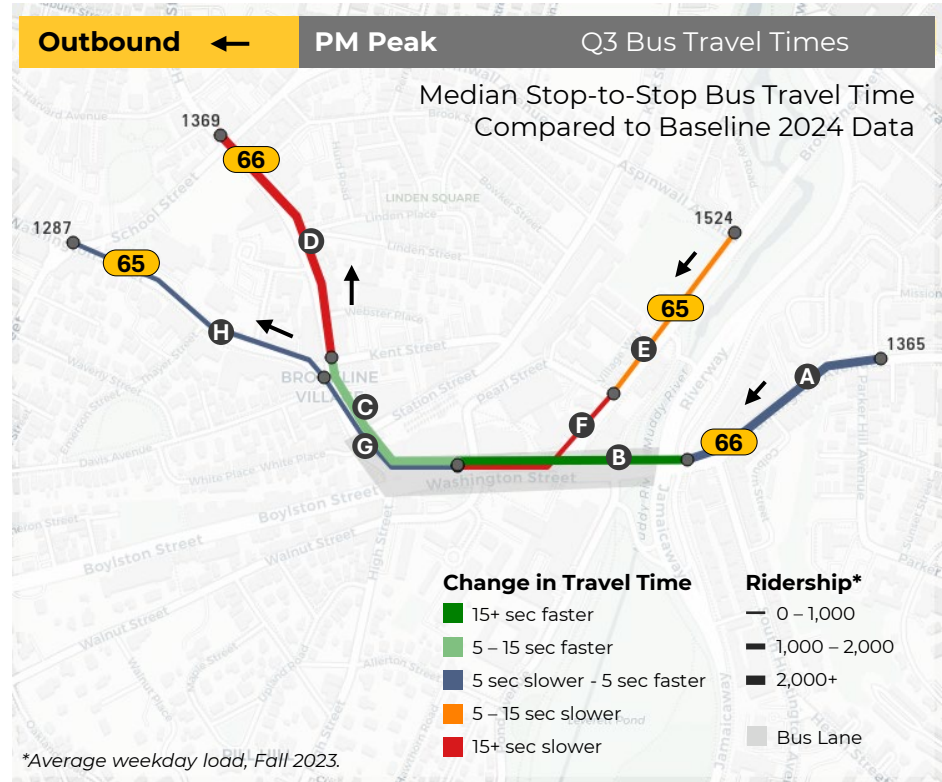
- Improving within the bus lane
- Consistent outside the bus lane.
- Segments F and D continues on the same trajectory and needs further investigation.

Compared to the same time-period in 2024:

- Continued congestion outside of the bus lane
- Faster travel times within the bus lane

During PM outbound trips, the bus lanes are performing well & **achieving significant time savings**

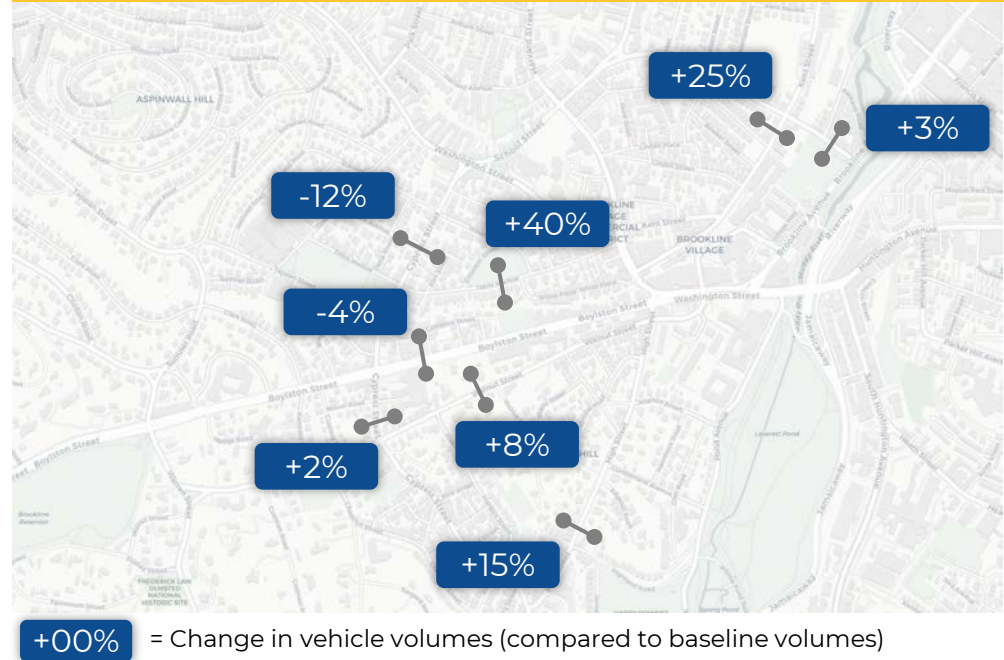
**See Appendix B for full details of Bus Service Analysis*



Vehicle volumes & speeds have remained similar to Q1 and Q2

- **Volumes increased in and around study area by approximately 0.6% on average**, relative to baseline
- Volumes on Route 9 **decreased slightly** with **moderate increase** of volume on side streets
- Some fluctuation with speeds, but in general **most observed speeds decreased**
- Could be options for **traffic calming** in the future if trends don't correct
- Nearby traffic patterns: **Pierce School** closed for construction and relocated to Old Lincoln School on Boylston St/Walnut St

Q3 Average Daily Traffic (ADT) Volume Change – Percentage

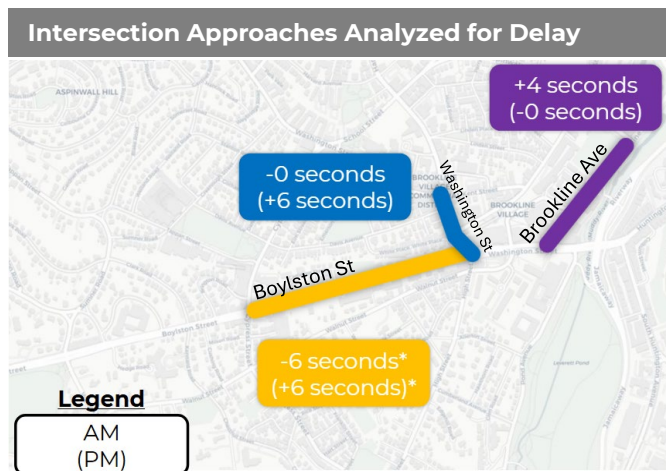


*See Appendix C for full details of Vehicle Volumes & Speeds

Travel times for general traffic have somewhat improved, and delays have remained similar

Intersection delay

- Either remains constant or fluctuates slightly
- Remain broadly similar to Q1, Q2, and baseline



*See Appendix D for full details of Vehicle Travel Times & Control Delay

Corridor travel times

- After some fluctuations in Q1 and Q2, the Q3 corridor travel times stabilized to baseline levels



Inbound	Period	Baseline	Quarter 1	Quarter 2	Quarter 3
	AM Peak	9.0 minutes	9.7 minutes	10.3 minutes	8.8 minutes
	MD Peak	5.7 minutes	6.6 minutes	6.0 minutes	6.5 minutes
	PM Peak	7.0 minutes	7.5 minutes	6.4 minutes	7.3 minutes

Outbound	Period	Baseline	Quarter 1	Quarter 2	Quarter 3
	AM Peak	6.2 minutes	6.0 minutes	6.0 minutes	6.0 minutes
	MD Peak	5.5 minutes	5.9 minutes	5.7 minutes	6.0 minutes
	PM Peak	8.5 minutes	8.8 minutes	8.3 minutes	8.4 minutes

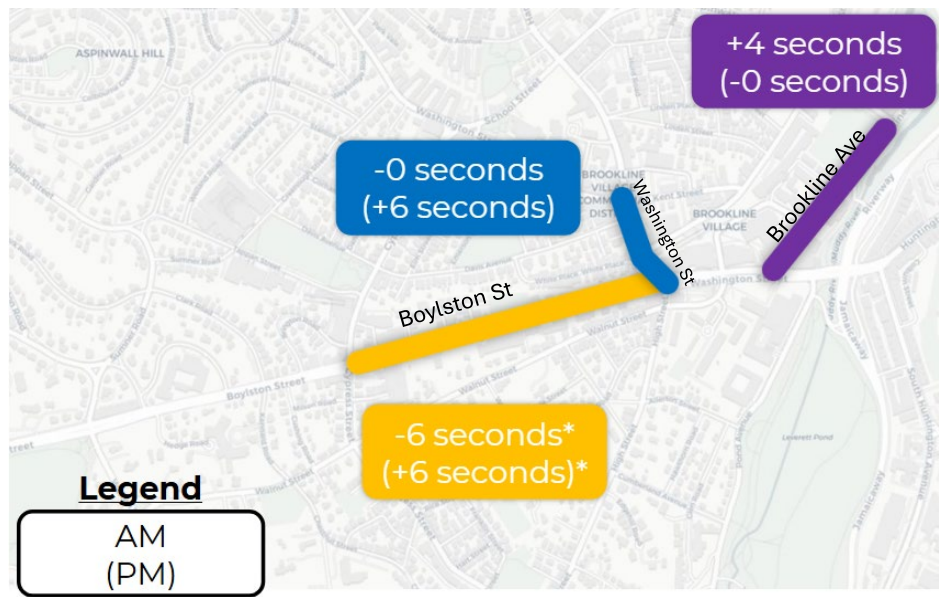
Vehicle queue lengths have seen minor increases at most approaches

Queue lengths:

Minimal increases in queue lengths at most approaches, but intersection delays (at right) are still similar to baseline

- One exception was at the Boylston Street eastbound approach, which saw a significant increase (similar to Q1 and Q2)

Intersection delays:



*See Appendix E for full details of Vehicle Queue Lengths

Summary & Next Steps



Key Findings Summarized

- **Bus Travel Times** have improved in Q3 from Q2.
 - Travel times outside of bus lanes have remained generally consistent from last quarter. Continuing to see faster travel times within the bus lanes.
- **Vehicle Volumes** are relatively consistent from Q1 and Q2
 - Traffic decreased slightly on Route 9 and moderate increase on side streets.
- **Vehicle Speeds** mostly decreased, consistent from Q1 and Q2
- **Vehicle Travel Times** have stabilized to baseline levels
 - Intersection delays remain broadly similar to Q1, Q2, and baseline
- **Vehicle Queue Lengths** increased minimally, while delays remained consistent
 - One exception was at the Boylston Street eastbound approach, which saw a significant increase (similar to Q1 and Q2)
- **User Feedback Surveys** continue to remain open throughout the pilot

Next Steps

- **Continue monitoring** & reporting quarterly throughout pilot duration
 - **Next report - Summer 2025: Quarter 4 (May 1, 2025 – July 31, 2025)**
- **MBTA continue coordination on activating Transit Signal Priority** with adaptive signal system vendor
 - Currently, Transit Signal Priority is expected to be activated in late June 2025
- Brookline continue coordination with BPD on **education & enforcement**
- **Discuss extending the pilot** to ensure the pilot analysis reflects quarters with Transit Signal Priority fully activated

Appendix

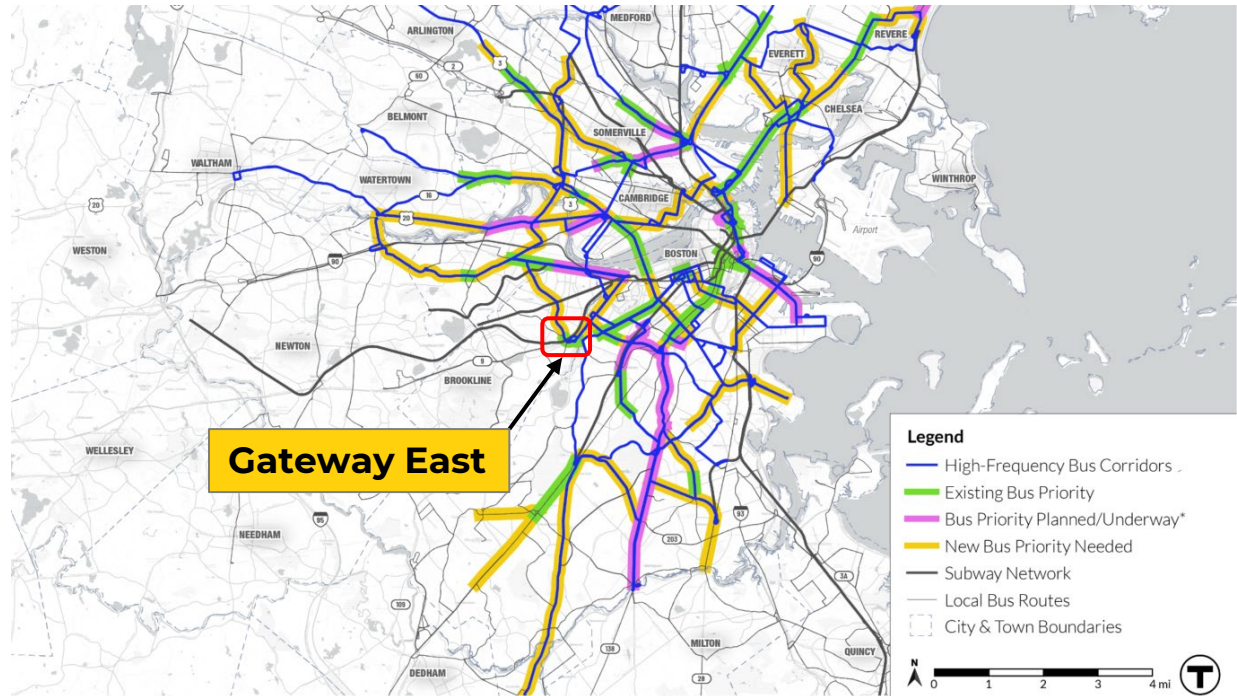
Appendix A

Project Background

MBTA Bus Priority

MBTA's Bus Priority Vision Plan

- **Targets existing delay** and service along 26 corridors
- Improves service to **220,000 daily bus riders**
- Covers 10-15% of the bus network; **impacts 80% of all bus riders**
- 5-7+ years of implementation



Gateway East: Route 66 Network Context

Route 66 is **the 2nd busiest line in the entire MBTA bus system**

Connects Red Line, Green Line, Orange Line, Silver Line, & several Frequent Bus Routes between Harvard & Nubian Stations

Gateway East project benefits nearly **15,000 daily riders** on Routes 60, 65, 66 – half of which travel through the project

 Route 66 is a **Frequent Bus Route** (every 15 min or better)



Gateway East: Route 66 Network Context

Existing Projects

- Gateway East Bus Lanes
- Brighton Ave Bus Lanes
- Harvard Bus Tunnel Reroute
- TSP at Packard's Corner
- Huntington Ave Bus Lanes
- Tremont Street Queue Jump

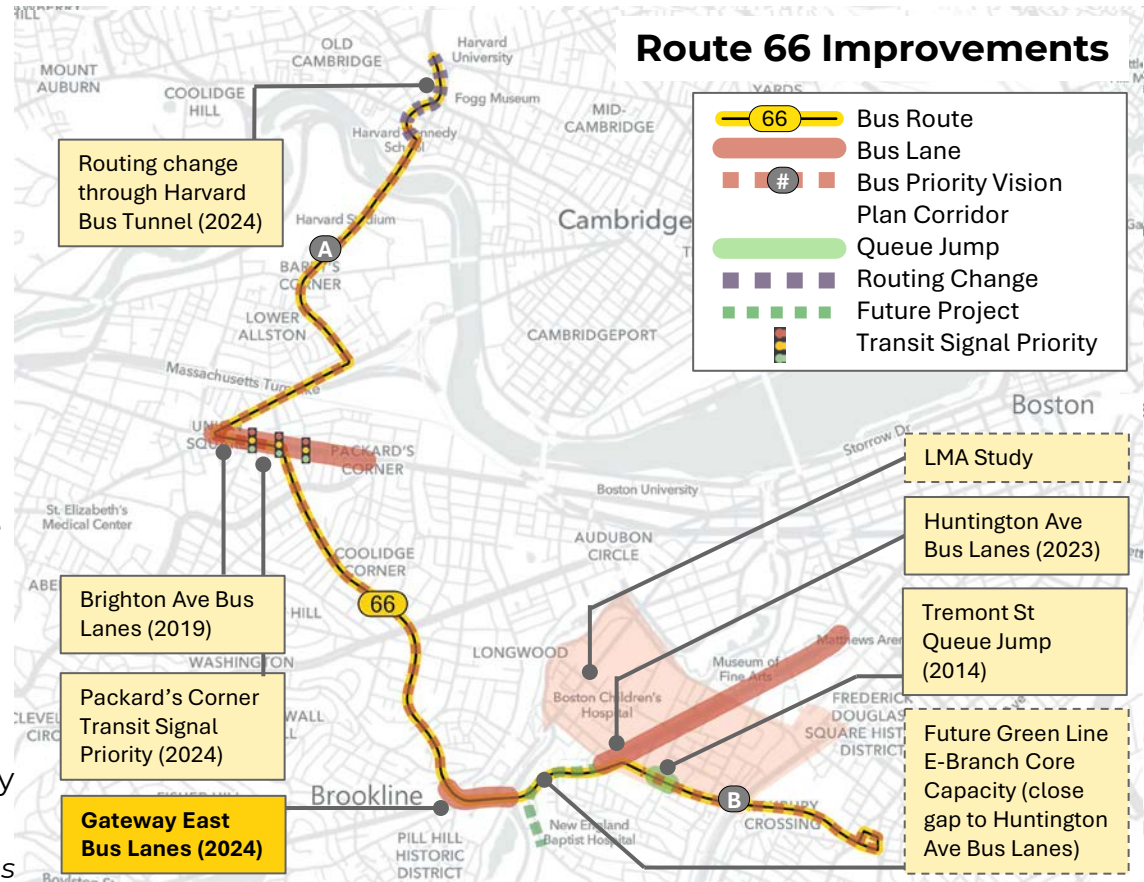
MBTA Bus Priority Vision Plan Corridors

- Ⓐ Harvard Sq - Brookline Village
- Ⓑ Nubian Sq - LMA (via Malcom X Blvd)

In Development

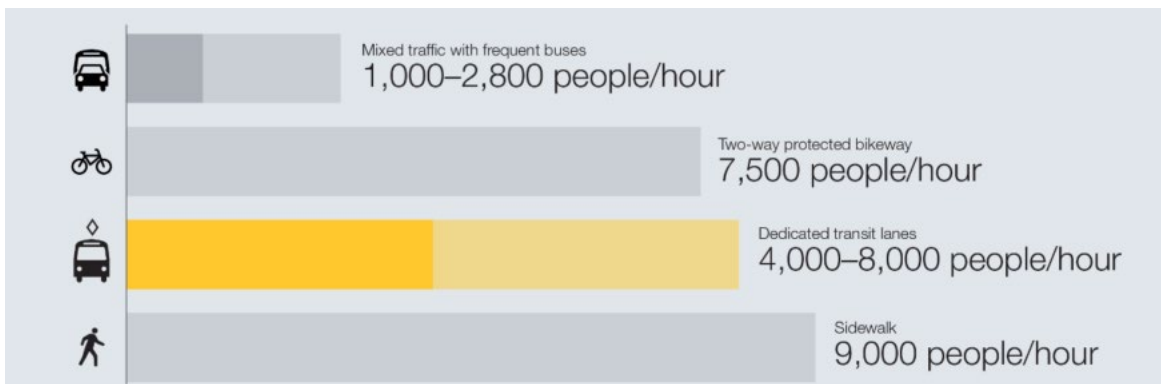
- Green Line E-Branch Core Capacity: Transit Lanes on Huntington Ave
- Longwood Medical Area Study

Future approach will address delays along the 66 by targeting key junctions



Transit Priority Moves More People

How many people can the space of one travel lane serve?



Person-Throughput Capacity (Graphic from MBTA Bus Priority Toolkit)

By repurposing space for transit, bus lanes can **increase the number of people that can travel along the corridor**, supporting future growth and mode shift to transit.



Project Goals: Why Are Bus Lanes Needed?

- **Fastest, most affordable way** to improve transit service for riders in a short time frame
- **Improving access** to Longwood Medical Area, grocery stores, and other essential services throughout the pandemic and recovery
- **Improving transit equity** by supporting the commuting needs of essential workers, low-income people, and people of color
- **Moving more people more efficiently**



Gateway East, before the bus lanes

MBTA's Bus Priority Projects

Advance the Bus Priority Vision Plan to reduce bus rider delay through projects such as

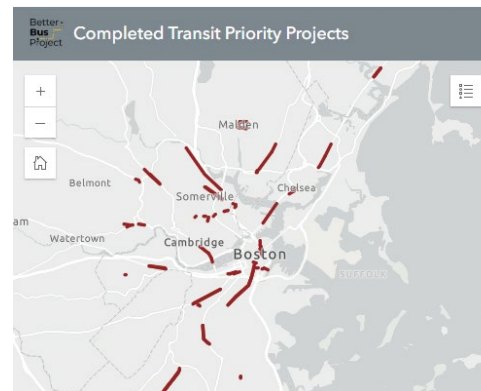
- Bus lanes
- Queue jumps
- Transit signal priority (TSP)

Growth of Bus Priority Projects in Greater Boston

- 40+ miles of bus lanes have been installed
- TSP has been activated at 85+ locations
- Collaboration is ongoing between MBTA and 12+ partner municipalities



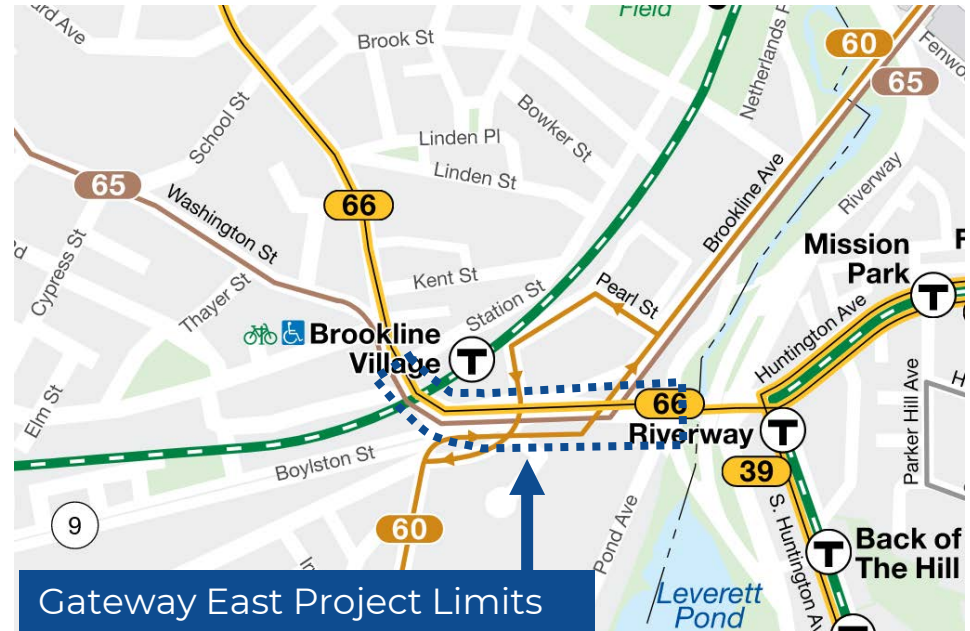
*Bus lanes completed as of **2015***



*Bus lanes completed as of **2024***

Project Motivation: Critical Transit Connection

- **Crossroads for three busiest bus routes** servicing Brookline: 60, 65, and 66 - highest bus ridership in all of Brookline
- Route 66 is **the 2nd busiest line in the entire MBTA bus system**
- Critical connections to and from the **Longwood Medical Area**, the Green Line (D and E branches), and other transit services
- Gateway East is the **busiest section of roadway** in Brookline for MBTA buses



MBTA Bus Map

Project Motivation: Bus Ridership & Equity

Typical Ridership on the Route 66 Bus

- 55% are from households without vehicles
- 40% are from households with incomes of less than \$43,500
- 40% are people of color
- 67% are women

Benefits nearly **15,000 daily riders** on Routes 60, 65, 66 – half of which travel through the Gateway East Corridor

During peak hours, the average 66 bus passing through the corridor has 35-45 riders - this means **multiple riders standing**



Route Number	Total Weekday	Through Riders
66*	11,293	5,086
65	2,396	1,833
60	873	343
Total	14,562	7,262

**Second-highest ridership in entire MBTA bus system*

Gateway East Bus Lane Pilot

Project Background

The **Gateway East Bus Lane Pilot** is a collaborative effort between MBTA, MassDOT, and The Town of Brookline to **build on the 2021 corridor reconstruction**.

One of principles the Brookline Transportation Board set for the Priority Bus Lane Pilot:

- **“To prioritize safe, space-efficient, and energy efficient movement of people and goods over the movement and parking of private vehicles when designing and improving our public ways with particular focus on high traffic routes connectivity and directness** consistent with Brookline Town meetings almost unanimously approval of Warrant Article 31 (WA31), titled as a **“resolution to respond to climate change by prioritizing health, access, and equity of Brookline’s public ways.”**”



Pilot Performance Indicators

- User Feedback Surveys
- MBTA Bus Travel Time
- MBTA Bus Travel Time Variability
- Volume and Speed tracked on Boylston St, Secondary Roads, and Residential Side Streets
- Vehicle Travel Times and Control Delay
- Queue Length Analysis



Project Timeline

2020: Collaborative planning effort began.

2021: Brookline Transportation Board authorized Gateway East Bus Priority Lane Pilot project, funded by the MBTA.

2024: Dedicated bus lanes were implemented on Washington St between Station St and the Town Line in both directions.

2024-2025: The pilot is expected to run for one year between August 2024 and July 2025 (note: bus lane installation occurred 6/24/2024 to 9/26/2024).

Quarterly evaluations of the pilot's impacts on bus travel times and car traffic are being conducted by Arcadis and Toole Design Group.



Gateway East, before



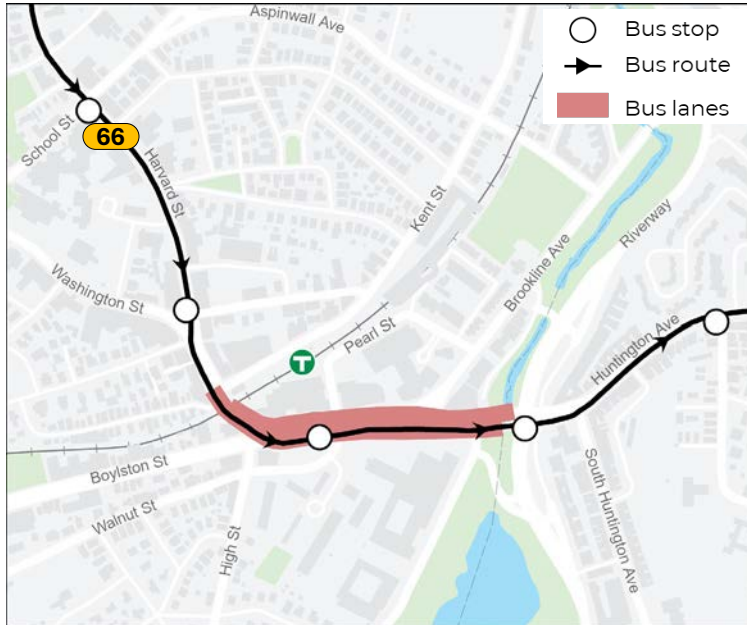
Gateway East, after



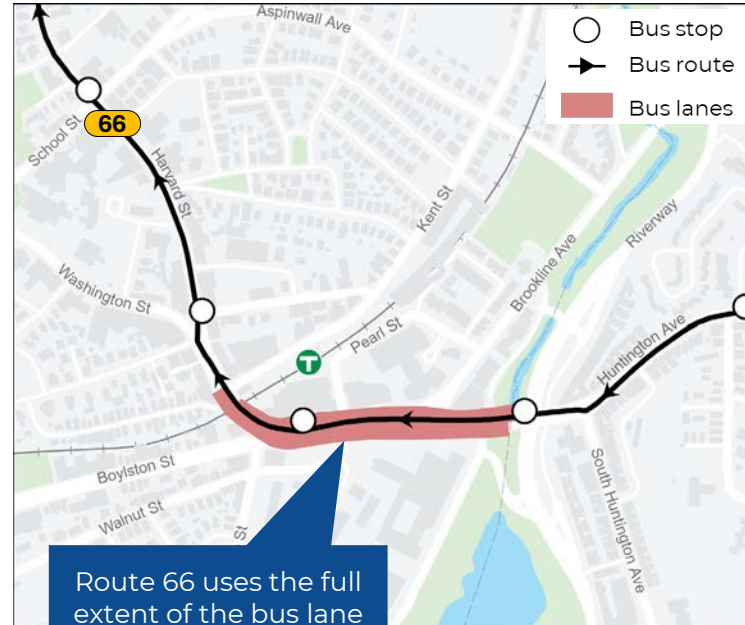
Gateway East, after
Photo Credit: Toole Design

Bus Routing Through the Project Area

66 Inbound



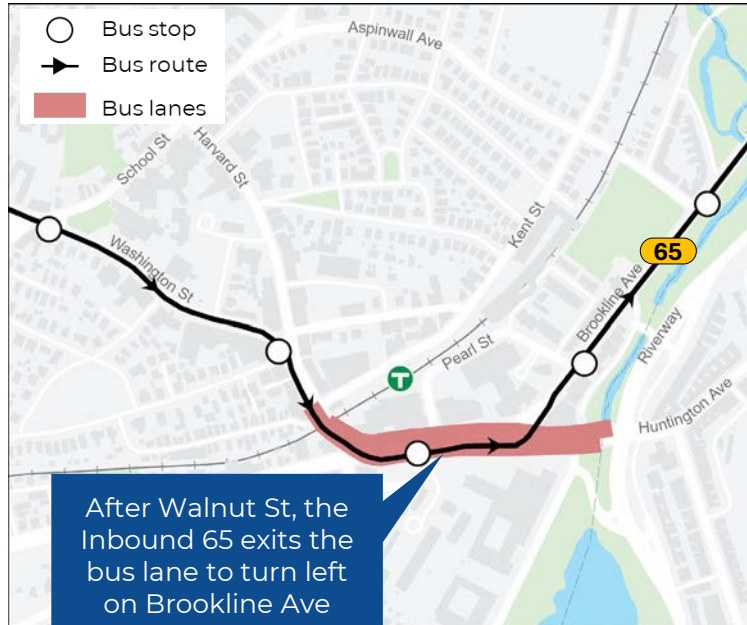
66 Outbound



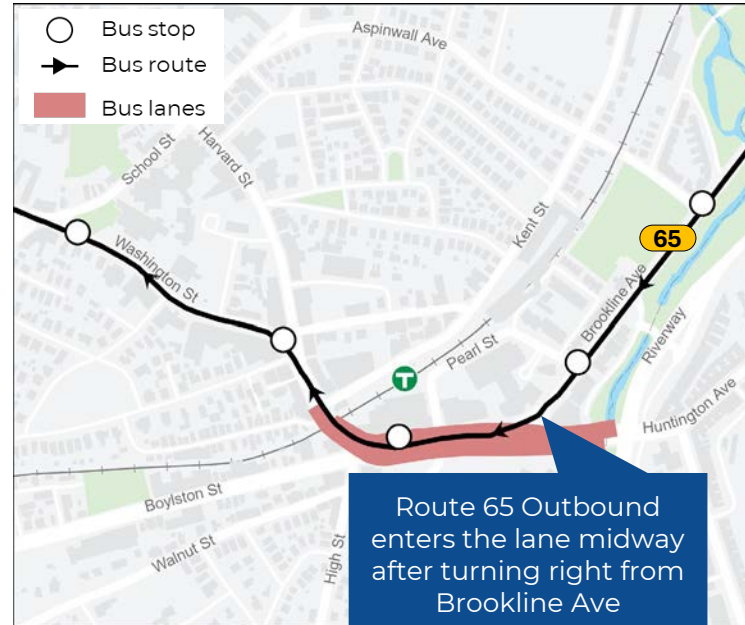
Route 66 uses the full extent of the bus lane in both directions

Bus Routing Through the Project Area

65 Inbound

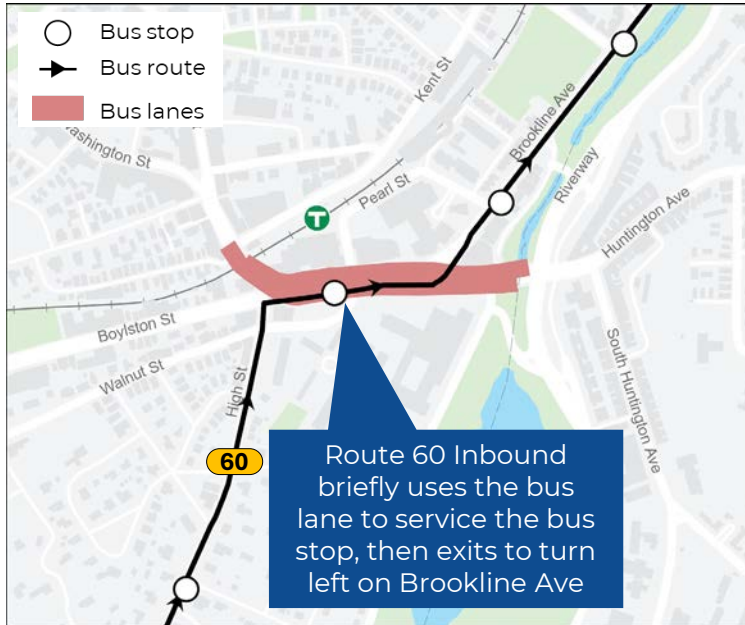


65 Outbound

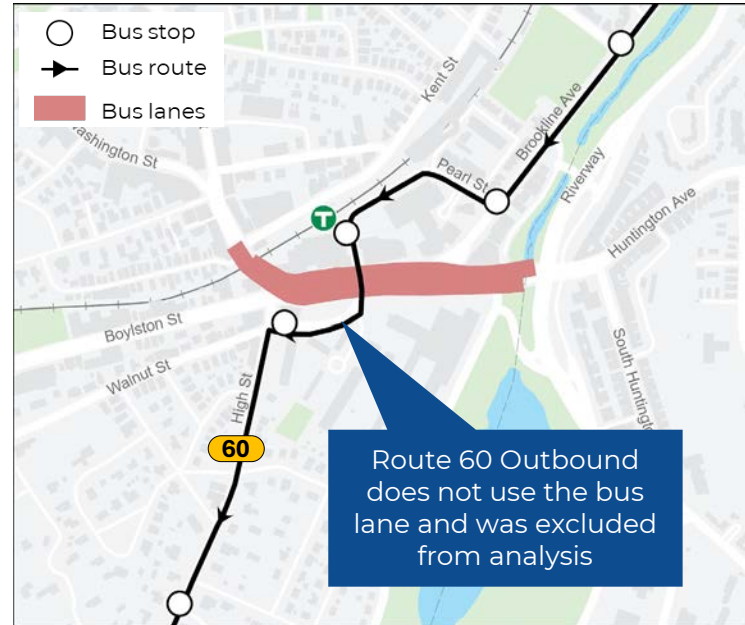


Bus Routing Through the Project Area

60 Inbound



60 Outbound



Project Status

Project Status & Operations

Construction – Markings & Signs Completed late September

- Installation period extended well into the Q1 analysis period, ending 9/26/24 due to delays with signage installation

Traffic Signals – New Signaling System Not Currently Activated

- Due to technical difficulties with the vendor, the Adaptive Signal System with Transit Signal Priority is only in partial operation.



T CEX

Project Status & Operations

Enforcement

- Start of enforcement postponed due to delays with signage installation
- Provided time for drivers to adjust
- BPD is working on an enforcement program. MBTA provided educational flyer that explains regulations & how to turn across bus lanes

Other Factors Affecting Local Travel Patterns

- The **Pierce School closure** may explain reduced traffic on Cypress St and increased traffic on Walnut St, as the school was relocated to the old Lincoln School between Boylston St and Walnut St



Quarter 1 should be viewed as an adjustment period due to the conditions listed above.

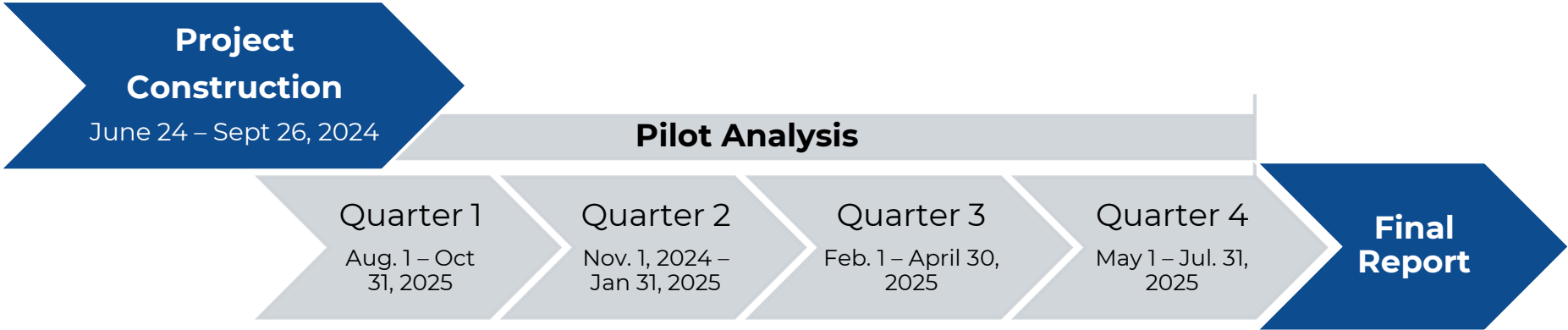
Public Feedback - Gateway East Bus Lane Pilot Survey

The survey was launched in mid-November and promoted through various channels, including:

- DPW and Town social media
- The Town Administrators' Newsletter
- The Longwood Collective Newsletter
- Eye-catching yard signs along the corridor
- The survey remains open for the duration of the pilot and we'd love to hear from you! Haven't taken the survey? Go to: <https://www.surveymonkey.com/r/CN3S9WZ>
- Survey results are included in the final Appendix.



Pilot Analysis Schedule



Data Collection Schedule

Period	Period Dates*	Traffic Count Dates	INRIX Dates	Queuing Dates
Baseline	Aug 1 – Oct 31, 2023	Sep 26-28, 2023	Jun 2024**	May 18, 2021***
Quarter 1	Aug 1 – Oct 31, 2024	Oct 8-10, 2024	Oct 2024	Dec 3, 2024
Quarter 2	Nov 1, 2024 – Jan 31, 2025	Feb 25-27, 2025	Jan 2025	Feb 26, 2025
Quarter 3	Feb 1 – Apr 30, 2025	Apr 8-10, 2025	Apr 8-10, 2025	Apr 8, 2025
Quarter 4	May 1 – Jul 30, 2025	Jul 2025	Jul 2025	

**APC data for travel time analysis collected over entire period.*

***INRIX Blackout from 6/2023 – 2/2024*

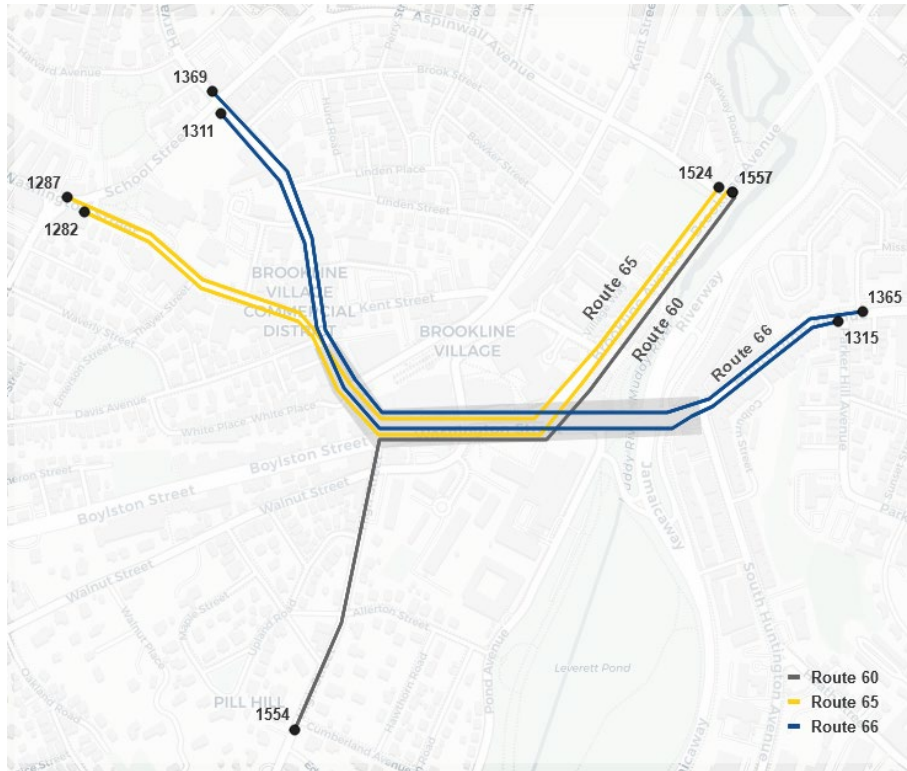
****Baseline queue data may be affected by decreased traffic in wake of COVID-19 pandemic*

Appendix B

Bus Travel Times

Methodology

Analysis Area



Route 60 inbound between High St at Cumberland Ave (1554) and Brookline Ave opposite Aspinwall Ave (1557)

Route 65 inbound between Washington St at Cypress St (1282) and Brookline Ave at Aspinwall Ave (1557)

Route 65 outbound between Brookline Ave at Aspinwall Ave (1524) and Washington St at School St (1287)

Route 66 inbound between Harvard St at School St (1311) and Huntington Ave at Parker Hill Ave (1315)

Route 66 outbound between Huntington Ave opposite Parker Hill Ave (1365) and Harvard St at Aspinwall Ave (1369)

Data

- All analysis was completed using stop arrival and departure times in **automatic passenger counter (APC)** data.
- Data was collected for **weekdays** from February 2025 through April 2025.
 - The baseline period was weekdays from February 2024 through April 2024.
- MBTA-defined **time periods**:
 - AM Peak: 7:00 AM to 9:00 AM
 - Afternoon: 2:00 PM to 4:00 PM (*corresponds with the end of school*)
 - PM Peak: 4:00 PM to 7:00 PM

Metrics

Travel Time	Variability (MBTA Metric)	Travel Time Quality of Service (TTQOS)	Travel Time Variability Quality of Service (TTVQOS)
Median travel time of a vehicle over a segment at a given time.	Relative difference between the median and 90 th percentile of travel times.	Letter grade (A to E) for how much delay vehicles experience on average over a segment at a given time.	Letter grade (A to E) for how consistent vehicle travel time is over a segment at a given time.

Metrics

TTQOS = $\frac{\text{average travel time (observed)}}{\text{reference travel time}^*}$

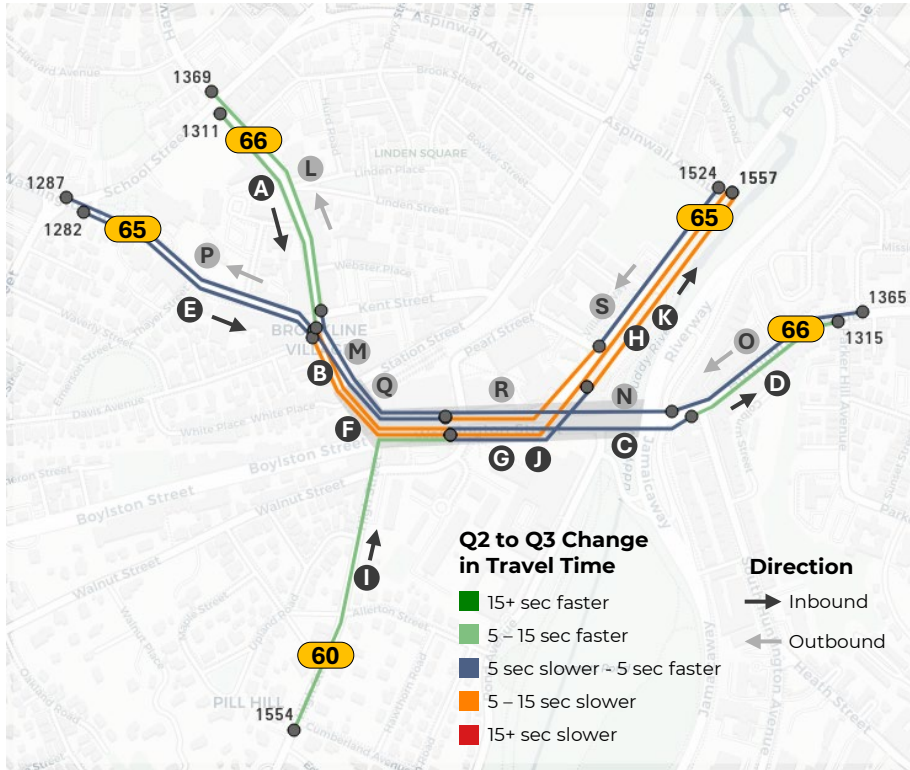
TTVQOS = $\frac{\text{standard deviation travel time (observed)}}{\text{average travel time (observed)}}$

Grade	Metric Upper Threshold		Representative Bus Service
	TTQOS	TTVQOS	
A	1.4	1.4	Fully grade-separated
B	1.8	2.7	Reserved right-of-way, subject to traffic signal control
C	2.4	3.8	Mixed traffic, little to no traffic congestion
D	3.0	5.1	Mixed traffic, modest traffic congestion
E	4.0	8.0	Mixed traffic, moderate traffic congestion
F	N/A	N/A	<i>Perceived as too slow to be a good travel choice</i>

*Based on segment length.

Quarter 3 Findings

What has changed in bus travel times between Q2 and Q3?



Change in Median Stop-to-Stop Bus Travel Time* (seconds)

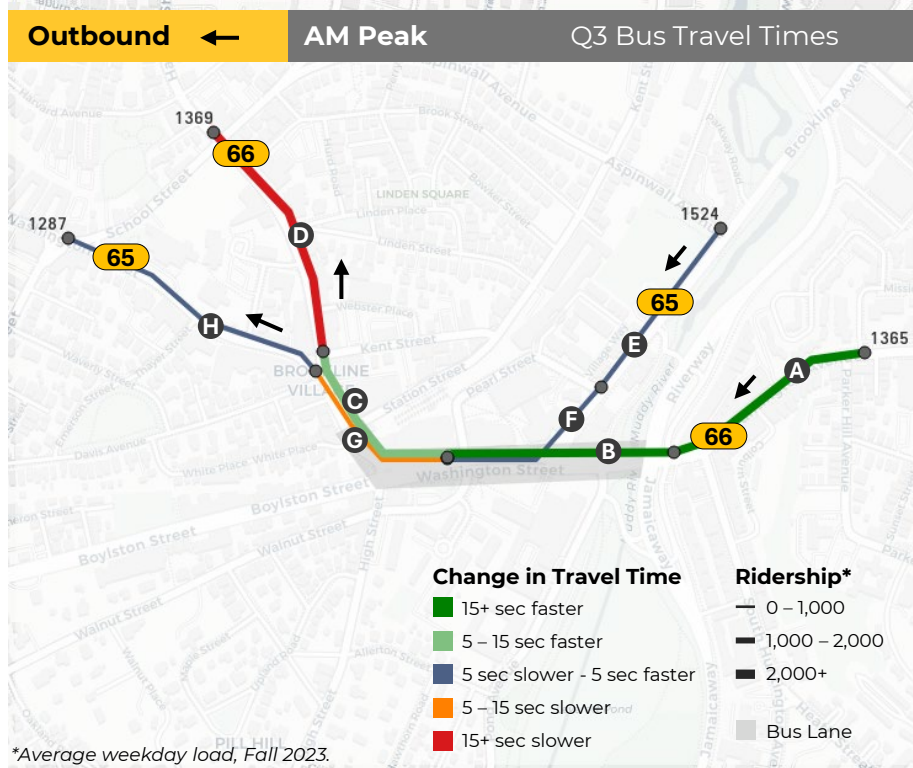
Represents a combination of AM, PM, and afternoon peak periods

	Inbound				Outbound		
	Q2 to Q3 Diff*	Baseline Diff**			Q2 to Q3 Diff*	Baseline Diff**	
		Q2	Q3			Q2	Q3
Route 66				Route 66			
A	-5	36	36	L	-6	31	26
B	7.5	-13	-2.5	M	-1	-11.5	-7
C	0	1	-7	N	5	-23	-24
D	-11	25	6	O	-4.5	-1.5	-8
Route 65							
E	-2	4	2	P	-1	1	-1
F	11	0	6	Q	5	-1.5	2
G	6	10	2	R	13	17	15
H	8	0	13	S	5	4.5	3
Route 60							
I	-7	8	-1				
J	-3	2	-17.5				
K	6	6	19				

*Difference in travel time (s) between Q2 and Q3.

**Difference in travel time (s) between each quarter and its baseline.

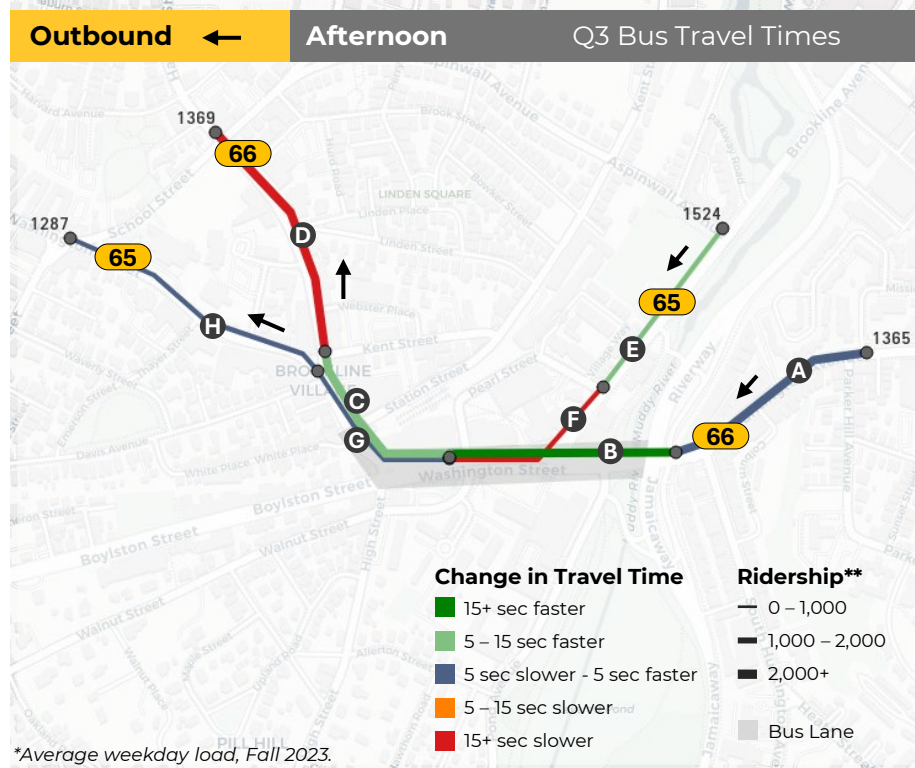
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline	Q3	Change (s)
Route 66			
Full corridor	8:48	8:16	-32
A	2:10	1:46	-24
B	2:21	2:04	-16
C	1:47	1:37	-10
D	2:03	2:33	+30
Route 65			
Full corridor	5:52	6:06	+14
E	1:16	1:15	-1
F	1:51	1:54	+4
G	1:31	1:42	+10
H	1:04	1:03	0

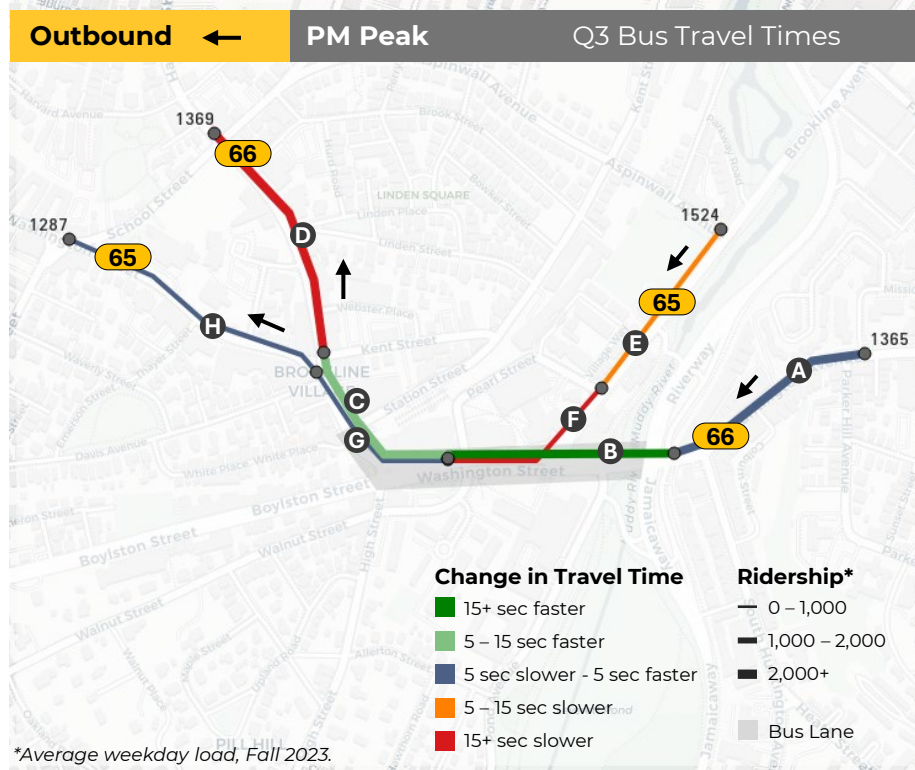
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline	Q3	Change (s)
Route 66			
Full corridor	8:21	8:16	-6
A	2:01	2:00	-2
B	2:31	1:58	-34
C	1:43	1:37	-6
D	1:58	2:22	+24
Route 65			
Full corridor	6:13	6:31	+17
E	1:24	1:16	-7
F	1:49	2:04	+16
G	1:45	1:43	-1
H	1:07	1:04	-3

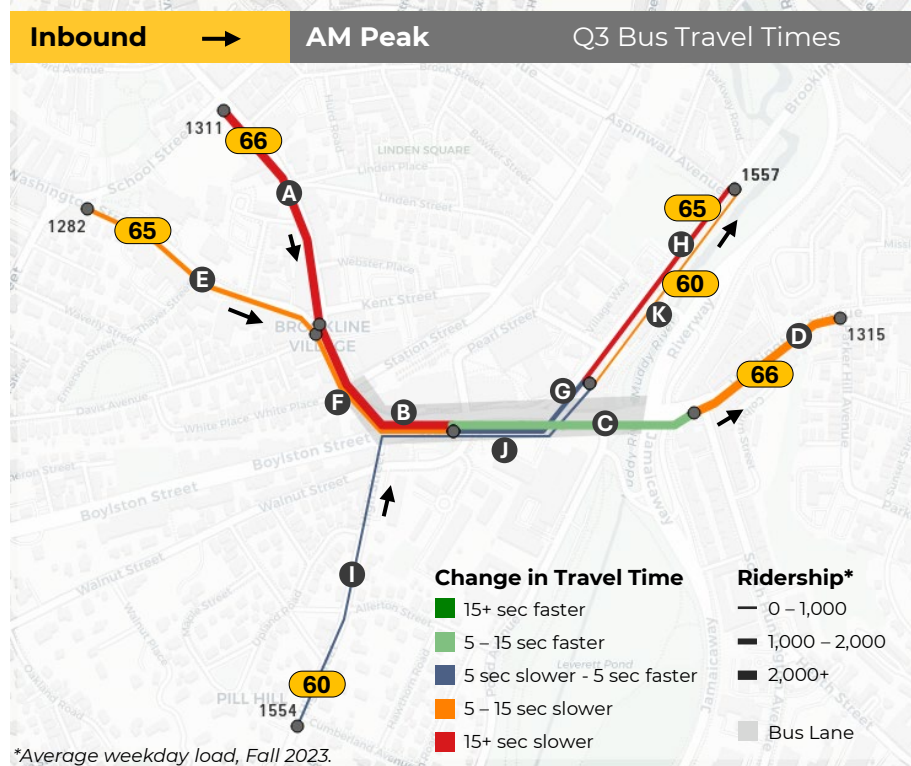
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline	Q3	Change (s)
Route 66			
Full corridor	8:41	8:42	0
A	2:04	2:03	-2
B	2:37	2:13	-24
C	1:43	1:39	-5
D	2:07	2:31	+23
Route 65			
Full corridor	6:34	7:03	+28
E	1:19	1:25	+7
F	1:58	2:19	+22
G	1:51	1:55	5
H	1:07	1:07	-1

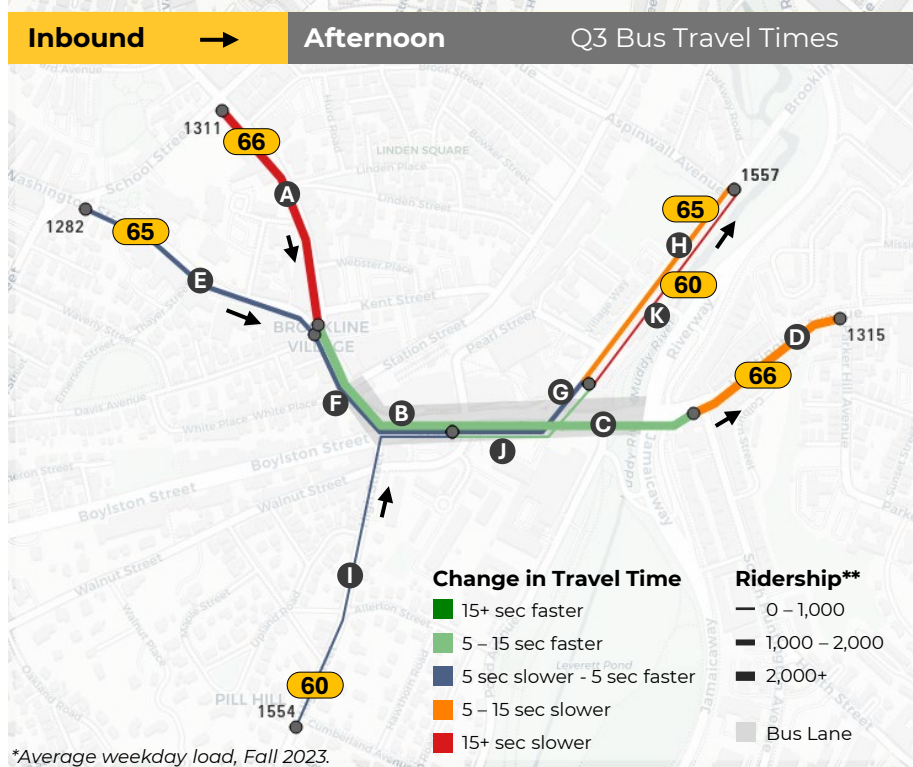
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline	Q3	Change (s)
Route 66			
Full corridor	8:25	9:14	+48
A	1:13	1:43	+30
B	2:36	2:58	+22
C	1:46	1:40	-7
D	2:28	2:34	+6
Route 65			
Full corridor	7:13	7:39	+26
E	1:16	1:24	+7
F	2:22	2:37	+15
G	2:07	2:03	-4
H	0:55	1:10	+16
Route 60			
Full corridor	6:21	6:48	+27
I	3:13	3:15	+1
J	2:01	1:58	-4
K	0:58	1:10	+12

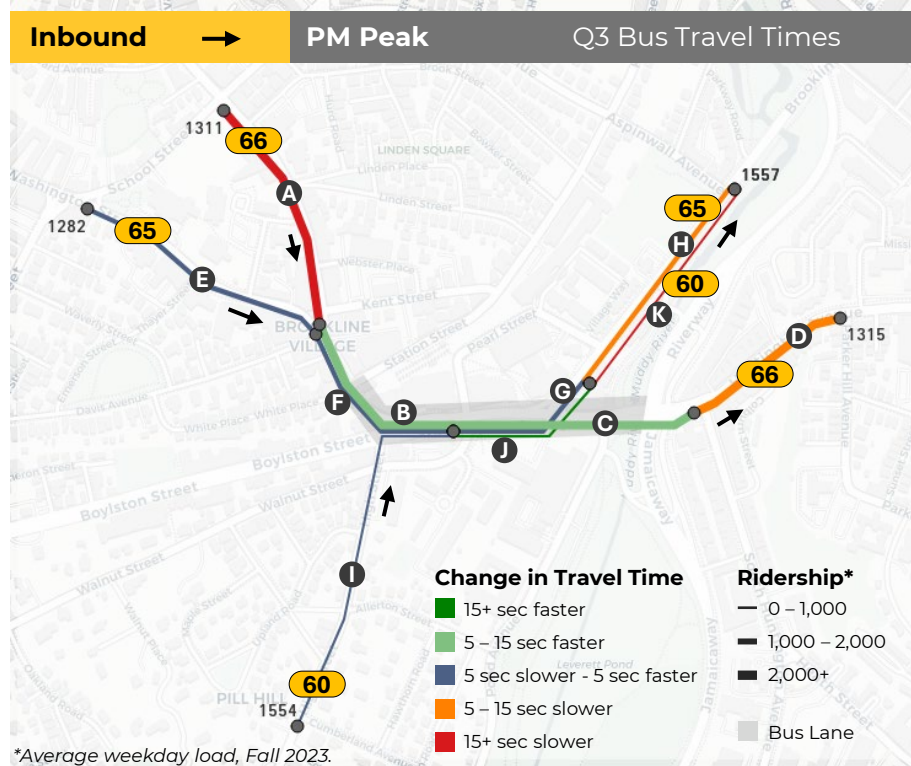
Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline	Q3	Change (s)
Route 66			
Full corridor	8:13	8:33	+19
A	1:39	2:15	+36
B	2:52	2:39	-13
C	1:34	1:30	-5
D	1:52	1:58	+6
Route 65			
Full corridor	7:01	7:07	+6
E	1:27	1:25	-1
F	2:27	2:25	-2
G	1:52	1:49	-3
H	0:46	1:01	+15
Route 60			
Full corridor	5:52	5:40	-12
I	2:36	2:37	+1
J	1:55	1:48	-8
K	0:48	1:07	+20

Has travel time improved for bus riders?



Median Stop-to-Stop Bus Travel Time

Segment	Baseline	Q3	Change (s)
Route 66			
Full corridor	8:27	8:37	+10
A	1:34	2:16	+41
B	2:57	2:46	-10
C	1:46	1:34	-12
D	1:51	1:58	+7
Route 65			
Full corridor	6:52	7:08	+16
E	1:22	1:22	0
F	2:24	2:25	+2
G	1:49	1:54	+5
H	0:51	1:04	+13
Route 60			
Full corridor	5:57	5:52	-5
I	2:31	2:34	+3
J	2:25	1:54	-32
K	0:49	1:10	+21

Quarter 3 Complete Results

Travel Times, Dwell, and QOS Ratios | Time Period: AM Peak

Q3 Baseline (Feb 2024 – Apr 2024)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	Inbound	1554	1557	381	642.2	11	16	40%	0.69	3.7	E	4.9	D
		1554	1555	194	413.4	12	23.5	90%	1.13	5.0	F	6.7	E
		1555	1556	122	176	9	22	50%	0.44	4.1	F	3.4	C
		1556	1557	58	109.6	11	16	40%	0.89	1.8	B	4.5	D
65	Inbound	1282	1557	433	586.7	10	15	23%	0.35	3.1	E	3.5	C
		1282	1283	77	131.8	12	25	65%	0.71	2.2	C	3.6	C
		1283	1555	143	234.9	14	29	89%	0.64	4.6	F	4.3	D
		1555	1556	127.5	209.9	10	20	58%	0.65	4.4	F	4.1	D
		1556	1557	55.5	112	10	15	23%	1.02	1.8	B	4.9	D
65	outbound	1524	1287	352	460.8	9	14	35%	0.31	2.6	D	2.9	C
		1524	1525	76	112	9	19.1	57%	0.47	2.3	C	2.9	C
		1525	1526	111	163	10	16	66%	0.47	3.2	E	3.8	D
		1526	1286	92	158.8	10	16	62%	0.73	3.3	E	3.7	C
		1286	1287	64	105.8	9	14	35%	0.65	2.0	C	3.1	C
66	inbound	1311	1315	506	682.7	19	50	90%	0.35	3.7	E	3.6	C
		1311	1313	74	129.9	14	29.7	84%	0.76	2.3	C	6.0	E
		1313	1555	156	250.9	14	32	84%	0.61	5.0	F	4.2	D
		1555	1314	107	180.9	16	29	96%	0.69	3.4	E	3.9	D
		1314	1315	148.5	229.9	19	50	90%	0.55	4.4	F	4.0	D
66	outbound	1365	1369	528	728	10.5	19	84%	0.38	3.8	E	3.7	C
		1365	1366	130	194.5	14	33	91%	0.5	3.8	E	3.4	C
		1366	1526	141	229	13	23	94%	0.62	4.2	F	4.0	D
		1526	1367	107.5	181	12	20	84%	0.68	3.5	E	4.0	D
		1367	1369	123.5	248	10.5	19	84%	1.01	3.8	E	5.3	E

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: Afternoon

Q3 Baseline (Feb 2024 – Apr 2024)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	352.5	529.9	8	9.6	7%	0.5	3.2	E	3.9	D
		1554	1555	156	321.3	12	22	89%	1.06	3.9	E	5.6	E
		1555	1556	116	191.7	8	13	55%	0.65	4.2	F	3.9	D
		1556	1557	48	105	8	9.6	7%	1.19	1.6	B	3.6	C
65	inbound	1282	1557	422	554.6	9	13	8%	0.31	3.1	E	3.2	C
		1282	1283	87	134.2	13	46	74%	0.54	2.4	C	3.4	C
		1283	1555	147	234.2	12	23	86%	0.59	4.7	F	3.9	D
		1555	1556	113	210.8	9	18.7	51%	0.87	4.2	F	4.3	D
		1556	1557	46	93	9	13	8%	1.02	1.5	B	3.7	C
65	outbound	1524	1287	374	494.8	9	24	45%	0.32	2.8	D	2.8	C
		1524	1525	84	121	12	29	73%	0.44	2.5	D	3.7	C
		1525	1526	109	177	12	24	83%	0.62	3.5	E	3.8	D
		1526	1286	105	164	12	26	71%	0.56	3.5	E	3.8	C
		1286	1287	67	101.8	9	24	45%	0.52	2.0	C	2.5	B
66	inbound	1311	1315	494	647	14	35	84%	0.31	3.6	E	3.0	C
		1311	1313	99	162	15	51	81%	0.64	2.9	D	3.7	C
		1313	1555	172	263	18	44.1	85%	0.53	5.4	F	3.8	C
		1555	1314	95	151	13	26	84%	0.59	3.0	D	3.7	C
		1314	1315	112	182	14	35	84%	0.62	3.4	E	3.8	C
66	outbound	1365	1369	501.5	655.2	13	29.7	74%	0.31	3.6	E	3.5	C
		1365	1366	122	172.1	15	37	78%	0.41	3.3	E	3.2	C
		1366	1526	152	216.1	15	37.9	91%	0.42	4.3	F	5.5	E
		1526	1367	103	165.1	14	30.3	82%	0.6	3.4	E	3.7	C
		1367	1369	119	187.3	13	29.7	74%	0.57	3.4	E	4.3	D

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: PM Peak

Q3 Baseline (Feb 2024 – Apr 2024)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	357	463.4	8	12.6	8%	0.3	3.2	E	3.1	C
		1554	1555	152	235.4	13	26	94%	0.55	3.5	E	4.4	D
		1555	1556	146	183.4	9	14	52%	0.26	4.6	F	3.8	C
		1556	1557	50	104.8	8	12.6	8%	1.1	1.6	B	3.9	D
65	inbound	1282	1557	412	541	8	11	8%	0.31	3.0	D	3.2	C
		1282	1283	82.5	136	11	22	54%	0.65	2.3	C	3.7	C
		1283	1555	144	229	11	22	78%	0.59	4.5	F	3.9	D
		1555	1556	109	191.1	9	14	39%	0.75	4.0	E	3.9	D
		1556	1557	51	105.1	8	11	8%	1.06	1.6	B	3.8	C
65	outbound	1524	1287	395	529.8	12	25.4	65%	0.34	3.0	D	3.4	C
		1524	1525	79	128	13	31	69%	0.62	2.5	D	3.6	C
		1525	1526	118	198.4	14	32	83%	0.68	3.8	E	4.5	D
		1526	1286	111	172	12	25.7	70%	0.55	3.6	E	3.7	C
		1286	1287	68	108.8	12	25.4	65%	0.6	2.1	C	3.1	C
66	inbound	1311	1315	507.5	682	13	27	80%	0.34	3.7	E	4.6	D
		1311	1313	95	162.3	14	51	83%	0.71	2.8	D	3.9	D
		1313	1555	177	276	20	54	88%	0.56	5.6	F	4.1	D
		1555	1314	106	166	14	30	88%	0.57	3.3	E	8.9	F
		1314	1315	111	174.3	13	27	80%	0.57	3.4	E	5.1	D
66	outbound	1365	1369	521.5	714	14	30.9	79%	0.37	3.7	E	5.2	E
		1365	1366	124.5	207.7	18	49	84%	0.67	3.6	E	6.4	E
		1366	1526	157	243	16	36	87%	0.55	4.6	F	7.4	E
		1526	1367	104	163	15	34	79%	0.57	3.2	E	9.0	F
		1367	1369	128	200	14	30.9	79%	0.56	3.5	E	6.7	E

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: AM Peak

Q3 (Feb 2025 – Apr 2025)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	408	639	8	15.7	27%	0.57	3.8	E	4.4	D
		1554	1555	195	388	13	24.9	96%	0.99	5.0	F	6.0	E
		1555	1556	118	194	9	21	36%	0.64	4.2	F	3.7	C
		1556	1557	70	129	8	15.7	27%	0.84	2.1	C	3.9	D
65	inbound	1282	1557	459	607	9	13	30%	0.32	3.3	E	3.3	C
		1282	1283	84	127.2	11	26	80%	0.51	2.3	C	3.2	C
		1283	1555	158	257	13	22	92%	0.63	5.0	F	4.4	D
		1555	1556	123	200	9	16	48%	0.63	4.3	F	3.8	D
		1556	1557	71	127.1	9	13	30%	0.79	2.1	C	4.4	D
65	outbound	1524	1287	366.5	474	8	11	22%	0.29	2.7	D	2.5	B
		1524	1525	75	109.1	9	16	44%	0.45	2.2	C	2.7	C
		1525	1526	114.5	176	12	18	85%	0.54	3.5	E	3.3	C
		1526	1286	102	171	9	15	51%	0.68	3.5	E	3.6	C
		1286	1287	63.5	102.1	8	11	22%	0.61	1.9	C	2.7	B
66	inbound	1311	1315	554.5	740.3	19	46.9	90%	0.34	4.0	F	3.4	C
		1311	1313	104	175	14	29.7	93%	0.68	3.0	E	3.8	C
		1313	1555	178	265.3	16	35.1	94%	0.49	5.5	F	4.0	D
		1555	1314	100	160.6	14	28	91%	0.61	3.1	E	4.1	D
		1314	1315	154	239.3	19	46.9	90%	0.55	4.6	F	3.8	C
66	outbound	1365	1369	496	698	11	21	76%	0.41	3.7	E	4.6	D
		1365	1366	106	173	12	21	81%	0.63	3.2	E	8.9	F
		1366	1526	125	181	14	22	93%	0.45	3.5	E	4.1	D
		1526	1367	98	159	12	20	77%	0.62	3.2	E	3.7	C
		1367	1369	153	302	11	21	76%	0.97	4.6	F	5.7	E

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: Afternoon

Q3 (Feb 2025 – Apr 2025)

Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	341	459	9	13	12%	0.35	3.1	E	3.0	C
		1554	1555	157	236.5	13	25	98%	0.51	3.5	E	3.8	C
		1555	1556	108	181.5	9	14.4	36%	0.68	3.9	E	3.8	C
		1556	1557	67.5	118	9	13	12%	0.75	2.0	C	3.6	C
65	inbound	1282	1557	428	542	9	12.2	8%	0.27	3.1	E	2.8	C
		1282	1283	86	135	11	30.6	74%	0.57	2.4	C	3.2	C
		1283	1555	145	233	11	20	89%	0.61	4.6	F	3.7	C
		1555	1556	110	191	10	16	42%	0.74	3.9	E	3.8	C
		1556	1557	61	109	9	12.2	8%	0.79	1.8	B	4.3	D
65	outbound	1524	1287	391	516	10	20	50%	0.32	2.9	D	2.7	B
		1524	1525	77	123	10	19.7	61%	0.6	2.5	D	3.4	C
		1525	1526	125	192.2	13	26	90%	0.54	3.8	E	3.4	C
		1526	1286	104	174.6	11	21	78%	0.68	3.5	E	3.8	D
		1286	1287	64	105	10	20	50%	0.64	2.0	C	3.2	C
66	inbound	1311	1315	513	655	13	26	84%	0.28	3.7	E	3.3	C
		1311	1313	135	197	14	38.1	82%	0.46	3.7	E	3.8	D
		1313	1555	159	251	16	39.7	87%	0.58	5.1	F	4.6	D
		1555	1314	90	141	12	27	80%	0.57	2.7	D	3.3	C
		1314	1315	118	171	13	26	84%	0.45	3.4	E	3.5	C
66	outbound	1365	1369	496	663	13	23	75%	0.34	3.6	E	3.5	C
		1365	1366	120	171.5	16	33.7	83%	0.43	3.5	E	5.7	E
		1366	1526	118	172.5	16	31.3	94%	0.46	3.4	E	4.9	D
		1526	1367	97	167	15	30	84%	0.72	3.2	E	4.9	D
		1367	1369	142.5	271	13	23	75%	0.9	4.3	F	5.5	E

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Travel Times, Dwell, and QOS Ratios | Time Period: PM Peak

Q3 (Feb 2025 – Apr 2025)

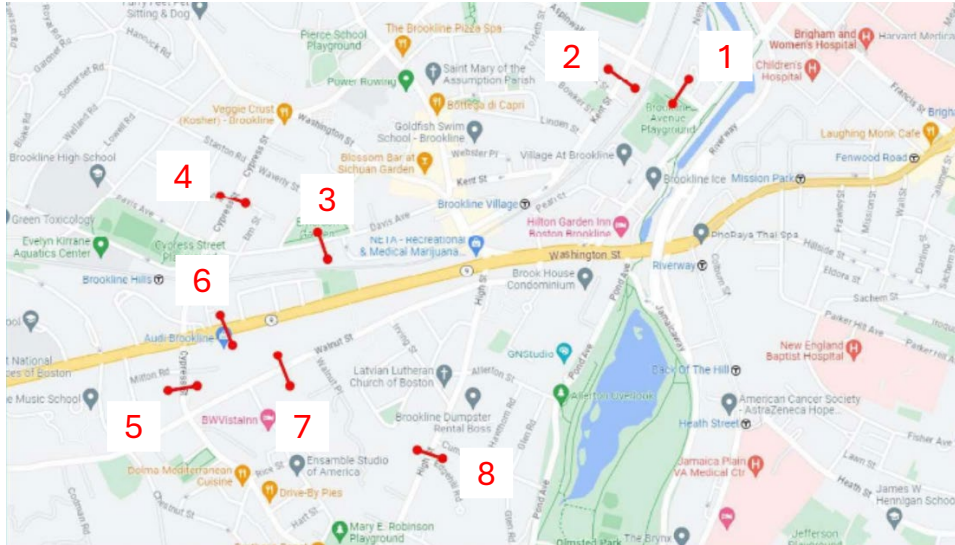
Route	Direction	Segment Start	Segment End	Travel Time Percentile (seconds)		Downstream Stop Dwell Percentile* (seconds)			Var (MBTA)	TTQOS Ratio		TTVQOS Ratio	
				50 th	90 th	50 th	90 th	Stopped %					
60	inbound	1554	1557	352	477	8	17.8	10%	0.36	3.2	E	3.7	C
		1554	1555	155	232.2	15	27	98%	0.5	3.6	E	4.4	D
		1555	1556	114	193	9	12.8	33%	0.69	4.0	E	4.0	D
		1556	1557	71	119	8	17.8	10%	0.68	2.0	C	3.4	C
65	inbound	1282	1557	428.5	564	8	11	10%	0.32	3.1	E	3.1	C
		1282	1283	82.5	142	9	16	55%	0.72	2.4	D	3.8	D
		1283	1555	146	238.7	11	18	78%	0.63	4.6	F	4.4	D
		1555	1556	114	187.4	9	14.6	40%	0.64	4.0	E	3.7	C
		1556	1557	64	119	8	11	10%	0.86	1.9	C	3.7	C
65	outbound	1524	1287	423	569.4	12	23	61%	0.35	3.2	E	3.4	C
		1524	1525	86	145.4	12	24	67%	0.69	2.7	D	4.3	D
		1525	1526	140	227	14	28	88%	0.62	4.4	F	4.0	D
		1526	1286	116	180.4	12	21	72%	0.56	3.8	E	3.7	C
		1286	1287	67	110	12	23	61%	0.64	2.1	C	3.1	C
66	inbound	1311	1315	518	683	12	22	81%	0.32	3.8	E	3.3	C
		1311	1313	136	197.2	15	40.4	87%	0.45	3.7	E	4.3	D
		1313	1555	167	263	18	43	91%	0.57	5.3	F	4.3	D
		1555	1314	94	149	13	26	91%	0.59	2.8	D	3.2	C
		1314	1315	118	167	12	22	81%	0.42	3.4	E	3.4	C
66	outbound	1365	1369	522	727.4	14	30	80%	0.39	3.8	E	4.1	D
		1365	1366	123	209.4	18	39	88%	0.7	3.8	E	6.3	E
		1366	1526	133	189	17	34	93%	0.42	3.8	E	4.8	D
		1526	1367	99	161.4	16	33	84%	0.63	3.3	E	6.0	E
		1367	1369	151	262.8	14	30	80%	0.74	4.4	F	5.0	D

*Calculated for buses that stop (excludes stops with no boardings, alightings, or dwell).

Appendix C

Highway Volumes

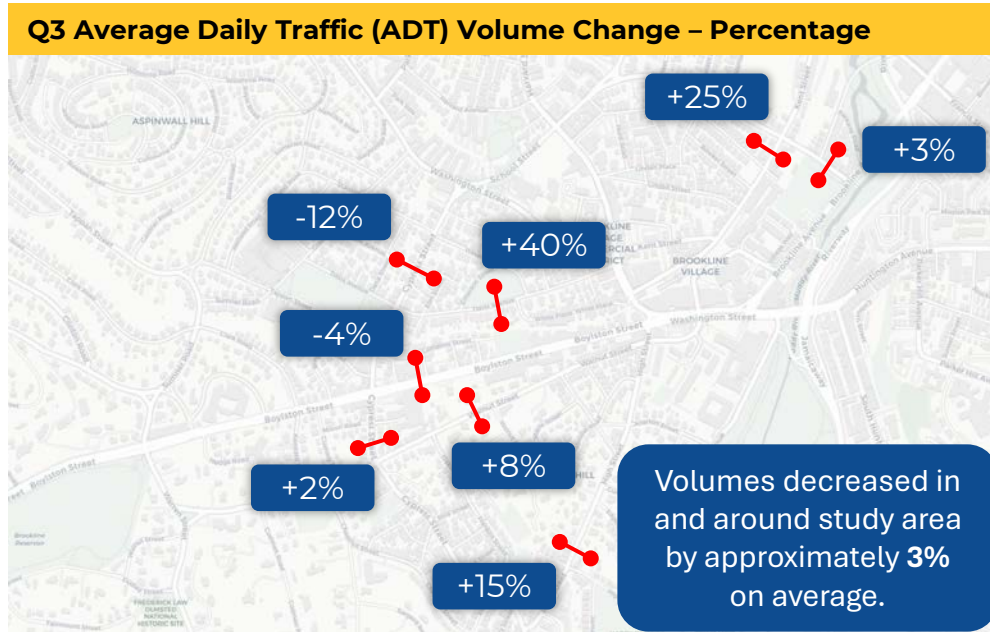
Data Collection Locations



1. Aspinwall Ave, between Brookline Ave & Kent St
2. Kent St, between Aspinwall Ave & Brook St
3. Davis Ave, between Cypress St & Washington St
4. Cypress St, between Tappan St & Davis Ave
5. Cypress St, between Boylston St & Walnut St
6. Boylston St (Route 9), between Cypress St & High St
7. Walnut St, between Cypress St & High St
8. High St, between Cumberland Ave & Edgehill Rd

Quarter 3 Findings

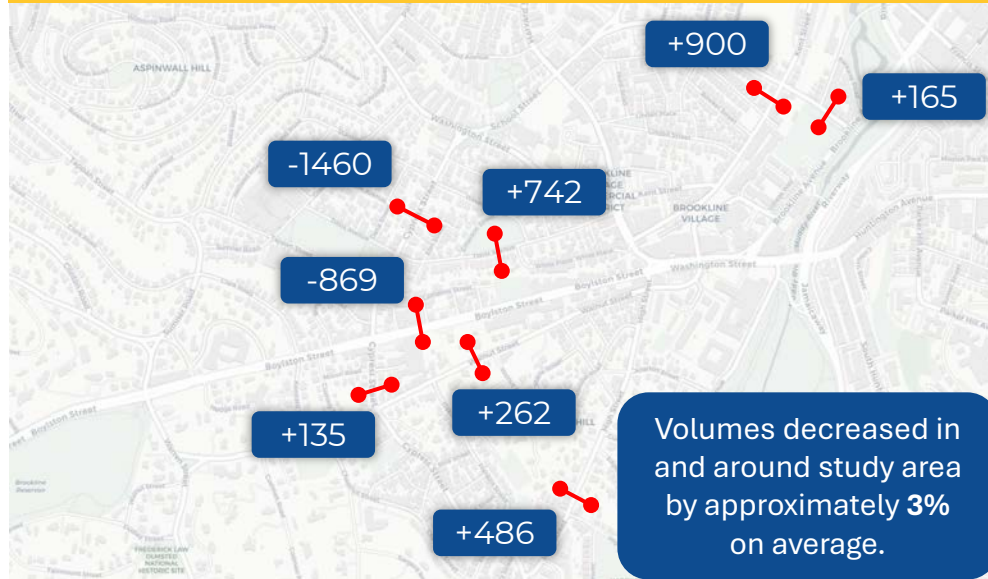
Has the project impacted traffic on secondary streets and residential side streets?



- Traffic on Route 9 **decreased slightly** with **moderate increase** of traffic on side streets
- Some fluctuation with speeds, but in general **most observed speeds decreased**
- Could be options for **traffic calming** in the future if trends don't correct
- Nearby traffic patterns: **Pierce School** closed for construction and relocated to Old Lincoln School on Boylston St/Walnut St

Has the project impacted traffic on secondary streets and residential side streets?

Q3 Average Daily Traffic (ADT) Volume Change - Volumes



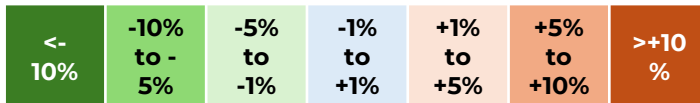
- Traffic on Route 9 **decreased slightly** with **moderate increase** of traffic on side streets
- Some fluctuation with speeds, but in general **most observed speeds decreased**
- Could be options for **traffic calming** in the future if trends don't correct
- Nearby traffic patterns: **Pierce School** closed for construction and relocated to Old Lincoln School on Boylston St/Walnut St

Has the project impacted speed on side streets?

Northbound/Eastbound

Location	NB/EB 50th Percentile Speeds (MPH)			NB/EB 85th Percentile speeds (MPH)		
	Baseline Sept 2023	Q3 Speeds Apr 2025	Change	Baseline Sept 2023	Q3 Speeds Apr 2025	Change
Aspinwall Ave, between Brookline Ave & Kent St	20.2	17.3	-14.5%	24.7	22.6	-8.5%
Kent St, between Aspinwall Ave & Brook St	18.0	16.8	-6.7%	24.1	23.0	-4.9%
Davis Ave, between Cypress St & Washington St	22.7	20.8	-8.3%	27.7	24.8	-10.3%
Cypress St, between Davis Ave & Gorham Ave	21.4	21.1	-1.5%	26.4	25.4	-3.6%
Cypress St, between Boylston St & Walnut St	19.5	19.7	+1.0%	24.1	23.8	-1.3%
Boylston St (Rt 9), between Cypress St & High St	28.8	28.4	-1.5%	34.6	35.6	+2.9%
Walnut St, between Cypress St & High St	23.5	21.5	-8.5%	28.4	24.9	-12.6%
High St, between Cumberland Ave & Edgehill Rd	22.6	25.7	+13.5%	27.4	29.5	+7.7%

Speed % Change Key:



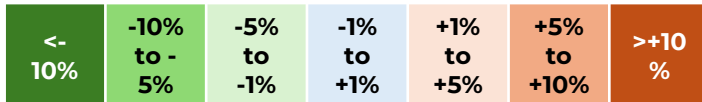
Some fluctuation with speeds, but in general most observed speeds have decreased

Has the project impacted speed on side streets?

Southbound/Westbound

Location	NB/EB 50 th Percentile Speeds (MPH)			NB/EB 85 th Percentile speeds (MPH)		
	Baseline Sept 2023	Q3 Speeds Apr 2025	Change	Baseline Sept 2023	Q3 Speeds Apr 2025	Change
Aspinwall Ave, between Brookline Ave & Kent St	20.2	20.1	-2.0%	24.7	24.1	-3.2%
Kent St, between Aspinwall Ave & Brook St	18.0	20.6	-5.2%	24.1	24.5	-6.4%
Davis Ave, between Cypress St & Washington St	22.7	18.2	-14.7%	27.7	23.2	-11.1%
Cypress St, between Davis Ave & Gorham Ave	21.4	19.9	+3.3%	26.4	25.6	+3.3%
Cypress St, between Boylston St & Walnut St	19.5	18.4	+1.8%	24.1	24.0	+1.3%
Boylston St (Rt 9), between Cypress St & High St	28.8	28.9	-1.0%	34.6	35.7	-0.3%
Walnut St, between Cypress St & High St	23.5	21.5	-4.7%	28.4	25.3	-7.2%
High St, between Cumberland Ave & Edgehill Rd	22.6	23.0	-2.7%	27.4	27.5	-3.1%

Speed % Change Key:



Some fluctuation with speeds, but in general most observed speeds have decreased

Quarter 3 Complete Results

Baseline Volumes – Sept 2023

Location	ADT	Peak AM	Peak PM
Aspinwall Ave, between Brookline Ave & Kent St	5,484	465	501
Kent St, between Aspinwall Ave & Brook St	3,605	364	292
Davis Ave, between Cypress St & Washington St	1,840	264	177
Cypress St, between Davis Ave & Gorham Ave	12,553	1113	932
Cypress St, between Boylston St & Walnut St	7,730	879	585
Boylston St (Rt 9), between Cypress St & High St	22,520	1777	1765
Walnut St, between Cypress St & High St	3,193	472	435
High St, between Cumberland Ave & Edgehill Rd	3,224	321	310
Total Volumes	60,149	5,655	4,997

Q3 Volumes – Apr 2025

Location	ADT	Change	Peak AM	Change	Peak PM	Change
Aspinwall Ave, between Brookline Ave & Kent St	5,649	+3.0%	635	+36.6%	621	+24.0%
Kent St, between Aspinwall Ave & Brook St	4,505	+25.0%	557	+53.0%	440	+50.7%
Davis Ave, between Cypress St & Washington St	2,582	+40.3%	328	+24.2%	301	+70.1%
Cypress St, between Davis Ave & Gorham Ave	11,093	-11.6%	909	-18.3%	994	+6.7%
Cypress St, between Boylston St & Walnut St	7,865	+1.7%	886	+0.8%	760	+29.9%
Boylston St (Rt 9), between Cypress St & High St	21,651	-3.9%	1,708	-3.9%	1,716	-2.8%
Walnut St, between Cypress St & High St	3,455	+8.2%	553	+17.2%	458	+5.3%
High St, between Cumberland Ave & Edgehill Rd	3,710	+15.1%	383	+19.3%	376	+21.3%
Total Volumes / Average % Change	60,510	+0.6%	5,959	+5.4%	5,666	+13.4%

Appendix D

Highway Travel Times and Control Delays

Study Locations

Intersections

1. Washington St at Station St
2. Boylston St (Route 9) at High St and Washington St
3. Washington St (Route 9) at Pearl St and Walnut St
4. Washington St (Route 9) at Brookline Ave

Corridors

1. Boylston St eastbound between Cypress St and High St
2. Washington St southbound between Boylston St and Harvard St
3. Brookline Ave northbound between Aspinwall Ave and Washington St.

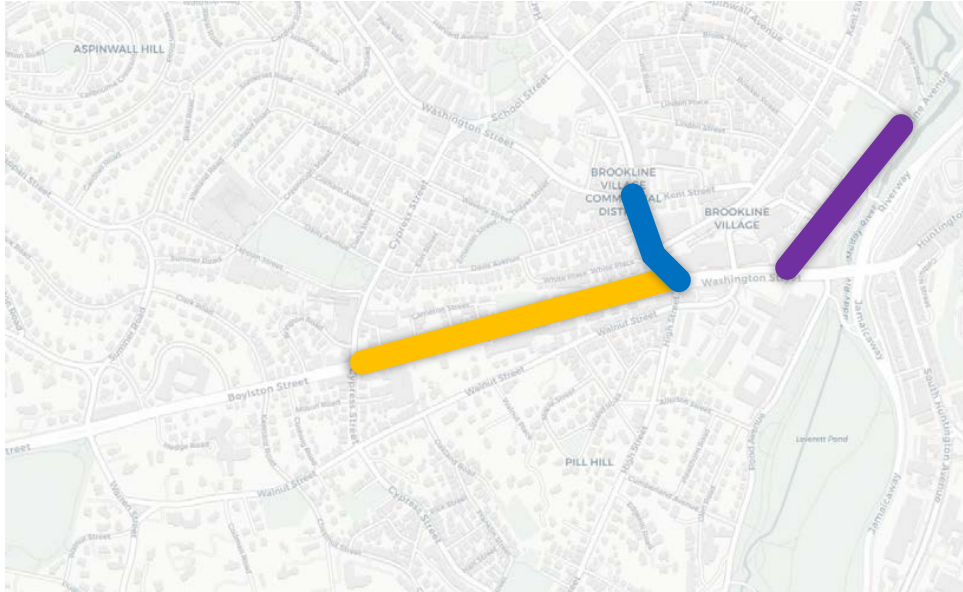
Intersections

1. Washington St at Station St
2. Boylston St (Route 9) at High St and Washington St
3. Washington St (Route 9) at Pearl St and Walnut St
4. Washington St (Route 9) at Brookline Ave



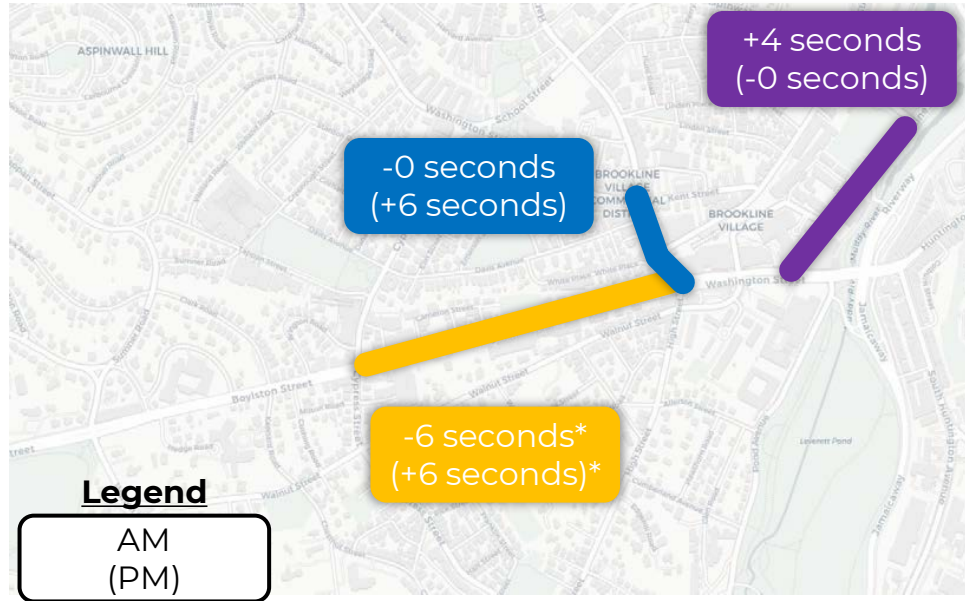
Quarter 3 Findings

Has the project created impacts to general purpose traffic?



1. Boylston St eastbound between Cypress St and High St (**orange**)
2. Washington St southbound between Boylston St and Harvard St (**blue**)
3. Brookline Ave northbound between Aspinwall Ave and Washington St (**purple**)

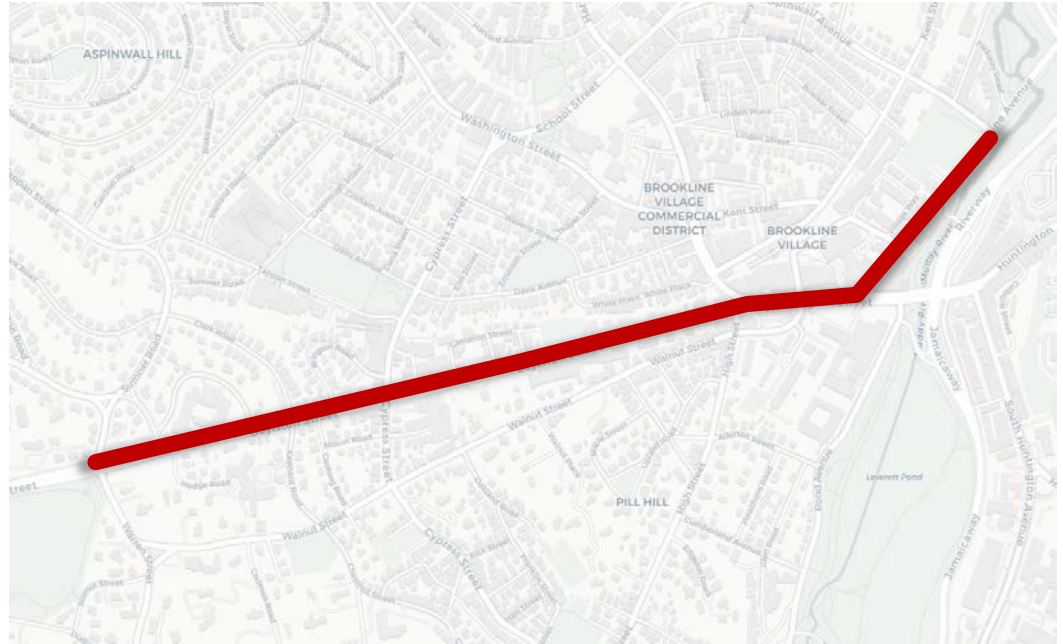
Has the project created impacts to general purpose traffic? Comparing Q3 to Baseline



- Intersection delay either remains constant or fluctuates slightly.
- *Data may be affected by INRIX platform limitations, but does not indicate significant increases in vehicle delay

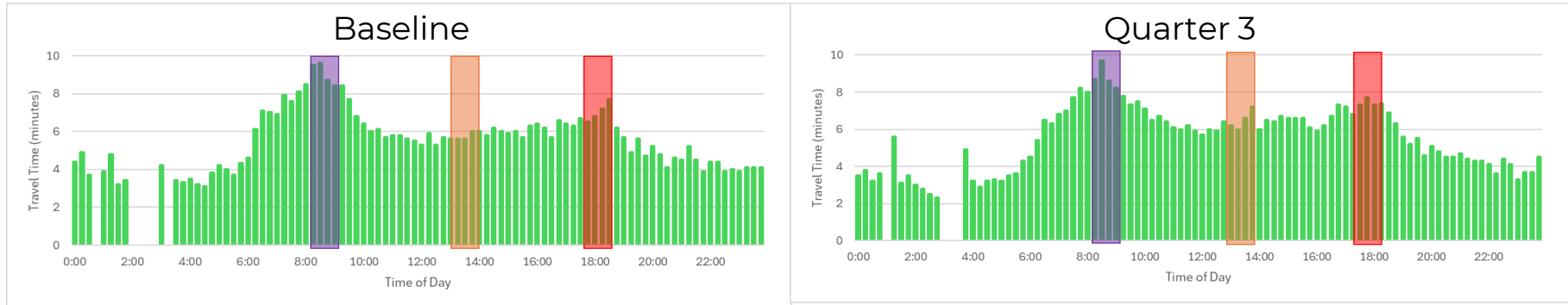
Corridor Travel Time

- Boylston Street & Brookline Avenue between Sumner Street and Aspinwall Avenue
- Approximately 1.2 miles
- Includes all three intersections in project area



Q3 Travel Time - Boylston Street and Brookline Avenue inbound between Sumner Road and Aspinwall Avenue

Average Travel Time over Time of Day

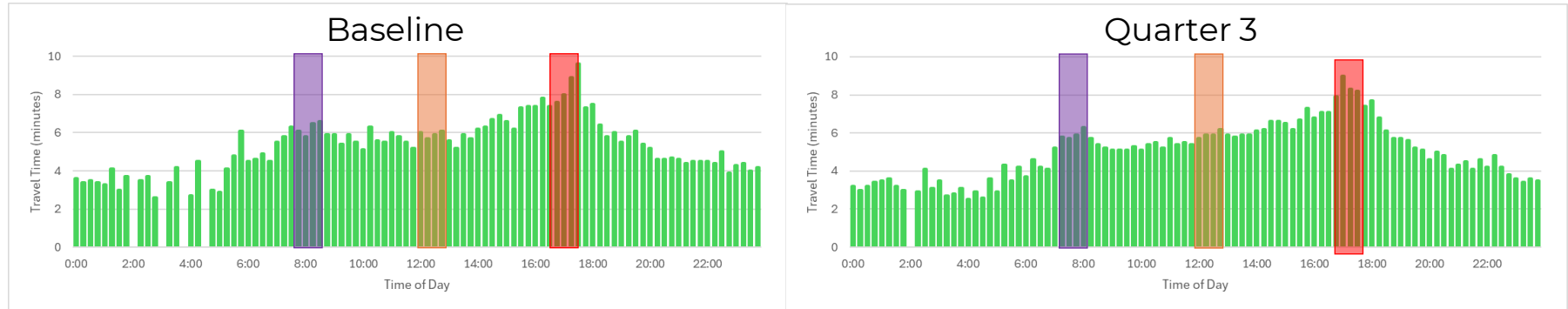


Period	Baseline Travel Time	Quarter 2 Travel Time
AM Peak Hour	9.0 minutes	8.8 minutes
MD Peak Hour	5.7 minutes	6.5 minutes
PM Peak Hour	7.0 minutes	7.3 minutes

Approximately 48 second increase in MD Peak travel time for vehicles travelling through all project area intersections, with AM and PM travel times remaining fairly constant

Q3 Travel Time - Boylston Street and Brookline Avenue outbound between Sumner Road and Aspinwall Avenue

Average Travel Time over Time of Day



Period	Baseline Travel Time	Quarter 2 Travel Time
AM Peak Hour	6.2 minutes	6.0 minutes
MD Peak Hour	5.5 minutes	6.0 minutes
PM Peak Hour	8.5 minutes	8.4 minutes

Approximately 30 second increase in MD Peak travel time for vehicles travelling through all project area intersections, with AM and PM travel times remaining fairly constant

Quarter 3 Complete Results

#1 Washington St at Station St – Baseline

Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily

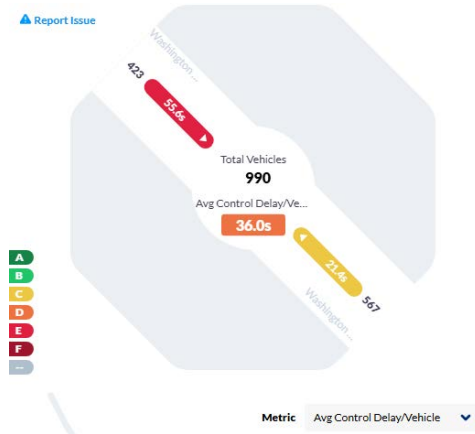


- Average intersection delay of about 40 seconds
- Average intersection delay varies from ~30-60 seconds during peak periods
- Most significant delay is Washington St southbound, in the PM peak (about 1.2 minutes)

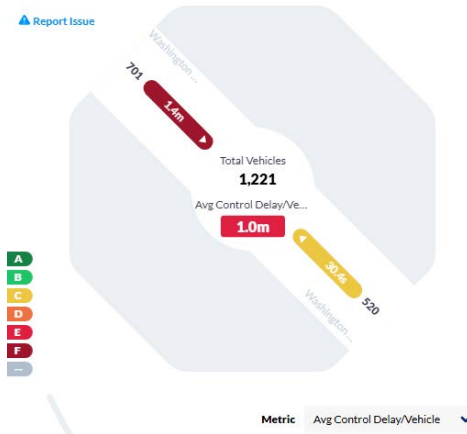
All data is from June 2024 weekdays.

#1 Washington St at Station St – Quarter 3

Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



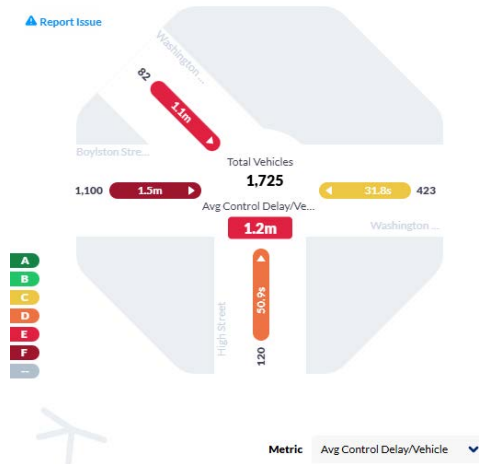
- **~7 second increase in average intersection delay compared to Baseline**
- All movements see slight fluctuations in delay

All data is from April 2025 weekdays.

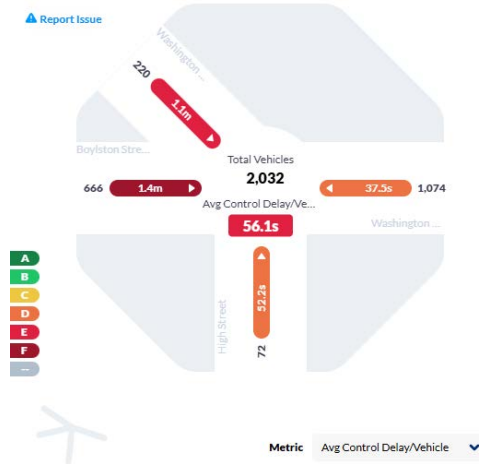
**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

#2 Boylston St (Route 9) at High St and Washington St – Baseline

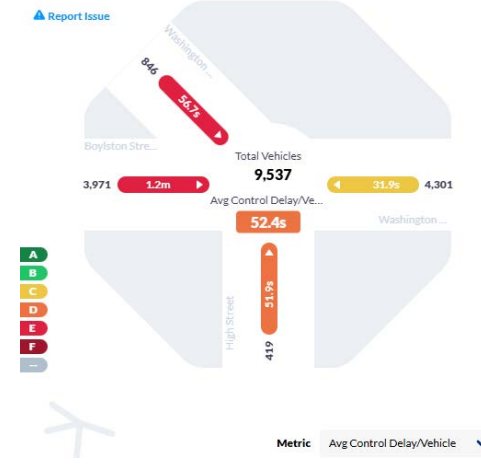
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily

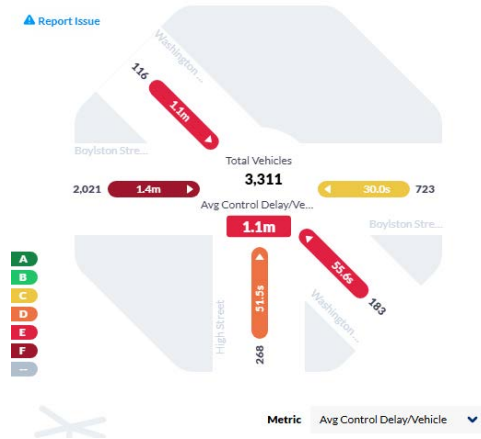


All data is from June 2024 weekdays.

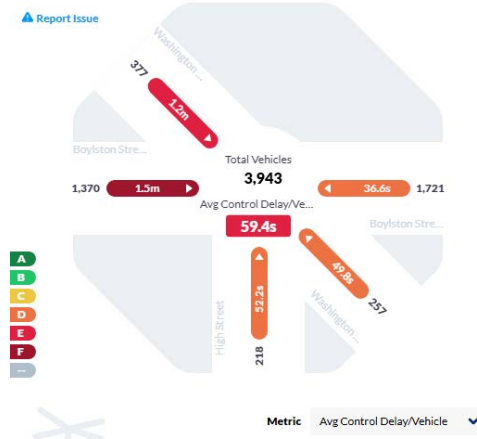
- Average intersection delay of about 1 minute throughout day
- Highest delay on Boylston St (Route 9), approximately 1.5 minutes during peak periods

#2 Boylston St (Route 9) at High St and Washington St – Quarter 3

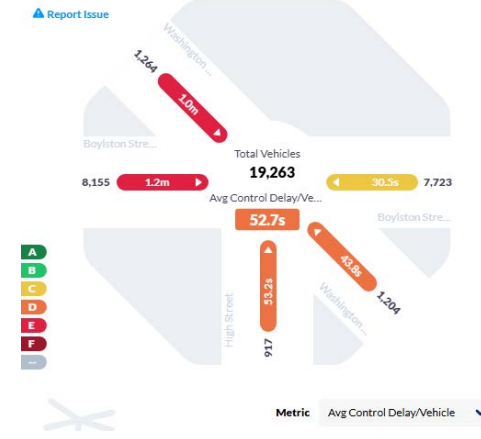
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



All data is from April 2025 weekdays.

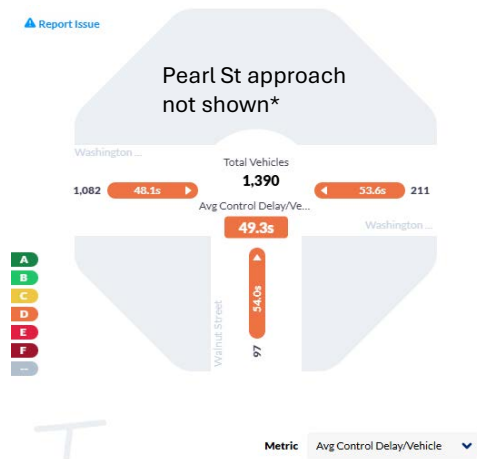
**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

**Note Washington St northwest-bound approach represents westbound right turning movements. INRIX has changed how the approaches are displayed*

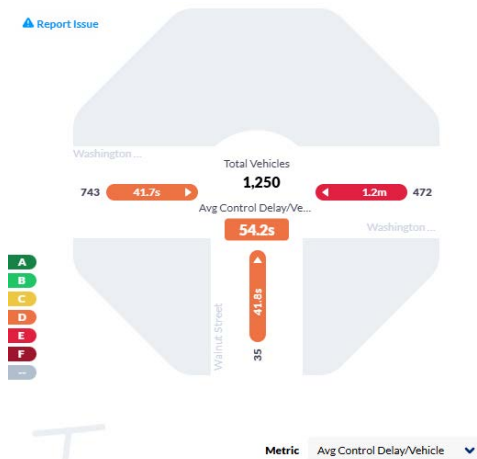
- **Inrix shows no change in total intersection delay compared to Baseline**
- Long queue lengths extend past the 500' approach distance INRIX uses to collect data, so actual intersection delay is likely higher

#3 Washington St (Route 9) at Pearl St and Walnut St – Baseline

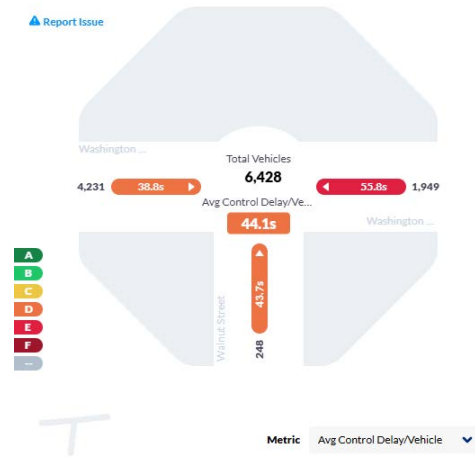
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



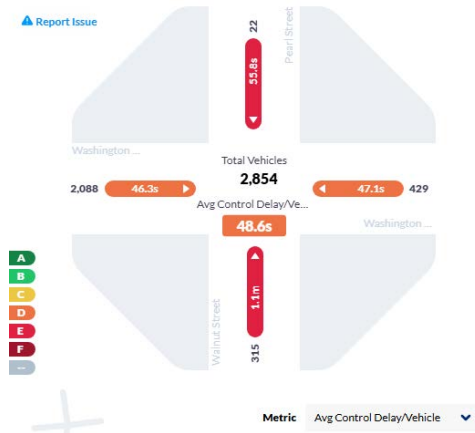
- Average intersection delay of 45-55 seconds throughout day
- Washington St (Route 9) through movements typically see highest delay

All data is from June 2024 weekdays.

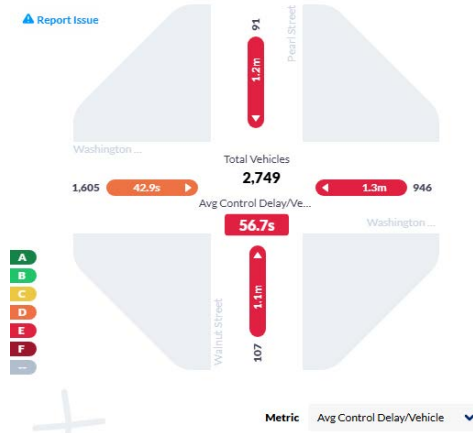
**Intersection diagram is missing the Pearl St approach because no volumes were recorded by INRIX at this approach during June 2024*

#3 Washington St (Route 9) at Pearl St and Walnut St – Quarter 3

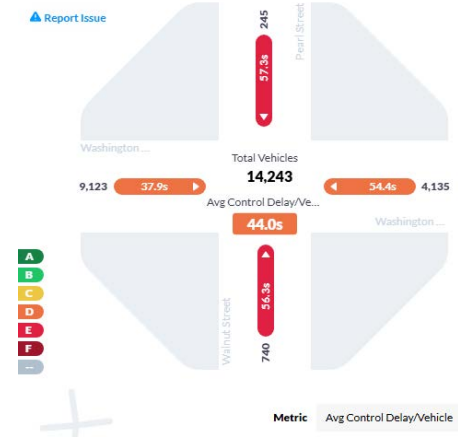
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



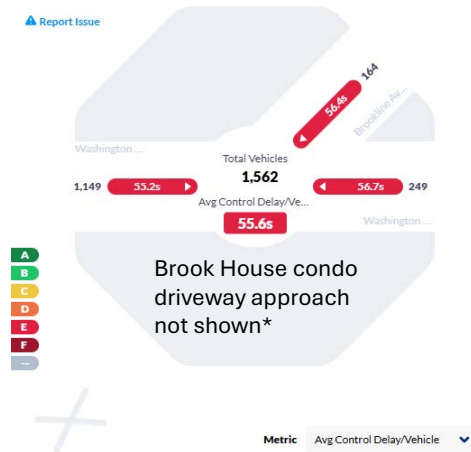
- **Generally, no change in total intersection delay**
- All movements see slight fluctuations in delay

All data is from April 2025 weekdays.

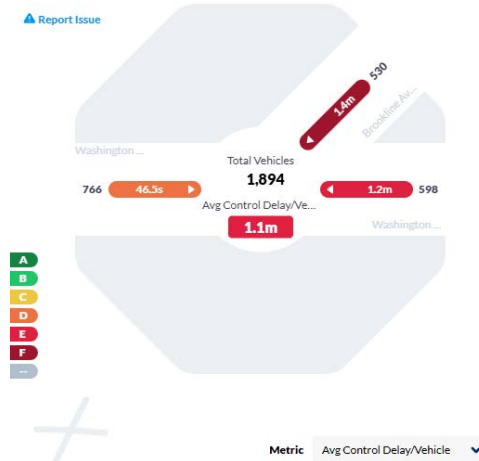
**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

#4 Washington St (Route 9) at Brookline Ave - Baseline

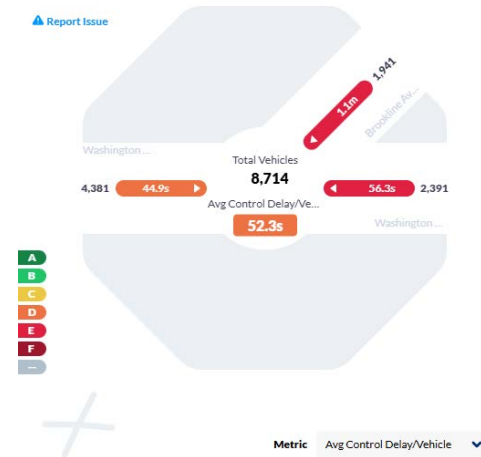
Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



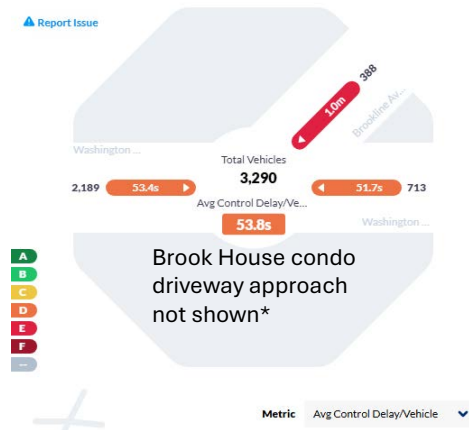
- Average intersection delay of ~50-70 seconds throughout day
- Highest delays are approaching project area
- Generally lesser delays leaving project area

All data is from June 2024 weekdays.

**Intersection diagram is missing the northbound approach because no volumes were recorded by INRIX at this approach during June 2024*

#4 Washington St (Route 9) at Brookline Ave – Quarter 3

Delay AM (6am-9am)



Delay PM (4pm-7pm)



Delay Avg. Daily



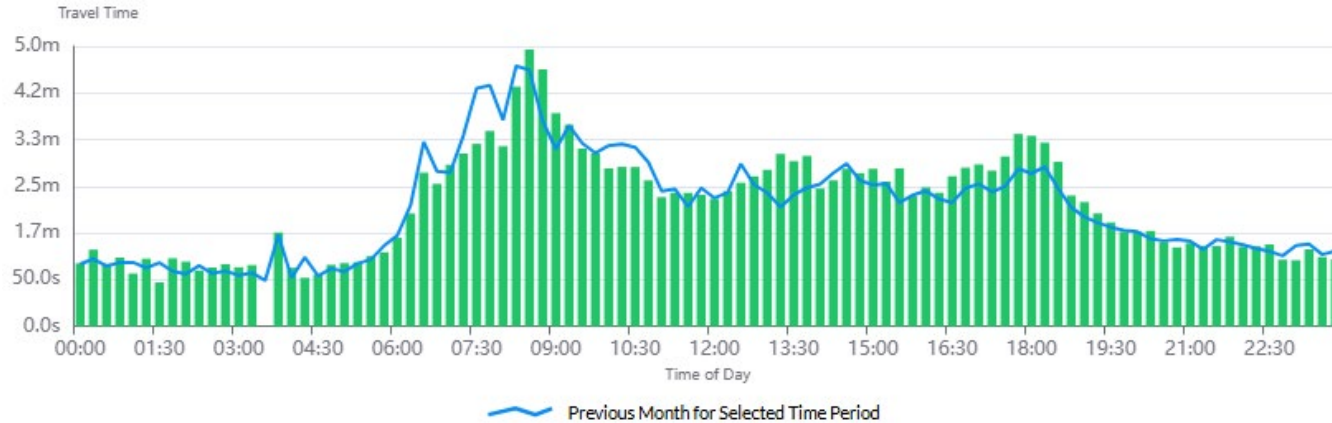
- **Generally, no change in total intersection delay**
- All movements see slight fluctuations in delay

All data is from April 2025 weekdays.

**Note increase in volumes related to INRIX data sample. Not indicative of actual volume change.*

Q3 Travel Time - Boylston St eastbound from Cypress St to High St

Average Travel Time over Time of Day*



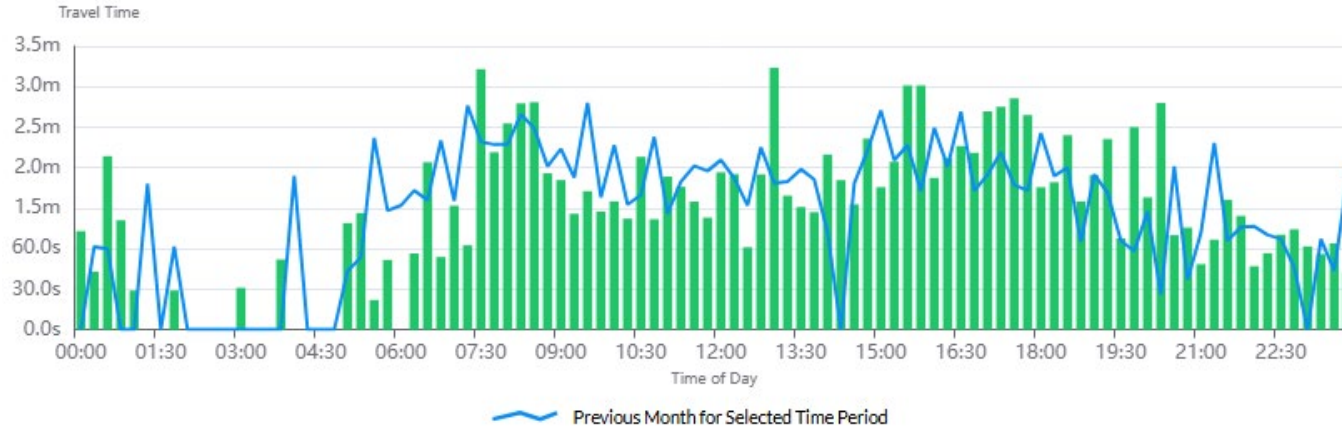
All data is from
April 2025
weekdays.

Period	Travel Time	Time of Day
AM Peak Hour	4.4 minutes	8:15am-9:15am
MD Peak Hour	3.0 minutes	1:00pm-2:00pm
PM Peak Hour	3.3 minutes	5:30pm-6:30pm

*Baseline data not available from INRIX.

Q3 Travel Time - Washington St southbound from Harvard St to Boylston St

Average Travel Time over Time of Day*



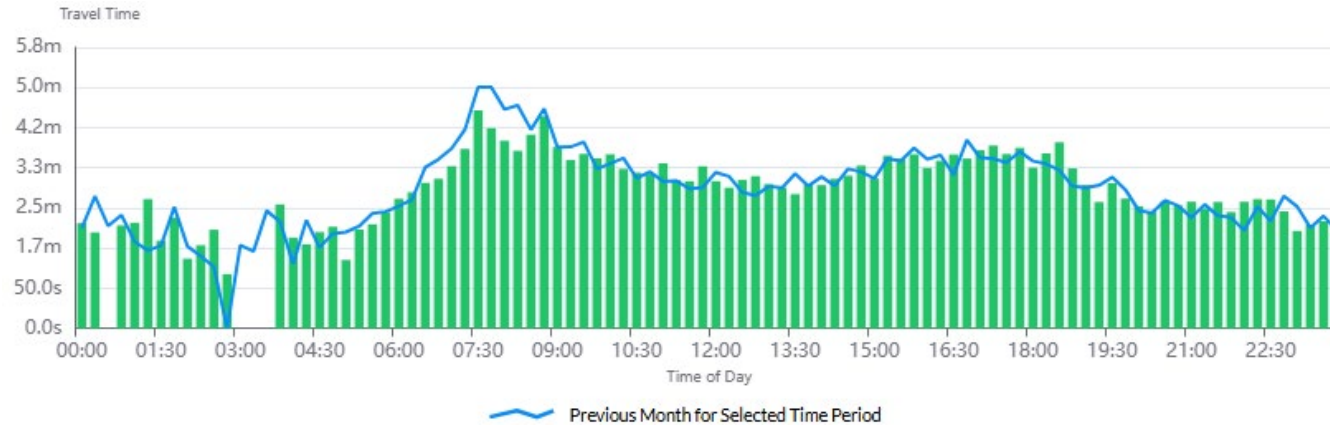
All data is from
April 2025
weekdays.

Period	Travel Time	Time of Day
AM Peak Hour	2.7 minutes	7:30am-8:30am
MD Peak Hour	2.1 minutes	12:45pm-1:45pm
PM Peak Hour	2.8 minutes	5:00pm-6:00pm

*Baseline data not available from INRIX.

Q3 Travel Time - Brookline Ave northbound from Washington St to Aspinwall Ave

Average Travel Time over Time of Day*



All data is from
April 2025
weekdays.

Period	Travel Time**	Time of Day
AM Peak Hour	4.1 minutes	7:30am-8:30am
MD Peak Hour	3.2 minutes	2:00pm-3:00pm
PM Peak Hour	3.7 minutes	5:00pm-6:00pm

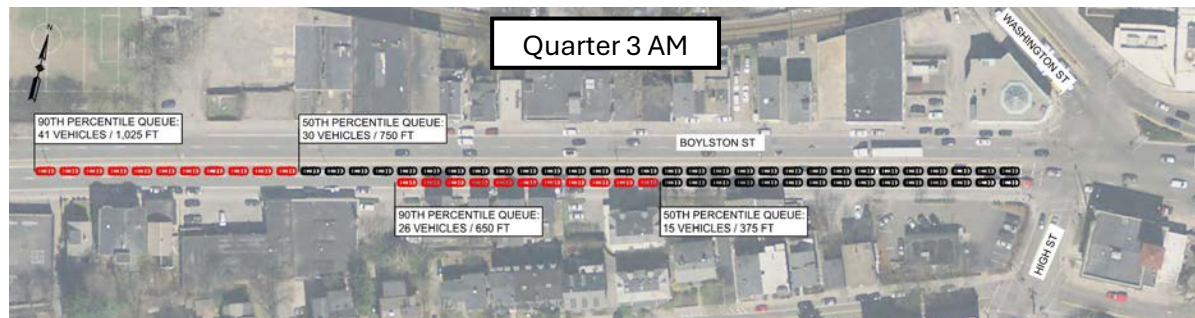
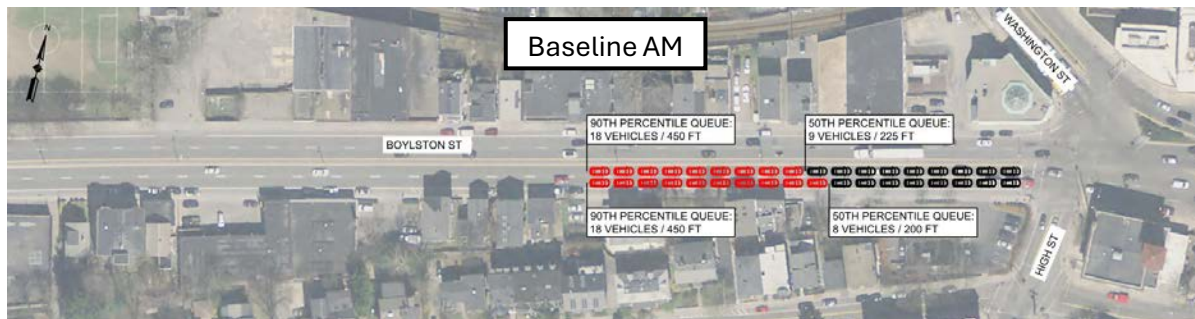
*Baseline data not available from INRIX.
**Note this includes delay at the
Washington St & Brookline intersection
approach.

Appendix E

Queueing Data

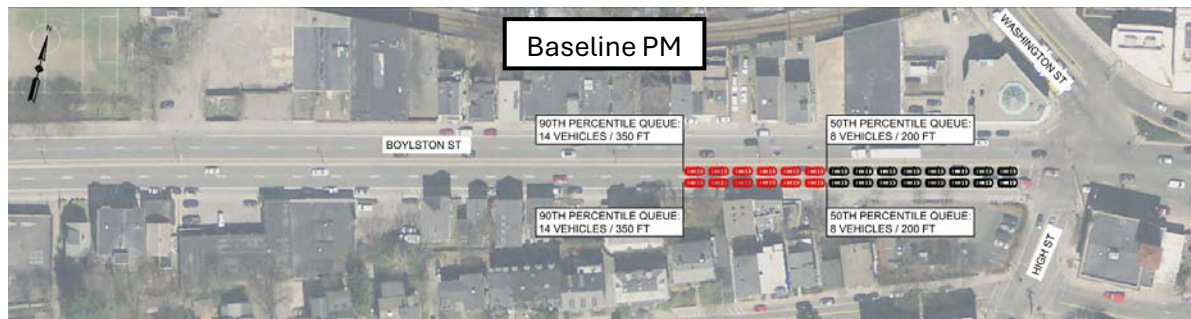
Q3 Findings

Boylston Street (Rt 9), approaching Washington Street, AM



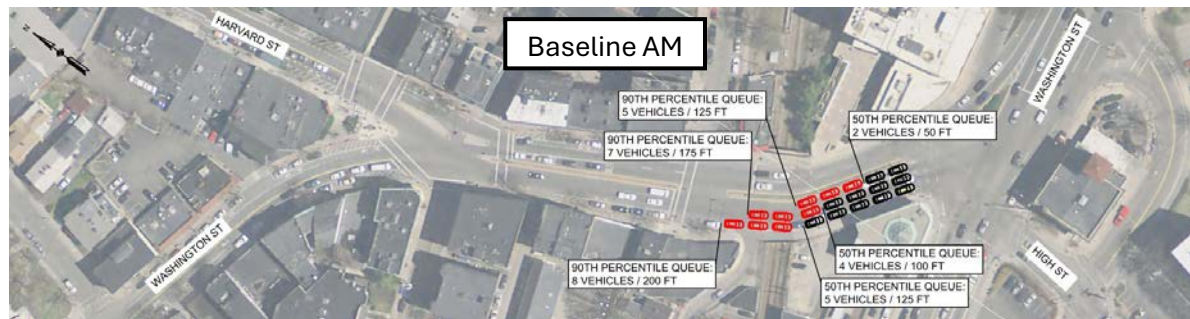
- Significant increase in AM vehicle queues

Boylston Street (Rt 9), approaching Washington Street, PM



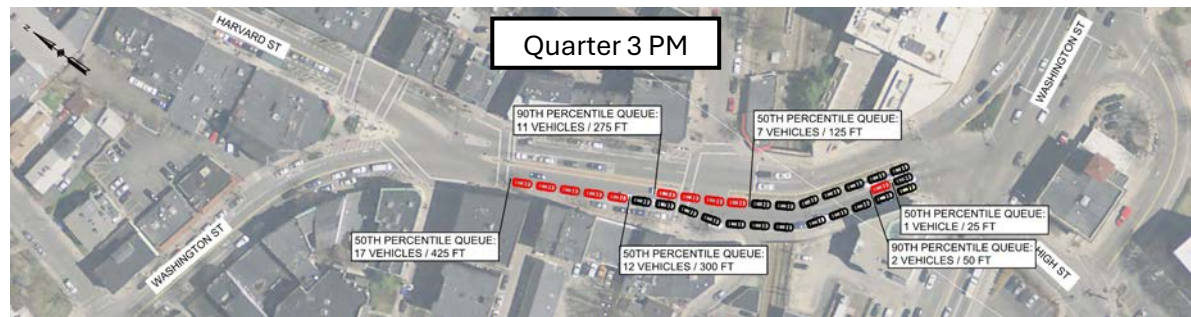
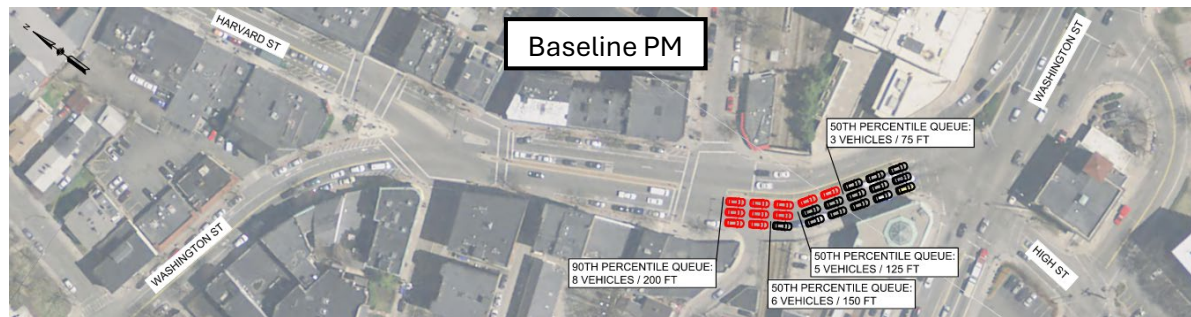
- Number of PM vehicles queued remains relatively constant

Washington Street, approaching Boylston Street (Rt 9), AM



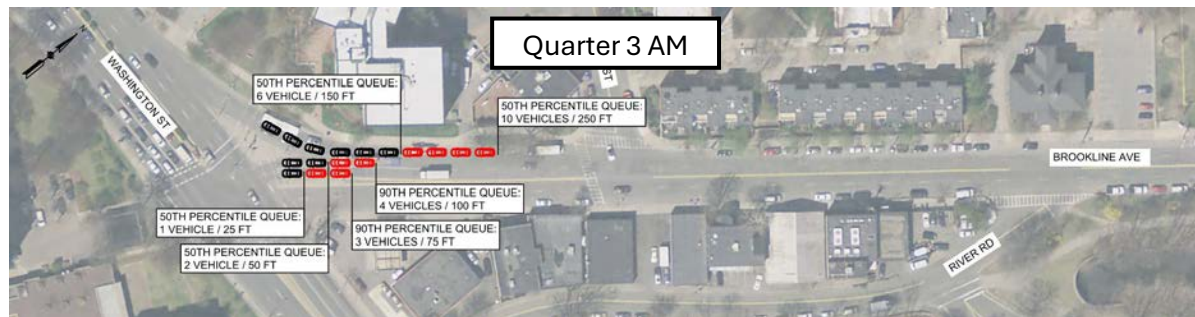
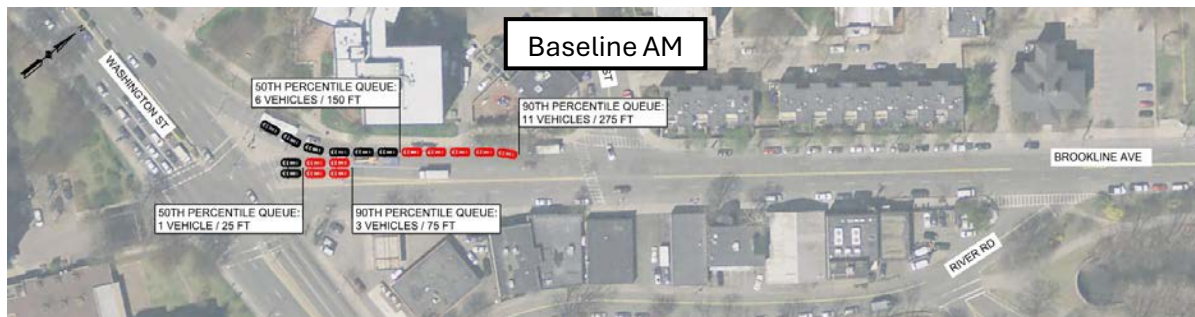
- Increase in AM vehicle queues

Washington Street, approaching Boylston Street (Rt 9), PM



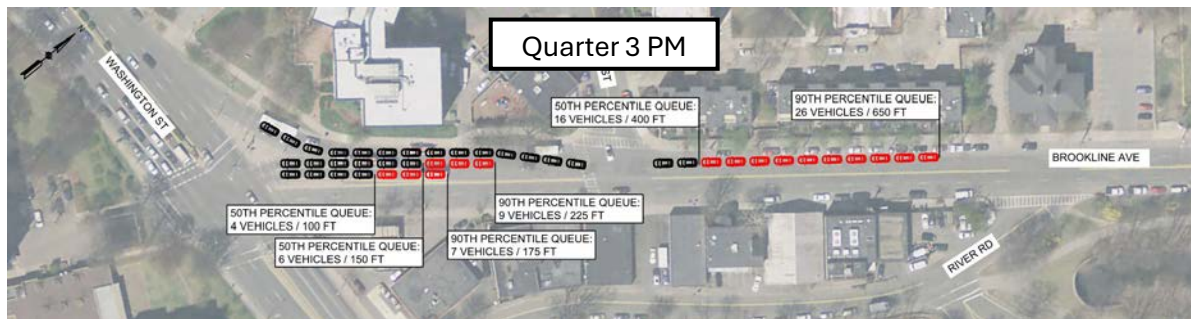
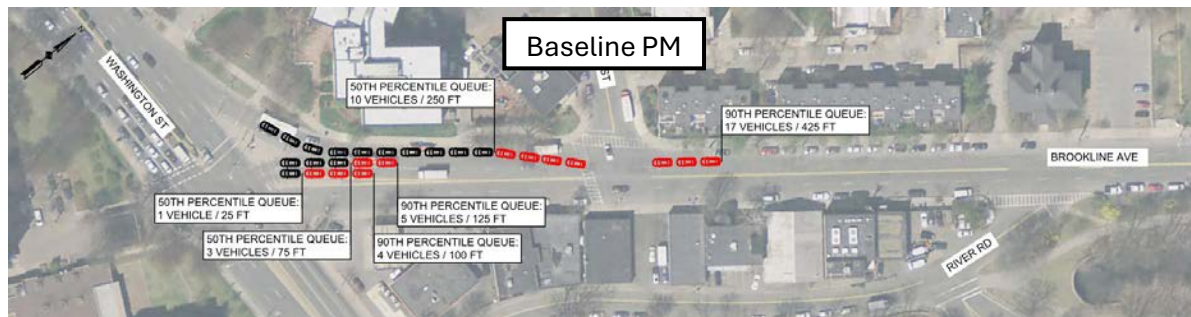
- Increase in PM vehicle queues

Brookline Avenue, approaching Washington Street (Rt 9), AM



- Number of AM vehicles queued remains relatively constant

Brookline Avenue, approaching Washington Street (Rt 9), PM



- Increase in PM vehicle queues

Quarter 3 Complete Results

Queue Length of Boylston St EB, west of Washington St

		Left Lane		Right Lane		Total		
		Baseline	Q3	Baseline	Q3	Baseline	Q3	Change
	10th %ile	2	11	1	4	3	15	+485%
AM	50th %ile	9	30	8	15	17	45	+165%
	90th %ile	18	41	18	26	36	67	+86%
	Longest	25	49	25	38	50	87	+74%
	10th %ile	1	2	1	0	2	2	-5%
PM	50th %ile	8	10	8	2	16	12	-25%
	90th %ile	14	20	14	6	28	26	-7%
	Longest	21	29	22	15	43	44	+2%

Queue Length of Washington St SB, north of Boylston St

		Left Lane		Center Lane		Right Lane		Total		
		Baseline	Q3	Baseline	Q3	Baseline	Q3	Baseline	Q3	Change
	10th %ile	0	2	2	0	2	2	4	4	+0%
AM	50th %ile	2	5	4	1	5	5	11	11	+0%
	90th %ile	5	11	7	3	8	11	20	25	+25%
	Longest	8	19	13	4	9	15	30	38	+27%
	10th %ile	1	3	1	0	4	6	6	9	+50%
PM	50th %ile	3	7	5	1	6	12	14	20	+43%
	90th %ile	8	11	8	2	8	17	24	30	+25%
	Longest	28	15	10	4	11	21	49	40	-18%

↑
Bus only lane

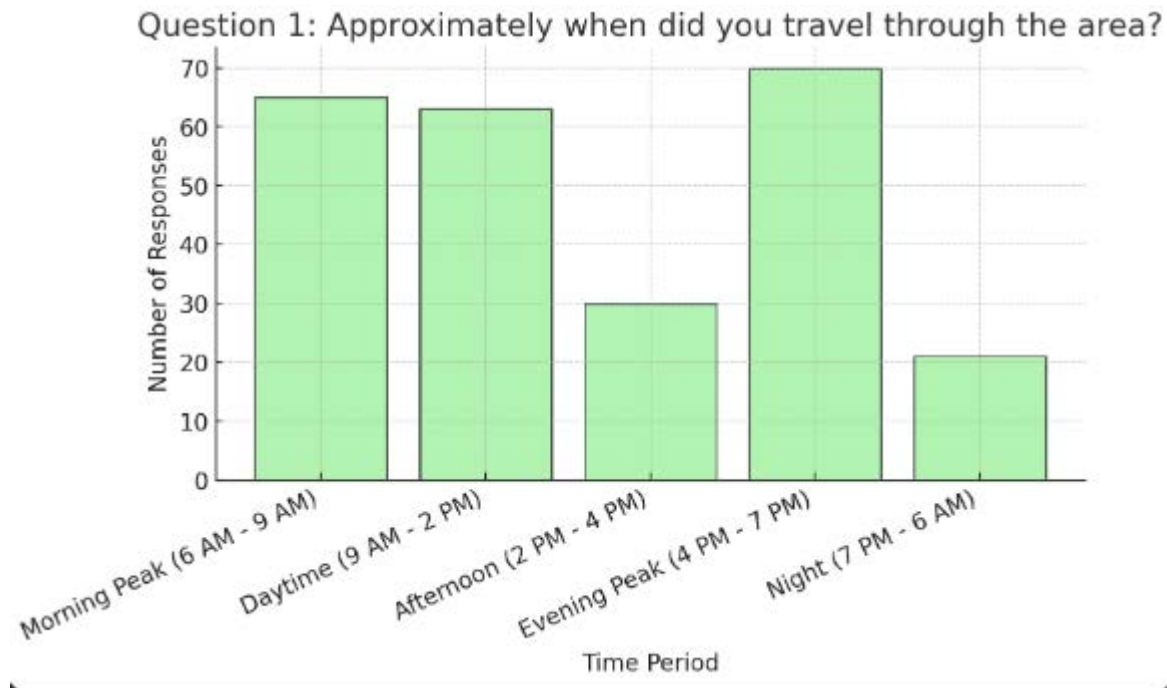
Queue Length of Brookline Ave SB, north of Boylston St

		Left Lane		Center Lane		Right Lane		Total		
		Baseline	Q3	Baseline	Q3	Baseline	Q3	Baseline	Q3	Change
	10th %ile	0	0	0	0	1	1	1	1	+0%
AM	50th %ile	1	1	1	2	6	6	8	9	+13%
	90th %ile	3	3	3	4	11	10	17	17	+0%
	Longest	4	5	4	5	16	15	24	25	+4%
	10th %ile	0	2	1	3	4	7	5	12	+145%
PM	50th %ile	1	4	3	6	10	16	14	26	+82%
	90th %ile	4	7	5	9	17	26	26	42	+60%
	Longest	6	14	8	10	21	30	35	54	+54%

Appendix F

Survey Results as of June 4, 2025

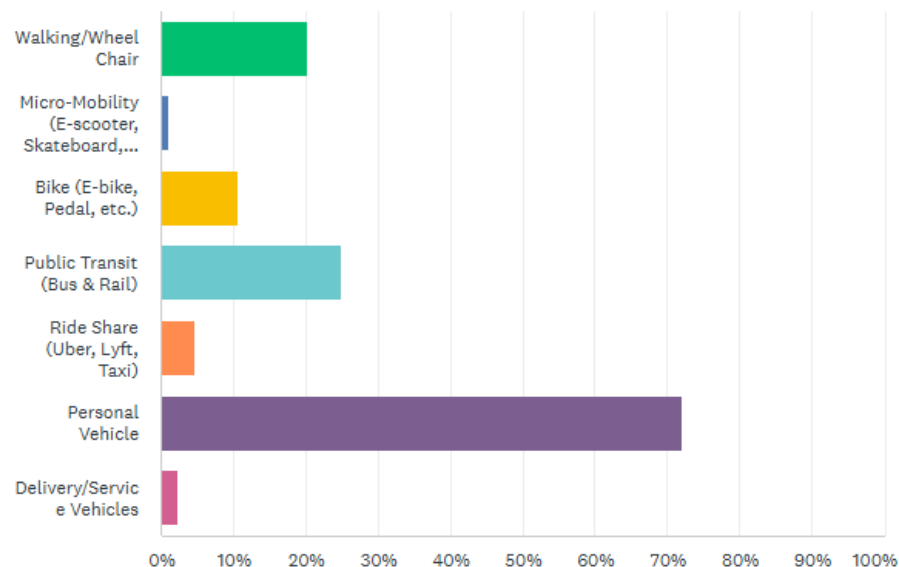
Gateway East Bus Lanes Pilot Survey: Question 1



Gateway East Bus Lanes Pilot Survey – Question 2

What modes did you use when traveling through this area?

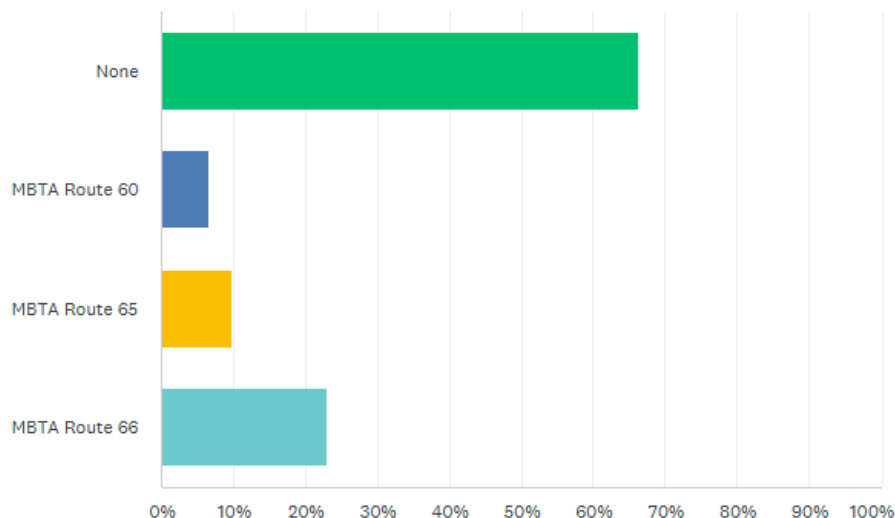
Answered: 301 Skipped: 9



Gateway East Bus Lanes Pilot Survey – Question 3

If you used MBTA bus service, which route?

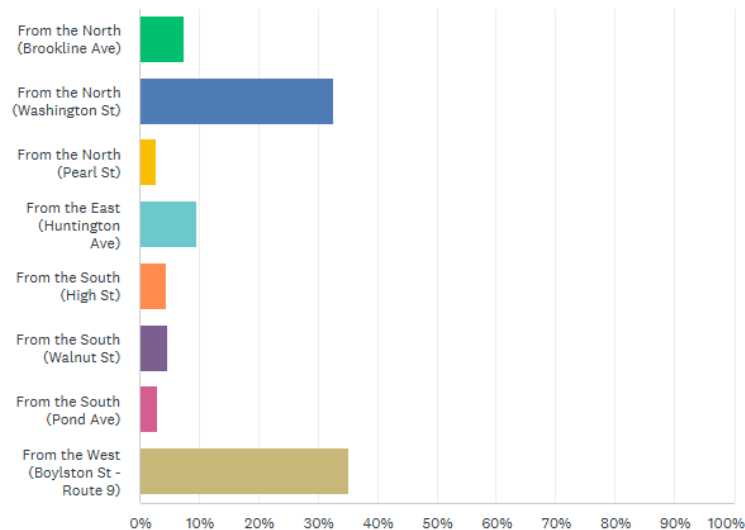
Answered: 226 Skipped: 84



Gateway East Bus Lanes Pilot Survey – Question 4

On this trip where did you come from?

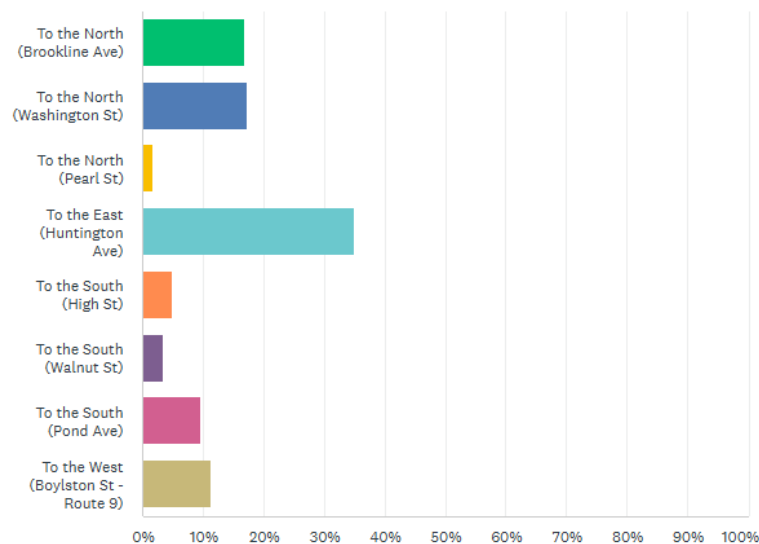
Answered: 292 Skipped: 18



Gateway East Bus Lanes Pilot Survey – Question 5

On this trip where were you going?

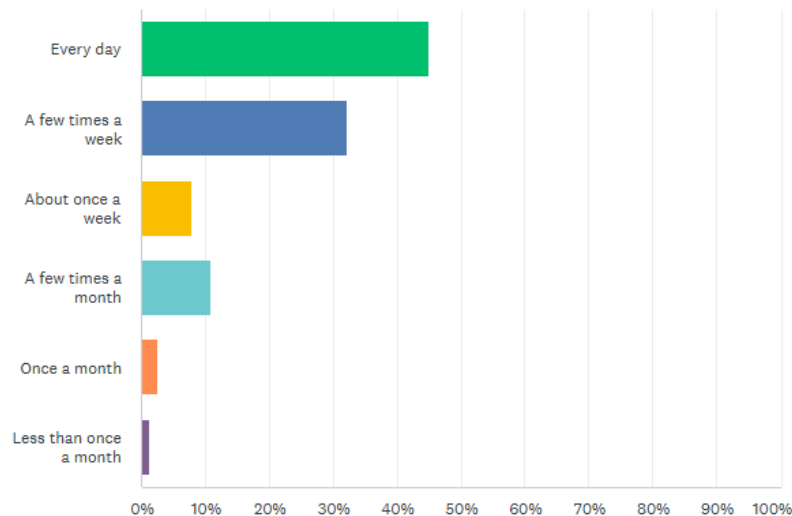
Answered: 291 Skipped: 19



Gateway East Bus Lanes Pilot Survey – Question 6

How often do you travel through this area? (Select One)

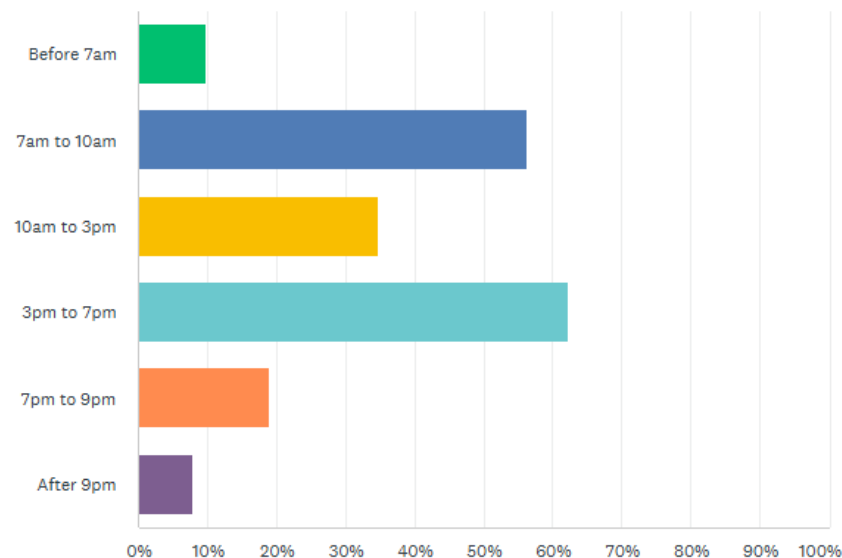
Answered: 304 Skipped: 6



Gateway East Bus Lanes Pilot Survey – Question 7

What time do you typically travel through this area?

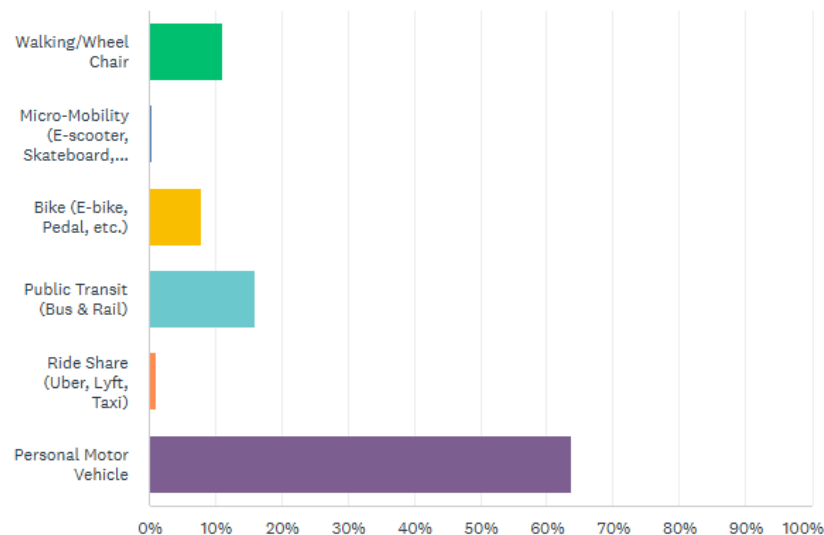
Answered: 305 Skipped: 5



Gateway East Bus Lanes Pilot Survey – Question 8

What is your primary mode of transportation when traveling through this area? (Select one)

Answered: 306 Skipped: 4



Gateway East Bus Lanes Pilot Survey – Question 9

The dedicated bus lane has improved safety for:

Answered: 306 Skipped: 4

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL
▼ those walking through this area	37.58% 112	14.43% 43	25.84% 77	11.07% 33	11.07% 33	298
▼ those biking or using micro-mobility devices through this area	37.29% 110	15.59% 46	23.73% 70	12.20% 36	11.19% 33	295
▼ those taking public transit through this area.	25.17% 74	8.16% 24	28.23% 83	20.75% 61	17.69% 52	294
▼ those driving through this area.	55.45% 168	12.54% 38	15.84% 48	9.57% 29	6.60% 20	303

Gateway East Bus Lanes Pilot Survey – Question 10

The dedicated bus lane has improved access for:

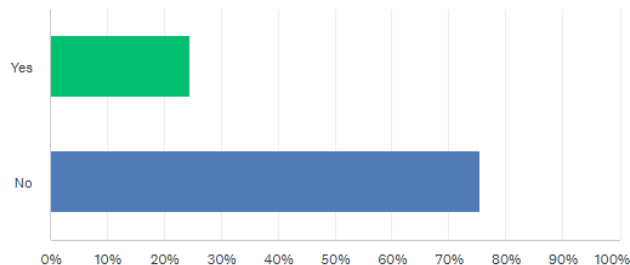
Answered: 305 Skipped: 5

	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL
▼ those walking through this area	36.12% 108	13.71% 41	29.77% 89	9.70% 29	10.70% 32	299
▼ those biking or using micro-mobility devices through this area	33.56% 99	14.92% 44	26.78% 79	13.56% 40	11.19% 33	295
▼ those taking public transit through this area.	23.89% 70	9.22% 27	21.84% 64	22.53% 66	22.53% 66	293
▼ for those driving through this area.	59.14% 178	12.96% 39	19.27% 58	4.32% 13	4.32% 13	301

Gateway East Bus Lanes Pilot Survey – Question 11 & 12

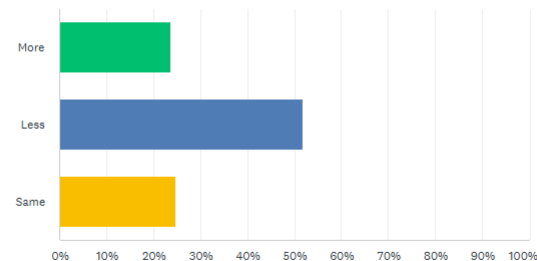
Do you feel your trip is faster with the bus lanes?

Answered: 297 Skipped: 13



Do you feel that your trip time is more or less consistent from day to day with the bus lanes?

Answered: 292 Skipped: 18



Gateway East Bus Lanes Pilot Survey – Question 13

- Q13 Has the dedicated bus lanes caused you to change how you travel through the area? (Open ended)
 - 246 responses Key Themes from the Open ended Comments:
 - Negative Feedback (~75%):
 - Increased Traffic congestion and delays.
 - Drivers feel confused and forced into last-minute lane changes.
 - Insufficient bus frequency to justify the dedicated lane.
 - Gridlock caused by poorly timed traffic signal and misuse of the lane.
 - Attempts to avoid area.
 - Positive Feedback (~10%):
 - Improved reliability and speed for buses.
 - Some responder are more likely to use buses.
 - Neutral or Unclear Feedback (~15%):
 - Observations without a clear stance (e.g., “no noticeable change”)
 - Mixed sentiments that acknowledge both pros and cons.

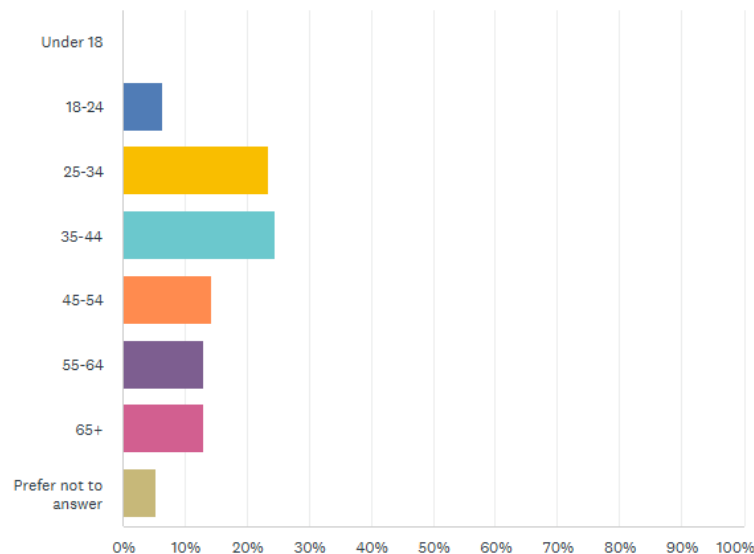
Gateway East Bus Lanes Pilot Survey – Question 14

- Q14 Should the Town and MBTA make changes to the dedicated bus lanes? (Open-ended)
 - 264 responses Key Themes from the Open ended Comments:
 - Negative Feedback (~60%):
 - Strong calls to remove the bus lanes or restrict their hours of operation.
 - Frustration over increased congestion and poor implementation while the bus lane is empty.
 - Concerns about drivers not respecting the bus lanes and safety issues with merging and turning.
 - Concerns about unsafe merging, turning conflicts, and widespread driver disregard for bus lane restrictions.
 - Positive Feedback (~20%):
 - Suggestions to adjust signal timings and improve enforcement.
 - Recognition of the potential for better transit efficiency if changes are made.
 - Neutral or Unclear Feedback (~20%)
 - Observations without a clear stance (e.g., “no noticeable change”, “lack of enforcement”)
 - Mixed sentiments that acknowledge both pros and cons.

Gateway East Bus Lanes Pilot Survey – Question 15

What is your age? (Select one)

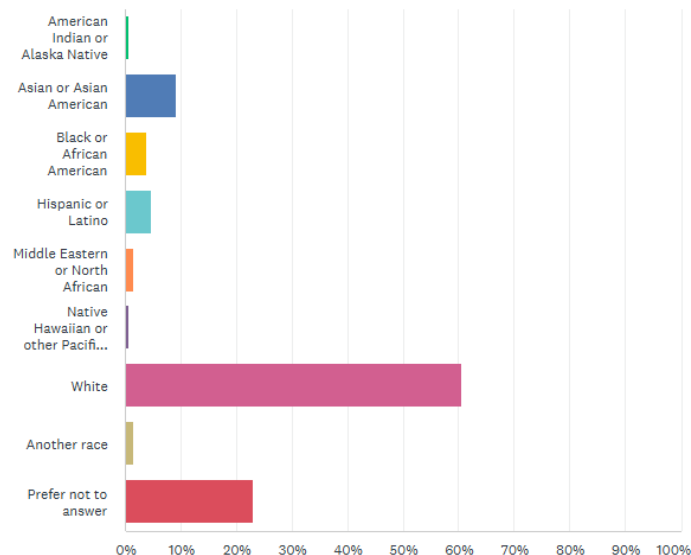
Answered: 299 Skipped: 11



Gateway East Bus Lanes Pilot Survey – Question 16

What is your ethnicity?

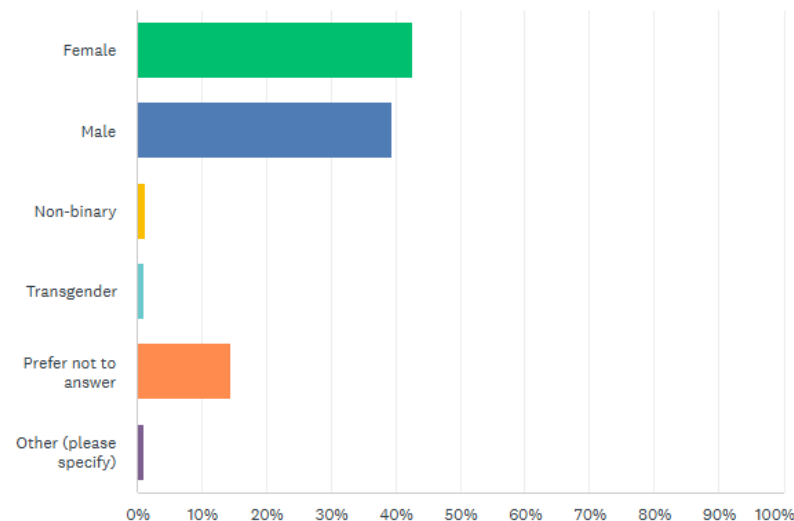
Answered: 282 Skipped: 28



Gateway East Bus Lanes Pilot Survey – Question 17

What is your gender identity? (Select one)

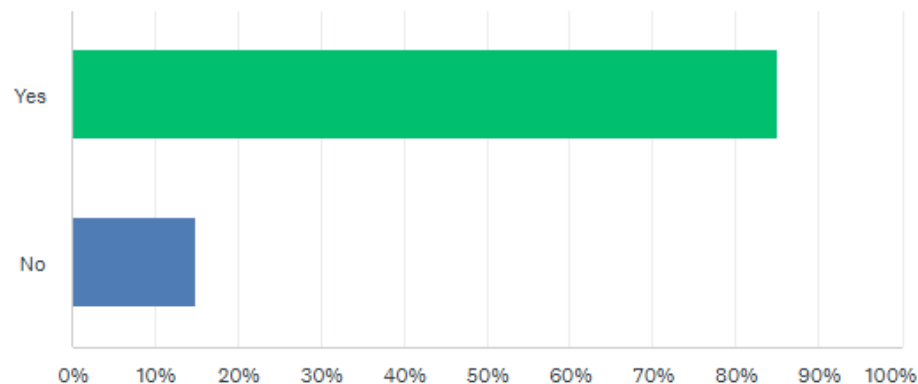
Answered: 289 Skipped: 21



Gateway East Bus Lanes Pilot Survey – Question 18

Do you live or work in Brookline? (Select one)

Answered: 308 Skipped: 2





Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbitts-Nutt, Secretary & CEO



TRAFFIC CONTROL AGREEMENT
NOTICE TO PROCEED

February 27, 2024

Town of Brookline
333 Washington Street
Brookline, MA 02445

Agreement Number: Pending
Action Item #: 10
Action Item Date: February 28, 2024

Dear Charles Carey:

Enclosed is a signed copy of your Traffic Control Agreement with the Massachusetts Department of Transportation.

This agreement is relative to the Highway Safety Improvement Project on Washington Street and Walnut Street in Brookline.

In accordance with the terms of this agreement, you are hereby notified to commence work on February 25, 2024.

Thank you,

Miguel A. Sanchez

Miguel A. Sanchez
Supervisor, Contracts & Records

MS/lr

cc: Fiscal
Contracts & Records

E-Mail: Richard Wilson
James Danila

October 13, 2023



**MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
Highway Division**

TRAFFIC ENGINEERING

TRAFFIC CONTROL AGREEMENT

AN AGREEMENT BETWEEN THE
MASSACHUSETTS DEPARTMENT OF TRANSPORTATION AND THE
TOWN OF BROOKLINE

FEDERAL AID PROJECT NO. CMQ/TAP/STP- 0036(215)X AGREEMENT NO. Pending

25th February 2024

AGREEMENT, made this ___ day of __, ~~2023~~ by and between the Massachusetts Department of Transportation, hereinafter called "**MASSDOT**," and the TOWN of BROOKLINE, hereinafter called the "**TOWN**," pursuant to the provisions of 23 U. S. C. §§ 109(d) & 116, and in accordance with the official standards of MASSDOT, which have been adopted in conformity with the provisions and recommendations of the Manual on Uniform Traffic Control Devices for Streets and Highways published by the Department of Transportation, Federal Highway Administration, hereinafter called "**STANDARDS**."

WHEREAS, MASSDOT and the TOWN have agreed that the WASHINGTON STREET (ROUTE 9) AND WALNUT STREET IMPROVEMENT PROJECT being in whole or in part a town way, has qualified to participate in the Federal Aid Program with the work being financed in part by the Federal Government; and

WHEREAS, the United States Government, through its Department of Transportation, Federal Highway Administration, requires that the project area upon completion will be operated and maintained in an adequate manner; and

WHEREAS, the TOWN approves the proposed plans for the improvements and upon completion of the project will be the responsibility of the TOWN.

NOW, THEREFORE, in consideration thereof, the TOWN hereby agrees to conform to the following provisions:

I. GENERAL PROVISIONS

- A. All information, regulatory or warning signs, or other traffic control devices and all pavement or other markings within the ways located in the project area shall be designed, located and operated in accordance with the STANDARDS of MASSDOT for such devices.

October 13, 2023

- B. The Police Department of the TOWN shall be the enforcement agency for traffic regulations established in accordance with this AGREEMENT and the traffic devices installed in connection therewith.
- C. Signed, dated and attested copies of amendments to the TOWN traffic ordinances necessary for the enforcement of any specific provisions will be forwarded forthwith by the TOWN to MASSDOT.

II. SPECIFIC PROVISIONS

A. STOP SIGNS

To be installed in accordance with applicable permits filed or to be filed by the TOWN and approved by MASSDOT.

River Road southbound at Washington Street
Pond Avenue northbound at Washington Street
Juniper Street northbound at Walnut Street

B. YIELD SIGN (BICYCLE)

Washington Street, Separated Bike Lane eastbound, at pedestrian crosswalk (adjacent to bus stop)
Washington Street, Separated Bike Lane westbound, at pedestrian crosswalks (adjacent to bus stop)
Walnut Street, Shared Use Path northbound, at pedestrian crosswalk

C. NO LEFT TURN

Boylston Street eastbound onto Washington Street
Washington Street westbound onto High Street
River Road southbound onto Washington Street
Pond Avenue onto Washington Street

D. RIGHT TURN ONLY

Double Rights - Washington Street westbound onto Washington Street northbound (Right Lane Bus Only)

E. LEFT TURN ONLY

Double Lefts – Washington Street southbound onto Washington Street eastbound (Right Lane Bus Only)
Double Lefts – Washington Street eastbound onto Brookline Avenue

F. LEFT LANE MUST TURN LEFT

Washington Street eastbound onto Pearl Street
Washington Street westbound onto Walnut Street
Brookline Avenue southbound onto Washington Street

G. RIGHT LANE MUST TURN RIGHT

Walnut Street northbound onto Washington Street
Brookline Avenue southbound onto Washington Street
Boylston Street eastbound onto High Street (Except Bicycles)
Washington Street eastbound onto Walnut Street (Except Buses)
Washington Street eastbound onto Brookline Avenue (Except Buses)

October 13, 2023

Washington Street eastbound onto Pond Avenue (Except Buses)
Washington Street westbound onto Brookline Avenue (Except Buses)
Washington Street westbound onto Pearl Street (Except Buses)

H. RIGHT TURN YIELD TO BIKES

Washington Street southbound, approaching Boylston Street

I. RIGHT TURN YIELD TO BIKES & PEDESTRIANS

Washington Street southbound, onto Boylston Street
Boylston Street eastbound, onto High Street
Washington Street eastbound, onto Walnut Street
Washington Street westbound onto Pearl Street
Pearl Street southbound onto Washington Street
Walnut Street northbound onto Washington Street
Washington Street eastbound onto Brook House Condominium Driveway
Washington Street westbound onto Brookline Avenue

J. KEEP RIGHT

Washington Street southbound, onto Washington Street eastbound
Boylston Street eastbound at Washington Street/ High Street
Washington Street westbound at Washington Street/ High Street
Washington Street eastbound at Walnut Street/ Pearl Street
Washington Street westbound at Walnut Street/ Pearl Street
Washington Street eastbound at Brookline Avenue/ Brook House Condominium Driveway
Washington Street westbound at Brookline Avenue/ Brook House Condominium Driveway

K. NO U-TURN

Boylston Street eastbound at Washington Street/ High Street
Washington Street westbound at Washington Street/ High Street
Washington Street eastbound at Walnut Street/ Pearl Street
Washington Street westbound at Walnut Street/ Pearl Street
Washington Street westbound at Brookline Avenue/ Brook House Condominium Driveway

L. SEPARATED BIKE LANE

Washington Street eastbound, from approximately 150' east of High Street to approximately 100' east of Pond Avenue
Washington Street westbound, from approximately 50' east of River Road to Boylston Street
Walnut Street northbound, between Juniper Street and Washington Street

M. BIKE LANE

Washington Street southbound, from Station Street to Boylston Street
Washington Street northbound, from Boylston Street to Station Street
Walnut Street eastbound, from High Street to Washington Street
Walnut Street westbound, from Washington Street to High Street

N. NO TURN ON RED

Brook House Condominium Driveway northbound at Washington Street

October 13, 2023

O. BUS STOP

Washington Street eastbound, between High Street and Walnut Street
Washington Street westbound, between Pearl Street and High Street

P. DON'T BLOCK THE BOX

High Street at Walnut Street

Q. RIGHT LANE BUS ONLY

Washington Street eastbound, from High Street to approximately 150' west of Walnut Street
Washington Street eastbound, from Walnut Street to approximately 100 west of Brook House Driveway
Washington Street eastbound, from Pond Avenue to Town Line
Washington Street westbound, from Brookline Avenue to approximately 110' east of Pearl Street
Washington Street westbound, from Pearl Street to High Street

R. BUS AND RIGHT TURN ONLY LANE

Washington Street eastbound, from approximately 150' west of Walnut Street to Walnut Street
Washington Street eastbound, from approximately 110' east of the Brook House Driveway to the Brook House Driveway
Washington Street eastbound, from the Brook House Driveway to Pond Avenue.
Washington Street westbound, from the Town Line to Brookline Avenue
Washington Street westbound, from approximately 115' east of Pearl Street to Pearl Street

S. CENTER LANE BUS ONLY

Washington Street southbound, from Station Street to Boylston Street.

III. ACCESS AND EGRESS

Within the limits of the Federal Aid Project, neither additional driveways (residential or commercial) nor relocation or alteration of existing driveways shall be permitted unless they are in conformance with MASSDOT STANDARDS and receive prior written approval from MASSDOT.

IV. TRAFFIC ISLANDS

Traffic islands or median islands and traffic devices thereon are not to be installed, altered or removed without the prior written approval of MASSDOT. Parking is prohibited on and adjacent to all traffic islands and median islands within the Federal Aid Project area.

V. TRAFFIC CONTROL SIGNALS

- A. Traffic Control Signals shall be operated in strict accordance with the requirements and stipulation of the applicable permit.
- B. Changes in the operation of the traffic control signals located in the Federal Aid Project area are not to be made without the prior written approval of the MASSDOT.

October 13, 2023

- C. Traffic Control Signals, the operation of which is pertinent to the Federal Aid Project area covered by this Agreement, will be installed to control traffic as shown on the plans for this Federal Aid Project. All power charges for the operation of the installation will be the responsibility of the TOWN as well as charges for maintenance and control. The traffic control signals listed below will be under the ownership of the TOWN.

Boylston Street/ Washington Street at High Street
Washington Street at Pearl Street/ Walnut Street
Washington Street at Brookline Avenue/ Brook House Condominium Driveway
Washington Street at Emerald Necklace (Midblock Crossing)
Walnut Street at High Street
Brookline Avenue at Pearl Street

VI. MISCELLANEOUS

Traffic Controls or regulations instituted whether by MASSDOT or the TOWN on ways or parts thereof within the Federal Aid Project are to remain in force and effect until proposed future changes have been approved in writing by MASSDOT.

MASSDOT will not approve any future proposed traffic control changes within the Federal Aid Project, which will in the opinion of MASSDOT, lessen to any degree the efficient utilization of the highway for traffic purposes.

VII. MAINTENANCE

The TOWN, pursuant to the provisions of 23 U.S.C. §§ 109(d) & 116, shall properly maintain the way and all traffic signs and pavement markings under the control of the TOWN within the project area.

VIII. PENALTY

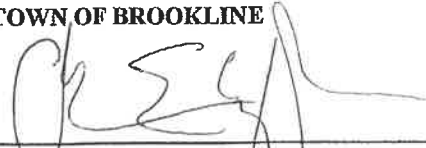
Continued and willful failure on the part of the TOWN to fulfill its responsibility in the proper maintenance, operation, and enforcement of the traffic regulations of the completed project may disqualify the TOWN from participation in future Federal Aid Projects in which the TOWN has maintenance responsibility, as provided in Title 23 USC.

Such failure shall result in the withholding or withdrawal of the unexpended balance of any funds assigned to the TOWN, under the provisions of MASS. GEN. LAWS ch. 90, § 34.

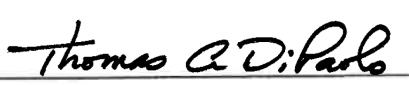
IN WITNESS WHEREOF, the Parties hereto have executed this AGREEMENT on the day and year first written.

October 13, 2023

TOWN OF BROOKLINE


TOWN ADMINISTRATOR

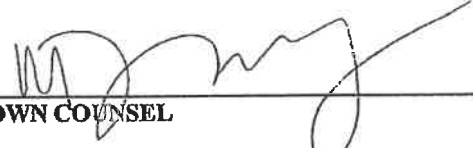
MASSACHUSETTS DEPARTMENT OF
TRANSPORTATION


ASSISTANT CHIEF ENGINEER 2/25/24

LEGAL CERTIFICATION

This will certify that the TOWN has complied with all applicable State Laws and its By-Laws and Ordinances as they apply to this AGREEMENT and that this AGREEMENT is a valid, binding Agreement with the TOWN.

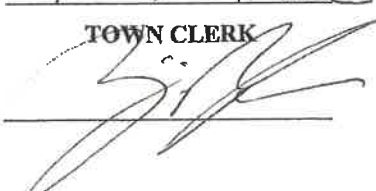
10/13/2023
DATE


TOWN COUNSEL

CERTIFICATE OF SIGNATORY

This will certify that the below named individuals are duly authorized and empowered to execute and deliver this AGREEMENT on behalf of the Town of Brookline.

NAME: Charles Carey
Town Administrator
SIGNED: 
DATE: FEB. 8, 2024

TITLE: Town Administrator
ATTEST: Ben Kaufman
TOWN CLERK
SIGNED: 

Memorandum**To** Select Board**From:** Charles Carey, Town Administrator**Date:** August 7, 2026**Re** Exigent Statement Ratification Policy

The past two years have seen a marked increase in requests for the Town to sign on to letters or public statements regarding matters of national political importance, including but not limited to federal policy concerning immigration, civil rights, and other related topics. These requests often arise on an exigent basis in response to current events (increased ICE activity, the end of TPS for certain nationalities, etc.).

The Town Administrator Act of 1985, as amended, expressly authorizes me to “coordinat[e] intra- and intergovernmental affairs” and “act[] as the administrative spokesperson for the Town.” As a matter of practice, however, it is important that the Select Board, as the chief executive body of the community, and one that is directly answerable to the voters, review and approve statements that take new positions or depart from past pronouncements. This practice is also in furtherance of the 2030 Roadmap goals involving increased transparency, better communication, and accountability.

This memo codifies an informal policy designed to ensure the Board remains in control of policy-related statements on behalf of the Town while allowing the Town to be quick enough to sign onto such statements when exigent circumstances arise. It is distinct from situations at which I or other staff are asked to speak on our own behalf—for example, at a conference or as officers of regional organizations. Even in those situations, we follow the International City/County Management Association’s Code of Conduct and never act in ways that bring the community or the Select Board’s positions into disrepute.

1. If a request is made for the Town to sign a statement that asks it to either take a new policy position or alter a prior one, wherever possible, that statement should be placed on the Board’s agenda for review and vote.
2. If there is insufficient time for the Board to consider such a statement prior to its next regular meeting, the Town Administrator may circulate the proposed letter to individual Board members, ensuring the Open Meeting Law is not violated.
3. If any individual Board member objects or wishes to further discuss signing a statement, the statement will not be signed and instead may be added to the Board’s next agenda for public discussion. The Town Administrator will not share any information other than the fact that the statement will not be signed to other Board members, so as to avoid serial deliberation.
4. If no Board members object, the Town Administrator may sign the statement as the Town’s administrative spokesperson and present it to the Board at its next meeting for formal ratification, so that the Select Board may publicly endorse and highlight its position to the community.

If the above procedures comport with the Board’s understanding, I will continue to operate in this manner when requests are made to sign a letter or statement on an exigent basis.

END OF DOCUMENT



Ann Hess Braga, Director

Town Hall, 2nd Floor
333 Washington St.
Brookline, MA 02245
617-730-2121

Memorandum

To: Charles Carey, Town Administrator
Brookline Select Board

From: Ann H. Braga, Human Resources Director *Ann H. Braga*

Date: August 6, 2026

Re: Updated Pay Structure for Police and Fire Department Non-Union Employees

At the request of Town Administrator Carey, the information below provides an update to non-union Police Command Staff and Fire Department non-union leadership. As part of the review and proposed update, I considered the gap between Lieutenants' pensionable pay (less OT and Details) and Deputy Superintendents, Deputy Superintendents and Superintendent as well as Superintendent and Chief. Similar considerations were reviewed for the Chief of Operations and Fire Chief and the parity between Police and Fire non-union staff.

The proposed pay grids would assist with recruiting candidates to apply for command staff and Chief of Operations openings and support a longer tenure for experience in these roles and preparation for the next steps in their career.

For Police Command Staff, they are eligible to receive their Education Incentive (Quinn percentage up to 25%), Tactical, Holiday Pay, Longevity and Uniform Allowance as part of their compensation. Fire Chief of Operations is eligible to receive an Education Stipend, Longevity and ASHER payments.

Prior to 2024, there were no steps for any Public Safety non-union senior leadership. At that time, four steps were created for Deputy Superintendents (in the Mid-Manager plan) at one percent per step. Currently, there are no steps for Police Superintendent or Fire Chief of Operations (part of the Department Head Plan).

For FY27, Public Safety leadership would receive a 1 percent increase in Tactical/ASHER to 5 percent and Superintendent and Chief of Operations would have four steps with 1% between steps. Beginning in FY28, the Tactical/ASHER would increase to 6 percent and new steps would be 1.5 percent. Incumbent employees would be placed on the Step that provides an increase in compensation, not an automatic increase in step – per standard practice.

For the Superintendent and Chief of Operations, in FY28 there would be four steps at 1.5 percent and a 1 percent increase in Tactical/ASHER stipend.

In FY27, the cost for implementation of the proposal is \$24,016.12. If approved, the proposal would be effective as of the Select Board vote.

Thank you for your consideration. I am available to answer any questions.

BASE PAY - PUBLIC SAFETY LEADERSHIP							
			HOURLY	DAILY	WEEKLY	ANNUAL	
DEP SUP	FY27	1	78.1275	625.02	3,125.10	163,130.23	CH 27*
	1.5% COLA	2	78.9088	631.27	3,156.35	164,761.56	
	1% STEP	3	79.6978	637.58	3,187.91	166,409.16	
		4	80.4948	643.96	3,219.79	168,073.25	
	4 NEW STPS	5	81.2997	650.40	3,251.99	169,753.87	RA, MM, RO 27
		6	82.1127	656.90	3,284.51	171,451.41	
		7	82.9339	663.47	3,317.35	173,165.93	
		8	83.7632	670.11	3,350.53	174,897.59	
	FY28	1	79.6901	637.52	3,187.60	166,392.82	
	2% COLA	2	80.8854	647.08	3,235.42	168,888.72	CH 28
	1.5% STEP	3	82.0987	656.79	3,283.95	171,422.05	
		4	83.3302	666.64	3,333.21	173,993.38	
		5	84.5801	676.64	3,383.20	176,603.28	RA, MM, RO 28
		6	85.8488	686.79	3,433.95	179,252.33	
		7	87.1365	697.09	3,485.46	181,941.11	
		8	88.4436	707.55	3,537.74	184,670.23	
SUP/COO	FY27	1	84.8300	678.64	3,393.20	177,125.04	PC 27*
	CREATE STP	2	85.6783	685.43	3,427.13	178,896.29	DR 27
	1% STEP	3	86.5351	692.28	3,461.40	180,685.25	
	1.5% COLA	4	87.4004	699.20	3,496.02	182,492.11	
	FY28	1	86.5266	692.21	3,461.06	180,667.54	
	2% COLA	2	87.8245	702.60	3,512.98	183,377.55	PC 28
	1.5% STEP	3	89.1419	713.13	3,565.67	186,128.22	DR 28
		4	90.4790	723.83	3,619.16	188,920.14	
	* No FY27 Step due to date of promotion.						

SELECT BOARD

David Pearlman, Chair
Michael Rubenstein, Vice Chair
Amanda Zimmerman
Anthony Buono
Bernard Greene



BROOKLINE
MASSACHUSETTS

333 Washington Street
Brookline, MA 02445
selectboard@brooklinema.gov
617-730-2200

NOTICE OF APPEAR & OPPORTUNITY TO BE HEARD

July 27, 2026

Cynthia Pappas
1459 Beacon Street
Brookline, MA 02446

Re: Lodging House License Renewal – 1459 Beacon Street

Dear Cynthia Pappas,

This letter is to notify you that on April 28, 2026, you appeared before the Select Board regarding the renewal of your lodging house license for the property located at 1459 Beacon Street. At that hearing, the Board found that your lodging house is not in compliance with the Town of Brookline's Lodging House Regulations. Specifically, the scaffolding erected at the exterior of the building remains in place, and to date you have not provided the Board with any update, timeline, or documentation regarding the repair or removal of that scaffolding, as you were previously directed to do.

Accordingly, you are respectfully directed to appear at a public hearing before the Select Board on **August 11, 2026** to be held at **Brookline Town Hall, 333 Washington Street, 6th Floor, Brookline, MA 02445 in the Select Board Hearing Room**, to show cause as to why the Town should not take remedial action against you, up to and including denial of your license renewal, suspension or revocation of your existing license, an order to close your business, and/or imposition of fines. Your hearing date has been rescheduled as we did not hear from you prior to July 28, 2026 Select Board meeting

You may be represented by an attorney at the hearing. Attendance at the hearing is permitted either in person or virtually via Zoom. You may provide written documentation to support your position at the hearing, including any evidence of completed or scheduled scaffolding repairs, by no later than **August 5, 2026**.

Should the reasons for the issuance of this notice not be resolved on August 11, 2026, that hearing will be continued at on a final scheduled date. At that point, the Select Board will make a final determination on what remedial action to take, including with respect to your renewal application.

Questions or documents in support of your position should be directed to Nicole Lima at Nlima@brooklinema.gov.

Respectfully,

Nicole Lima
Town of Brookline Licensing Department

Tree Planting CommitteePamela Templer
Hugh Mattison
Elizabeth Erdman**Milee Pradhan**

Parks and Open Space Director

Jack Schleifer

Urban Forestry Manager and Tree Warden

August 7, 2026

Re: Public Hearing regarding Beacon Street Public Shade Tree Removals and Possible Vote to Uphold the Tree Planting Committee's Hearing and Vote on 8/5/2026.

Dear Select Board,

The Tree Planting Committee held a hearing on August 5th at 5:00pm concerning the removal of 3 Public Shade Trees at the Brandon Hall MBTA Station that are in conflict with the proposed MBTA designs for their C-Line Accessibility Project. This decision followed numerous arborist evaluations of the trees, air spading to expose their root systems in conflict with the proposed infrastructure, and many months of dialogue between the Town and the MBTA. The MBTA presented on the reasons for these removals and a proposed mitigation and replanting plan at the Tree Planting Committee on August 5, 2026. This hearing was held pursuant to MGL c. 87, and public notices were posted on the trees and in the Boston Herald two weeks prior to the hearing. Following the public hearing, the Tree Planting Committee voted 3-0 to approve the removal of the three public shade trees and the associated mitigation and replanting plan.

Following the vote, Town staff received a letter of appeal from Joslin Murphy that is attached in the documents packet. Although this appeal was received after the public hearing and vote, and is thus untimely, staff ultimately believe that Select Board review of the Tree Planting Committee's August 5, 2026 decision is in the public interest. Such review furthers the Select Board's 2030 Roadmap goals of transparency and accountability by helping the public be better informed of the factors behind the removal decision and allowing residents to offer any further comment/objection to the Select Board for consideration.

Sincerely,
Jack Schleifer



August 10, 2026

Subject: Tree removal hearing Brandon Hall MBTA C-Line station

Dear members of the Select Board,

On Wednesday, August 5, 2026, the Tree Planting Committee (TPC) held a public hearing requesting the removal of 3 shade trees at the Brandon Hall C-Line station. This requested resulted from work done as part of the MBTA C-line accessibility project Fairbanks/Brandon Hall (consolidated station). The trees are a 30" dbh oak tree in poor condition and two six-inch dbh oak trees in good condition.

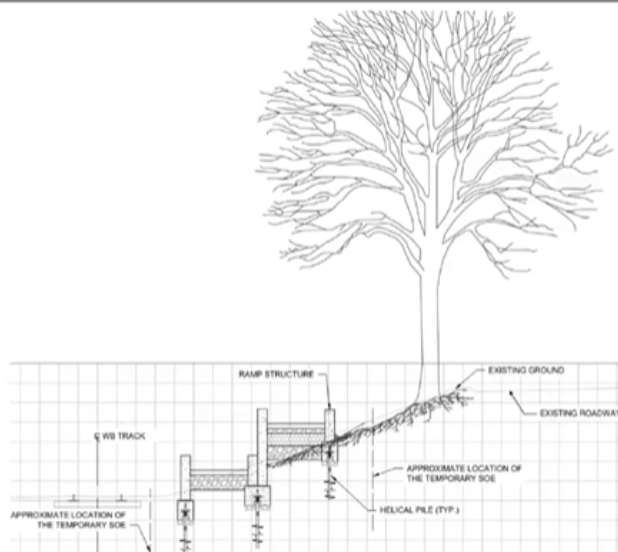
During the meeting, the TPC learned that extensive measures had been taken over the summer by the Town of Brookline's arborist and the MBTA forestry team to test the roots and alternate ramp designs to prevent removal of the three trees; they observed that several ~3" roots, which had grown toward the new station, would need to be cut to accommodate the ramp to the new station. It was noted that cutting these roots on the downhill side of the trees would compromise the stability of the trees. The 30" oak, already in poor condition (as evidenced by its large cavity), is leaning over pedestrian walkways and westbound travel lanes on Beacon Street and presents a risk of falling on pedestrians and the road. This opinion was expressed by two other design team arborists. (See diagram below presented by the MBTA).

Fairbanks Street/Brandon Hall Consolidated Station – Reason For Removal

Conflict between Structural Roots and Ramp



- All Three tree's root systems were air spaded near the required excavation limits
- All three trees had structural roots that conflict with the proposed ramp structure
- The Town's Tree Warden reviewed the tree with respect to conflicts with proposed construction and expressed concern that pruning the roots would jeopardize the structural integrity and/or health of the trees and ultimately fail, potentially damaging TOB Infrastructure, MBTA Infrastructure, and risk injury to people in the area. The Town subsequently asked the Design Team's Arborist for a second opinion on the tree conflicts, and they agreed with the removal.
- Other alternatives were evaluated, but would require longer ramps and the removal of at least 8 other trees



Other alternatives were evaluated, but “led to the removal of even more trees”. (MBTA presentation).

The TPC subsequently learned that the 30” oak tree contained an Eastern Screech Owl perch, though there was no evidence of a “nest”. We discussed whether the tree stump, which has the cavity, could be retained. It was determined that the Eastern Screech Owl nests in the canopy of trees, so the remaining trunk would not be desirable to the owl and would be a safety hazard if it was left standing. During the TPC meeting Gwen Dunlevy, the MBTA presenter, responded that installation of owl nesting boxes was “relatively reasonable” and would be discussed with the project team.

For context, the committee had discussed tree preservation matters at this station extensively during several meetings in February 2026. At that time, the proximity of the Eastern Screech Owl to the construction was discussed at length and one solution was to provide owl nesting boxes for the Eastern Screech owl to nest in. In February, Hugh Mattison, a member of the TPC, approached Brookline Boy Scout Troup 6 to assist with installation of owl boxes along Beacon Street. Further discussion with Troop 6 was held pending discussion within Troop 6 leadership. The committee also learned that Brookline Department of Public Works separately planned to install owl boxes the length along Beacon Street and encouraged partnering with a local Boy Scout Troup to install the boxes. We had assumed that the length of Beacon Street would have owl boxes installed at the conclusion of the MBTA project, but the owl boxes have not yet been installed. Following last week’s TPC hearing, we recommend that the Select Board make a formal request to the MBTA to provide the owl boxes, with support for installation to be provided by the Town of Brookline and consultation with Mass Audubon Society.

Approximately 15 members of the public attended the recent TPC hearing and two members of the public commented. We received no letters in opposition before or during the meeting. We received one the next day.

The tree planting committee voted unanimously to permit the removal of the three petitioned trees with the requirement that at least six additional trees are planted at the Brandon Hall station. (A Google map prepared by the TPC at www.tinyurl.com/mbta-tree-plan displays the tree removals, new plantings, and a few potential locations for new trees.) The TPC will monitor the implementation of the new planting plan for compliance.

Sincerely,
Elizabeth Erdman, Chair
Hugh Mattison
Pamela Templer

Brookline Tree Planting Committee

From: [Joslin Murphy](#)
To: [Jack Schleifer](#)
Cc: [lizerdman505](#); [Milee Pradhan](#)
Subject: Re: Brandon Hall Tree
Date: Thursday, August 6, 2026 8:59:47 AM

CAUTION: This email originated from a sender outside the Town of Brookline mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Good morning. I am seeking an appeal of the removal of the three Brandon Hall Station trees that were discussed last night at the Tree Planting Committee meeting because I understand that one of the trees, a 30" DBH Oak, is the tree occupied by an Eastern Screech Owl, a matter that was discussed at length during the hearings that resulted in the loss of 96 (+/-) trees along the Beacon Street line. The public was informed that the tree would not only be saved, but protected. These birds, and their habitat, are protected under the Federal Migratory Bird Act. Kindly forward my objection to the Select Board for purposes of my appeal. Regards, Joslin

[96 trees to be removed, 98 replanted: MBTA moves forward with Green Line accessibility project - Brookline.News](#)

On Wed, Aug 5, 2026 at 5:50 PM Joslin Murphy wrote:

Hi, Jack - Please be advised that I object to the removal of the trees at Brandon Hall that were discussed at this evening's ongoing Tree Planting Committee hearing; in particular, the tree earlier identified as being occupied by a screech owl which the public was informed would be protected. Regards, Joslin Murphy

From: [Joslin Murphy](#)
To: [Charles Carey](#); [David Pearlman](#); [Michael Rubenstein](#); [Melanie Otsuka](#); [Jack Schleifer](#); [Milee Pradhan](#)
Subject: Fwd: Brandon Hall Tree
Date: Friday, August 7, 2026 1:26:05 PM

CAUTION: This email originated from a sender outside the Town of Brookline mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Hi, Chas and others - I just saw that the agenda packet for the Select Board's meeting on August 11 does not include my suggestion for a resolution of the matter concerning the trees at the Brandon Hall MBTA station, which is a part of the relevant email chain and was made in a good faith effort to resolve the matter without further action by the Select Board. Was that an oversight? Could my email time stamped August 6 at 1:47 PM below please be included in the packet as it is a part of the same email chain? If these questions can be answered satisfactorily before Tuesday, I will be happy to withdraw the appeal. Thank you, Joslin Murphy (TMM P16)

----- Forwarded message -----

From: Joslin Murphy [REDACTED]
Date: Thu, Aug 6, 2026 at 1:47 PM
Subject: Re: Brandon Hall Tree
To: Jack Schleifer <jschleifer@brooklinema.gov>
Cc: Elizabeth Erdman [REDACTED] <mpradhan@brooklinema.gov>, Milee Pradhan

Good afternoon. Following up, as I just watched the videos of last night's TPC meeting and of the February 3, 2026 TPC meeting. Questions: Jack, are you able to determine - independently of the MBTA - whether the trunk of the tree that the Eastern Screech Owl was photographed in is able to be preserved with or without further stabilization? If not, will the MBTA make a commitment in writing to install nesting boxes that are appropriate for screech owls in the nearby area? I understand that a condition of the removal is replanting six oak trees. Will the MBTA make a commitment in writing as to the DBH of the replacement trees, along with agreed upon replanting locations? I am hoping this can be resolved without the need for further action by the Select Board. Thank you, Joslin

On Thu, Aug 6, 2026 at 8:59 AM Joslin Murphy [REDACTED] wrote:

Good morning. I am seeking an appeal of the removal of the three Brandon Hall Station trees that were discussed last night at the Tree Planting Committee meeting because I understand that one of the trees, a 30" DBH Oak, is the tree occupied by an Eastern Screech Owl, a matter that was discussed at length during the hearings that resulted in the loss of 96 (+/-) trees along the Beacon Street line. The public was informed that the tree would not only be saved, but protected. These birds, and their habitat, are protected under the Federal Migratory Bird Act. Kindly forward my objection to the Select Board for purposes of my appeal. Regards, Joslin

[96 trees to be removed, 98 replanted: MBTA moves forward with Green Line accessibility project - Brookline.News](#)

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**MEMORANDUM OF UNDERSTANDING and REVOCABLE LICENSE
WITH RESPECT TO FIELD USAGE AND FEES**

This Memorandum of Understanding and Revocable License Agreement with Respect to Field Usage and Fees (hereinafter “Revocable License Agreement” or “MOU”) made on this 14th day of July, 2026 is between the Town of Brookline, acting by and through its Board of Selectmen and Park and Recreation Commission (hereinafter the “Town”), a municipal corporation and political subdivision of the Commonwealth of Massachusetts with offices located at 333 Washington Street, Brookline, Massachusetts 02445, and Beaver Country Day School (hereinafter the “School”), a Massachusetts charitable and educational corporation with an address of 791 Hammond Street, Brookline, Massachusetts (hereinafter collectively referred to as the “Parties”).

WHEREAS, the School desires to use certain Town athletic fields and other recreational facilities as part of the School’s daily recreational curricula and after school programming; and

WHEREAS, the Town has historically permitted the School to use these athletic fields and other recreational facilities owned by the Town for the School’s programs; and

WHEREAS, the Town desires to permit the School to use such athletic fields and recreational facilities in exchange for a fee; and

WHEREAS, the Town desires to use the School’s athletic fields and other recreational facilities from time to time as part of its normal recreation programming; and

WHEREAS, the School has historically permitted the Town to use athletic fields and other recreational facilities owned by the School for the Town’s recreational programming; and

WHEREAS, the School desires to provide the Town with use of its fields in exchange for a reduced fee;

NOW THEREFORE, in consideration of the mutual covenants, promises, terms and conditions set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by the Parties, the Parties hereby agree as follows:

I. Facility Locations

Town of Brookline

- Soule Recreation Center, Upper and Lower Fields, 652 Hammond Street, Brookline
- Baker School Tennis Courts, 205 Beverly Road, Brookline
- Robert T. Lynch Municipal Golf Course at Putterham Meadows, 1281 West Roxbury Parkway, Brookline

Beaver Country Day School

- Beaver Country Day School, 791 Hammond Street, Brookline
- Baseball and Soccer Fields

II. Athletic Field and Recreational Facility Usage

School Usage Dates and Times

The Town agrees to permit the School to use the foregoing Town athletic fields and recreational facilities under a limited revocable license and to the extent provided herein.

The Town agrees to permit the School to use the Upper and Lower fields at the Soule Recreation Center for School athletic practices and games each spring from approximately mid-April to mid-June and in the fall from approximately early September to mid-November, on weekdays (Monday through Friday) from 2:30 to 5:30 pm.

The Town agrees to permit the School to use the Robert T. Lynch Municipal Golf Course for the School's golf team practice in the fall from approximately early September to mid-November. Tee times for the season shall be arranged through a pre-season meeting with the Town's Golf Professional and shall be set forth in writing by the Town's Golf Professional and provided to the School.

The Town agrees to permit the School to use the Baker School tennis courts for tennis team practice and games in the spring from approximately mid-April to mid-June on weekdays (Monday through Friday) from 2:30 to 5:30 pm. The School agrees that the public shall have the use of at least one Baker School tennis court during these permitted times.

The Town agrees to permit the School to use other Town fields for the purpose of Cross Country Meets between September and November of each year, subject to permitting that is approved by the Town's Recreation Department.

Town Usage Dates and Times

The School agrees to permit the Town to use: (i) the School's soccer fields for Brookline Youth Soccer practices and games in the Spring from approximately mid-April to mid-June and in the Fall from approximately mid-September to mid-November, on weekend days (Saturday and Sunday) from 8:00 am to 6:00 pm, and on weekdays (Monday through Friday) from 5:30 pm to dusk, and; (ii) the School's baseball fields from approximately April to mid-June on weekend days (Saturday and Sunday) from 8:00 am to 6:00 pm and on weekdays (Monday through Friday) from 5:30 pm to dusk.

Periodic Review

The School and the Town will review specific field schedules at least two months prior to the start of each athletic season.

III. Fees

In exchange for permitting the Town to use the School's athletic fields as described above, the School shall pay a reduced fee to the Town for the use of the Town's athletic fields and recreational facilities as described above. The School shall pay the Town the fees set forth in the attached Exhibit "A," which shall be due and payable in four (4) equal quarterly installments, on August 1, November 1, February 1, and May 1 of each year during the term of this Agreement.

IV. Permitted Use of Athletic Fields and Recreational Facilities

During the term of this Revocable License Agreement, the Town agrees to issue such permits as are necessary to allow the School to use the Town's athletic fields and recreational facilities, as more fully described herein.

The Town and School each shall make reasonable and good faith efforts to accommodate the other party's annual request for specific athletic field(s) usage as more fully described herein.

V. Terms and Conditions of Permits for Athletic Fields

Any permits issued by the Town to the School for use of the Town's athletic fields and recreational facilities as described herein shall be subject to the same terms and conditions applicable to any other permits issued by the Town to individuals and organizations for the use of Town athletic fields, and shall be subject to all applicable Town rules, regulations and By-laws, as they may be amended from time to time, including, but not limited to, the Town's Field Use and Allocation Policy. A copy of the Town's Field Use and Allocation Policy and the terms and conditions contained therein is attached hereto and incorporated herein as Exhibit B.

VI. Condition of Fields/Weather Cancellations

The Town shall maintain the designated fields and outdoor facilities in accordance with standard practice. Any field related maintenance requests shall be made to the Town's Director of Recreation.

The Town and School agree to abide by weather and construction related field use decisions for the respective fields, as determined by either the School or the Town's Parks and Open Space Division of the Department of Public Works.

VII. Term

This Revocable License Agreement shall be for a term of ten (10) years commencing on July 1, 2026, and continuing for a period of ten (10) years, which shall end on the day before the ten-year anniversary date of the commencement date of the license term (hereinafter "Termination Date"), subject to the terms and conditions stated herein.

During the ninth year of this Agreement, the Parties will review their respective needs with regard to the facilities identified herein. The School will be offered the right of first opportunity to renew this Agreement for an additional license term on mutually agreeable terms.

VIII. Applicable Laws

The laws of the Commonwealth of Massachusetts shall govern the validity, interpretation, construction, enforcement and performance of this Agreement without regard to conflict of laws principles. This Agreement shall be subject to all applicable local, state and federal laws including, but not limited to, legislative acts, statutes, general and special laws, rules, regulations, Town By-laws, ordinances, codes, executive orders and judicial orders that apply to the subject matter.

IX. Insurance/Indemnity

The School shall at all times during the term of this Revocable License Agreement, at its own cost and expense, carry and maintain, for the mutual benefit of the Town and the School, general public liability insurance against claims for bodily injury, death or property damage occurring on or about any Town athletic field or recreational facility, which insurance shall cover such claims as may be occasioned by the act, omission or negligence of the School, its officers, agents, representatives, employees or servants during all times that this Agreement is in effect. The School shall maintain limits for general liability of no less than \$1,000,000 individual and \$3,000,000 aggregate for each occurrence. The School shall cause the Town of Brookline to be named in any such policy of insurance as an "Additional Insured." No later than the Commencement Date of this Agreement, the School shall provide the Town with a valid certificate of insurance evidencing coverage as aforesaid, and the School shall provide the Town with additional certificates of insurance from time to time as needed to show continuing coverage.

The School shall also indemnify and hold harmless the Town, its officers, officials, employees and volunteers from and against any and all claims, suits, actions, or liabilities for injury or death of any person, or for loss or damage to property, arising from the School's negligent use of the premises covered by this agreement, except to the extent that such claims are caused in whole or in part by the negligence or willful misconduct of the Town, its officers, officials, employees or volunteers.

X. Authority of BCDS

The School warrants and represents to the Town that it has lawfully granted to its undersigned agent all the necessary power and authority to execute, deliver and perform this Revocable License Agreement.

XI. Integration and Modification

This Revocable License Agreement, together with the exhibits, appendices, and other documents incorporated herein by reference, is intended by the Parties as a final expression of their agreement and understanding and as a complete and exclusive statement of the terms thereof, all negotiations, considerations and representations between the Parties having been incorporated by reference herein. No prior agreement between the Parties or their affiliates shall be relevant or admissible to determine any of the terms of this Agreement. No representations, understandings, or agreements have been made or relied upon in the making of this Agreement other than those specifically set forth herein. This Agreement can only be modified by a writing signed by both parties hereto, approved by the Town in accordance with applicable law.

XII. Construction

The fact that this Agreement or a particular provision thereof may have been initially drafted by the attorney for one of the Parties or the fact that this Agreement or a provisions thereof has been substantially revised by the attorney for one of the Parties, shall have no significance as to the construction of ambiguous terms against either party inasmuch as both Parties have cooperated in the drafting of this Agreement and that it is the result of arms-length negotiation between the Parties. No provisions of this Agreement shall be construed against one Party or the other merely because that Party's attorney drafted or revised such provision.

XIII. Assignment or Transfer

This Revocable License Agreement and the rights granted by this Revocable License Agreement shall not be sold, transferred, assigned, sublicensed or assumed in any manner, voluntarily or involuntarily, directly or indirectly unless both Parties so agree in writing. Any transfer or assignment of this Revocable License Agreement without the written agreement of both Parties shall be null and void and shall be deemed a material breach of this Revocable License Agreement by the acting Party. In the event of a transfer or assignment of this Revocable License Agreement, such assignment or transfer shall be subject to the Transferee's assumption of all of the duties and obligations set forth in this Revocable License Agreement.

XIV. Termination

The Town or the School may terminate this Revocable License Agreement for any reason and at any time by giving written notice to the other Party specifying the date of termination, such notice to be given not later than one (1) year prior to the date specified therein. In the event that either Party fails reasonably to maintain or make available the fields and facilities as provided herein or otherwise materially breaches the terms of this Revocable License Agreement, the other Party may terminate this Revocable License Agreement upon thirty (30) days written notice.

XV. Force Majeure

No Party shall be liable for any failure to perform its obligations in connection with any action described in this Agreement if such failure results from conditions beyond its control, including, but not limited to, riot, war, civil unrest, vandalism, terrorism, public emergency, Act of God, Act of Nature, fire, flood, earthquake, hurricane, tornado or any other cause beyond such Party's reasonable control.

XVI. Notices

All notices which shall or may be given pursuant to this Agreement shall be in writing and transmitted by certified mail, return receipt requested, or by hand delivery. All notices shall be deemed given on the date received. Any notice delivered on a Saturday, a Sunday or on a Federal or State holiday observed by the Town, shall not be deemed received until the first business day following such weekend or holiday. All notices received after Regular Business Hours will not be deemed received until the next business day. Either Party may from time to time designate any other address for this purpose by written notice to the other Party given in the manner set forth in this Section XVI.

All notices shall be addressed as follows:

If to the Town: Recreation Director
 Town of Brookline
 333 Washington St.
 Brookline, MA 02445

If to the School: Chief Financial & Operating Officer
 Beaver Country Day School
 791 Hammond Street,
 Chestnut Hill, MA 02467

Executed as an Agreement under seal by the Parties through their duly authorized representatives as follows:

Beaver Country Day School,
By its CFOO:

Marie Downey
7/14/2026

(Attach Certificate of Vote or
Proof of Authority)

Dated: _____

The Town of Brookline,
By its Board of Selectmen:

Park and Recreation Commission:

Dated: _____

Approved as to form:

Town Counsel

Exhibit A

FY	Town Field Use	School Field Use	School Golf Use	Payment
2015	(5,000.00)	19,470.00	10,489.00	24,959.00
2016	(5,125.00)	19,956.75	10,751.23	25,582.98
2017	(5,253.13)	20,455.67	11,020.01	26,222.55
2018	(5,384.45)	20,967.06	11,295.51	26,878.11
2019	(5,519.06)	21,491.24	11,577.89	27,550.07
2020	(5,657.04)	22,028.52	11,867.34	28,238.82
2021	(5,798.47)	22,579.23	12,164.02	28,944.79
2022	(5,943.43)	23,143.71	12,468.12	29,668.41
2023	(6,092.01)	23,722.30	12,779.83	30,410.12
2024	(6,244.31)	24,315.36	13,099.32	31,170.37
2025	(6,400.42)	24,923.25	13,426.81	31,949.63
2026	(6,560.43)	25,546.33	13,762.48	32,748.37
2027	(6,724.44)	26,184.99	14,106.54	33,567.08
2028	(6,892.56)	26,839.61	14,459.20	34,406.26
2029	(7,064.87)	27,510.60	14,820.68	35,266.41
2030	(7,241.49)	28,198.37	15,191.20	36,148.07
2031	(7,422.53)	28,903.32	15,570.98	37,051.78
2032	(7,608.09)	29,625.91	15,960.25	37,978.07
2033	(7,798.29)	30,366.56	16,359.26	38,927.52
2034	(7,993.25)	31,125.72	16,768.24	39,900.71
2035	(8,193.08)	31,903.86	17,187.45	40,898.23
2036	(8,397.91)	32,701.46	17,617.13	41,920.68
2037	(8,607.86)	33,519.00	18,057.56	42,968.70
2038	(8,823.05)	34,356.97	18,509.00	44,042.92
2039	(9,043.63)	35,215.89	18,971.73	45,143.99

EXHIBIT B

(Field Use and Allocation Policy)

Application Form**Translation Available****Profile****Select whether your application is for reappointment or a new application: ***☒ New Application

Nicholas

First Name

Ariniello

Last Name

Email Address

Home Address

City

MA

State

01890

Postal Code

Primary Phone

Which Boards would you like to apply for?

Board of Assessors: Submitted

Do you have an existing contract with the Town?☐ Yes ☒ No**Interests & Experiences****If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.**

I worked for the City of Boston Assessing Department for 20 years, serving as the Commissioner of Assessing for the last 7. Prior to that I was department Counsel for 12 years and the Director of Tax Policy for one year. During this time I have worked on countless assessing abatement applications and appeals and resolved thousands of matters covering all types of property owners and property types.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

I view the fundamental role of any Board of Assessors is to treat all constituents respectfully and to address their concerns in a clear and timely manner that is consistent with the restrictions put in place by the Massachusetts general laws that govern property valuation.

Are you involved in any other Town activities? If so, describe.

I am not

Do you have time constraints that would limit your ability to attend one to two meetings a month?

I do not



Upload a Resume

Demographics

NICHOLAS P. ARINIELLO, ESQ.

Experience

CITY OF BOSTON ASSESSING DEPARTMENT, Boston, Massachusetts

MARCH 2006 - PRESENT

Commissioner June 2019 - Present

- Responsible for generating \$3.5 billion in annual revenue for the City of Boston, over 70% of the City's operating budget, through the valuation of 185,000+ tax parcels
- Key member of the executive financial team tasked with reviewing bond offerings and presenting before global ratings agencies, resulting in a AAA from S&P Global Ratings, and Aaa from Moody's Investors Service, for each of the past seven years
- Lead a team of 90 staff members across divisions in legal, valuation, research, operations, customer service, and human resources, with an annual operating budget of \$9 million, and manage a \$150 million reserve account
- Negotiate tax incentive agreements for major real estate developments throughout the City under M.G.L. c. 121A (6A Agreements), M.G.L. c. 121B (PILOTs), and M.G.L. c.23A (TIFs) (sample negotiated agreements include the office to residential program, Amazon Seaport, GE HQ, Millennium Place, and the Hub on Causeway (TD Garden))
- Oversaw the transition to and implementation of a new Computer Assisted Mass Appraisal (CAMA) valuation system, the software product that all of the City's assessments rely upon
- Successfully led the department through a Commonwealth of Massachusetts mandated recertification process, the first in five years, during the pandemic in November of 2020, and then again in November of 2024
- Set seven consecutive records for new growth revenue while serving as Commissioner, totaling over \$670 million in newly discovered revenue, eclipsing the previous record by 20% during my first year
- Steward the nation leading Payment in Lieu of Tax (PILOT) program, a collaborative effort whereby charitable institutions voluntarily provide the City \$35 million in annual cash contributions and over \$60 million of annual in kind community benefits
- Member of the Future of Work Task Force under Mayor Janey, a group of City of Boston leaders appointed to make recommendations for managing the City workforce during and after the pandemic
- Presented before the Appraisal Institute (MA and RI Chapter) and the Counselors of Real Estate (NE Chapter)
- Taught a seminar on negotiating tax incentive agreements for the Massachusetts Association of Assessing Officers

Director of Tax Policy September 2018 – June 2019

Acting Director of Tax Policy February 2018 – September 2018

Attorney, Tax Policy/Litigation March 2006 – February 2018

Litigation Highlights

- Practiced before the Massachusetts Appellate Tax Board, over twelve years experience handling all aspects of complex litigation involving over 1,000 residential and commercial property overvaluation and exemption cases
- Reduced the case backlog by over 80%, resolving hundreds of cases a year through trials and negotiated settlements
- Managed a team of ten valuation experts and oversaw their caseload
- Significant trials include NStar Electric (2015), Park Plaza (2013), Newbury Street (2012), and Boston Gas (2009)
- Drafted and filed post trial briefs, motions, discovery, responses to discovery, answers to appeals and subpoenas
- Examined and cross-examined lay and expert witnesses

Tax Policy/Transactional Highlights

- Developed departmental policy
- Negotiated and drafted complex tax incentive agreements
- Drafted legislation addressing diverse matters such as the taxation of MBTA property, the local meals tax, condominium parking easements, and residential exemption qualifications
- Interpreted and explained statutes to the Mayor, the CFO, the Commissioner of Assessing, and the general public
- Researched and wrote memoranda on complex issues of law in areas including: real property taxation and exemption, personal property taxation and exemption, condominium law, trust law, corporate formation, and public records
- Oversaw department communications such as taxpayer brochures and the department website
- Determined tax exemption eligibility of nonprofit institutions
- Presented before the Boston Bar Association and the Norfolk/Suffolk County Assessors Association

Experience (cont.)

GEORGE WASHINGTON UNIVERSITY SMALL BUSINESS CLINIC, Washington, D.C.

FALL 2004

Legal Fellow

- Drafted a Membership Agreement for an LLC
- Advised clients on various legal matters such as taxation, local licensing, trademark, and business entity choice
- Drafted memoranda analyzing clients current and potential legal issues

U.S. DEPARTMENT OF LABOR, Washington, D.C.

SUMMER 2004

Law Clerk, Office of the Solicitor – Plan Benefits Security Division

- Assisted Senior Trial Attorney in complex litigation involving ERISA violations by Global Crossing, Ltd, attending settlement meetings and depositions
- Drafted settlement agreements and a motion to intervene
- Researched and drafted legal memos regarding ERISA, fiduciary law, and evidence rulings

U.S. FEDERAL TRADE COMMISSION, Washington, D.C.

SUMMER 2003

Law Clerk, Bureau of Consumer Protection

- Researched and summarized a list of state identity theft laws for all fifty states for publication to the FTC website
- Drafted a memo on the Freedom of Information Act (FOIA) exemptions for privacy and law enforcement

STATE STREET CORPORATION, Quincy, Massachusetts

JULY 2000 – AUGUST 2001

Portfolio Accountant and Auditor, Institutional Investor Services

- Primary client contact for an account valued at more than \$1 billion
- Determined the cause of discrepancies between accounting books and cash movement for funds valued at \$2 billion
- Trained new employees and audited their work

Education

THE GEORGE WASHINGTON UNIVERSITY LAW SCHOOL, Washington, D.C.

Juris Doctor (JD), May 2005

- Participant in Spring 2003 and Spring 2004 Trial Court Competitions, Fall 2003 Negotiations Competition and Spring 2003 Moot Court Competition
- Actor in 2003 and 2005 law school performances of the Law Revue Show

UNIVERSITY OF MASSACHUSETTS AT AMHERST, Amherst, Massachusetts

Bachelor of Business Administration (BBA), Cum Laude, May 2000

Major: Marketing; Minor: Psychology

- Studied abroad at The Haarlem Business School, The Netherlands, Fall 1998

Bar Admissions/Memberships

- Admitted to Massachusetts State Bar, November 2005
- Member of the Boston Bar Association (BBA)
- Member of the Massachusetts Association of Assessing Officers (MAAO)
- Member of the International Association of Assessing Officers (IAAO)

Other Interests

- Pan Mass Challenge
- Cycling
- Obstacle Course Races (Spartan, Tough Mudder, Rugged Maniac)

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Khandan

First Name

Baradaran

Last Name

khandan-baradaran@comcast.net

Email Address

Home Address

City

MA

State

02446

Postal Code

What Precinct do you live in (if known)?

☒ Precinct 8

Primary Phone

Which Boards would you like to apply for?

Conservation Commission: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

I have been a Brookline resident for over 30 years, graduating from Heath School and BHS. I have worked in the biotech industry until now. I am a Harvard Ph.D. scientist. My skills include consensus building, budgeting, and management. My hobbies and interests include the arts, preservation of trees and green spaces, and advocacy for democratic norms.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

Urban development projects should include a mix of new housing projects, infrastructure/road repairs and preservation of green spaces, including trees.

Are you involved in any other Town activities? If so, describe.

No

Do you have time constraints that would limit your ability to attend one to two meetings a month?

No


Upload a Resume

Demographics

Ethnicity

☒ Middle Eastern

Gender

☒ Female


Date of Birth

SUMMARY

Scientist entrepreneur with nearly 30 years' experience in the pharmaceutical industry, including over 10 years in the rare disease gene therapy space, including all phases of development and commercialization. Expertise in Regulatory Affairs, CMC, Quality Control and Quality Assurance. Molecular biologist and virologist, providing strategic input from early development to BLA submission, inspection, licensure and post-marketing. Demonstrated ability to initiate and grow new departments, including Quality and Regulatory organizations. Excellent verbal and written communication skills.

SKILLS

- Global Regulatory Strategy (US, EU, UK, Japan)
- Regulatory Affairs & Regulatory CMC Leadership
- IND / IMPD / BLA Submissions
- AAV Gene Therapy & Advanced Therapies
- Quality Systems (GMP, GCP, GLP)
- Inspection Readiness & Compliance
- Health Authority Interactions (FDA, EMA, MHRA)
- Cross-Functional & Executive Leadership

EXPERIENCE

Principal, Mill Creek Consulting LLC

Executive Consultant and Strategic Advisor, Regulatory CMC Cell & Gene Therapy

Jul 2025-Present

- Provides executive-level regulatory and CMC strategy for cell and gene therapy programs across early development through BLA submission, licensure, and post-marketing commitments
- Leads global Regulatory CMC strategy for gene therapy programs, including IND/IMPD submissions, Phase 3-enabling packages, and comparability assessments
- Serves as senior advisor to executive leadership (CEO, CMO, R&D heads) on regulatory risk, development timelines, and agency engagement strategy
- Drives inspection readiness and compliance for FDA, EMA, and MHRA audits, ensuring alignment across GMP, GCP, and quality systems
- Partners with CMC, Quality, and Technical Operations teams to resolve complex development and manufacturing challenges in fast-moving clinical programs
- Provides hands-on leadership for regulatory document development, including INDs, IMPDs, briefing packages, and health authority responses
- Advises biotech leadership teams on organizational build-out of Regulatory, Quality, and CMC functions in early-stage and scaling environments
- Supports multiple rare disease gene therapy programs, bringing over 10 years of specialized AAV and advanced-therapy experience to high-impact consulting engagements
- Consulting projects to date include an AAV gene therapy BLA, a gene editing project and a plasmid project

Nanoscope Therapeutics, Dallas TX

Senior Vice President, Regulatory Affairs

Senior Vice President, Regulatory Affairs and Quality

Jan 2025-Jun 2025**Apr 2024-Jan 2025**

- Led global Regulatory Affairs and Quality strategy for clinical-stage gene therapy programs, ensuring compliance across FDA, EMA, and UK regulatory frameworks
- Oversaw end-to-end regulatory execution for INDs, Phase 2/3 and BLA submissions, and accelerated development pathways in rare disease indications
- Built and scaled Quality and Regulatory organizations to support rapid pipeline expansion and inspection readiness
- Acted as executive sponsor for cross-functional governance across CMC, Clinical, Safety, and Manufacturing
- Provided strategic oversight for external regulatory consultants and vendors, ensuring high-quality deliverables and consistent agency messaging

Ultragenyx Pharmaceutical/Dimension Therapeutics, Cambridge MA**Vice President and Global Head of Regulatory CMC****Principal Scientist, CMC Product Quality****Vice President and Global Head of Quality - Gene Therapy****Vice President and Global Head of Quality****Vice President, Regulatory Affairs and Quality Assurance****May 2021-Apr 2024****Jan 2020-May 2021****Nov 2017-Dec 2019****Sep 2015-Nov 2017****Aug 2014-Sep 2015**

- Led a team of 12 FTEs to oversee 16 pipeline programs: 4 marketed products, 6 modalities and multiple geographies, including 4 late stage AAV gene therapy programs.
- Successfully filed four AAV gene therapy IND/IMPDs in less than three years.
- Gained approvals for multiple major submissions, including 3 Phase-3 enabling submissions and multiple comparability assessments.
- As employee #13 of the startup organization, filed first US IND, hired initial Regulatory and Quality teams and implemented a complete Quality system that enabled 2 third party inspections.
- Managed all aspects of GCP, GMP and Regulatory functions initially and then QA and QC organizations after the initial push.
- Drove integration of Regulatory CMC strategy with technical development and lifecycle management for marketed and pipeline products
- Led a team of 30 FTEs to manage end-to-end Quality, QA, and QC organizations, ensuring compliance across development, manufacturing, and commercialization.

Shire Human Genetic Therapies, Lexington MA**Director, Regulatory CMC****Jul 2013-Aug 2014**

- Led Regulatory CMC strategy for biologics and genetic therapies across development and commercialization
- Partnered with CMC, Manufacturing, and Quality teams to ensure submission-ready documentation and inspection preparedness

Biogen Idec, Cambridge, MA**Associate Director, Regulatory CMC****Nov 2010-Jun 2013**

- Led Regulatory CMC strategy for multiple clinical programs, supporting INDs, BLAs, and global variations

Novartis Vaccines and Diagnostics, Cambridge MA**Head Government Contracts, Regulatory CMC & Compliance****Jan 2010-Nov 2010****Senior Manager, Regulatory Affairs****Jan 2008-Jan 2010**

- Managed regulatory interfaces for federal contracts and public-health initiatives across entire influenza vaccine portfolio, including commercially available vaccine (Fluvirin), BLA ready (Aggripal and CellFluVax) and pandemic flu vaccines (Fluad, H5N1)
- Ensured alignment between regulatory strategy, quality systems, and compliance obligations

Dyx Corp., Cambridge MA**Sr. Manager, Regulatory CMC****Mar 2007-Jan 2008**

- Directed Regulatory CMC activities for biologics programs supporting global clinical development
- Oversaw submission readiness and cross-functional regulatory execution of ecalantide (Kalbitor) BLA

Biogen Idec, Cambridge, MA**Manager, Regulatory CMC****Apr 2005-Mar 2007****Senior Scientist, Corporate Product Quality****Apr 2004-Apr 2005****Senior Scientist, QC Virology****Mar 2002-Apr 2004****Scientist II****Sep 1999-Mar 2002**

- Led Regulatory CMC strategy for multiple clinical programs, supporting INDs, BLAs, and global variations
- Built deep expertise in viral vector QC, product quality, and regulatory compliance
- Served as key liaison between technical development, Quality, and Regulatory organizations

Genome Therapeutics Corporation, Waltham MA
Senior Scientist

Jun 1997-Sep 1999

- Conducted molecular biology and genomics research supporting early therapeutic discovery efforts

EDUCATION

Post-Doctoral Fellow, Biochemistry **1997**
Harvard Medical School

Ph.D., Virology **1995**
Harvard University

Bachelor of Arts, Molecular Biology **1985**
Wellesley College

Publications available upon request.

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Kelly

First Name

J

Middle
Initial

Brilliant

Last Name

Email Address

Home Address

Suite or Apt

Brookline

City

MA

State

02445

Postal Code

What Precinct do you live in (if known)?

☒ Precinct 3

Primary Phone

Which Boards would you like to apply for?

Conservation Commission: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

I am the Executive Director of the Fenway Alliance, and I have served on the Muddy River Management & Maintenance Committee (the MMOC) for 20 years representing our 22 cultural and academic institutions of the Fenway Alliance in Boston. I have served as the MMOC's Treasurer and the MMOC's Chair (2.5 year term), and currently serve on its leadership and water quality subcommittees. I have a deep commitment to the historic Olmsted Muddy River Park. As a Brookline resident for over a decade, I also have a desire to make a civic contribution to green spaces in the beautiful town that is my home.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

I have read the Conservation Commission's materials on the website, and I have attended a public meeting. I believe the Commission does a fine job of protecting green space and wetlands, and would like to contribute to that.

Are you involved in any other Town activities? If so, describe.

I serve on two other Boston based Boards--Boston Arts Academy and Friends of Fenway Studios in addition to my active role of the MMOC. I am eager to serve the Town of Brookline in this capacity so that I can bring my longterm environmental experience and deep knowledge of how to work with partners and constituents gain through my work at the Fenway Alliance.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

There will be times I will need to attend meetings for the Fenway Alliance, but I should be able to regularly make a monthly meeting of the Conservation Commission, and times where I can make two meetings per month.



Upload a Resume

Demographics

Ethnicity

☒ Caucasian/Non-Hispanic

Gender

☒ Female



Date of Birth

Select one of the following

☒ answer 3

SUMMARY OF QUALIFICATIONS

Organizational leader with 15+ years' experience building strategic alliances and partnerships across highest levels of nonprofit, government, corporate and community sectors to accomplish major programs and initiatives. Expertise:

- engage highest level institutional, government & corporate leaders, staff and volunteers toward major cultural, environmental, infrastructure accomplishments
- design, found & sustain large public education/cultural programs
- corporate fundraising & city, state and federal grants fundraising
- environmental advocacy, cultural place-making and community-building
- messaging, writing, PR and public speaking

EXPERIENCE

THE FENWAY ALLIANCE, INC., Boston, MA

July 2001-Present

A membership organization of 22 prestigious academic and cultural institutions that collectively achieve large cultural, environmental and infrastructure improvements toward advancing Boston's identity as a world class destination and work collectively toward improving access to culture and the Arts for all Boston residents.

Executive Director

Executive leadership of member organizations that include the Museum of Fine Arts, Boston Symphony Orchestra, Northeastern University, Berklee College of Music, the Isabella Stewart Gardner Museum, among others. Advocate for and promote work of Fenway Alliance institutions to numerous corporate, government, and community stakeholders across the New England. Enlist cooperation of State and City agencies to upgrade roadways, streetscapes, rehabilitate historic Olmsted Park to enhance the resident and visitor experience and position Boston as a world class destination. Raise the organization's annual budget. Selected achievements:

- Spearheaded the designation and five-year re-designation of the "Fenway Cultural District" the first among five designated Cultural Districts in the Commonwealth, and the first in Boston (est. Mar 20, 2012). Execute the statewide initiative of multi-stakeholders for this cultural, economic, community-building and public identity initiative
- Founded and directs the Fenway Alliance Corporate Partners Sponsorship Program, now 26 corporations strong
- Key member of successful advocacy team that now oversees \$92 million in Federal, State, City and Town funding for US Army Corps of Engineers project to rehabilitate Olmsted's Muddy River Park.
- Oversaw infrastructure completion and now manager of all green maintenance for \$22 million Huntington Avenue Reconstruction & Beautification
- Founder and creator of the *largest* day of free cultural experiences in Greater Boston--*Opening Our Doors festival*— in its 24th year w 10,000 attendees, annually, 13 institutional and 20 community partners
- Established organizational e-newsletter highlighting the achievements of Black Artists in Boston
- Created and launched four TEDx Fenway events. Successfully enlisted voluntary participation of the most prominent thought leaders in New England from wide range of disciplines. Hosted approx. 300 attendees for each event
- Launched organization's first fundraising event *FACES* now in its 11th year, honoring Boston's highest level civic leaders
- Founded and facilitates the *Fenway Alliance's Salon Dinner Series*, bringing together leaders of Boston non-profit institutions with corporate leaders for spirited evenings of curated networking and conversation
- Founded and manage the Fenway Alliance's Public by Design Public Art initiative. Most recent: *Fenway Frequencies* in partnership with Artist Maria Finkelmeir and Fenway Community Center
- Increased organization's annual budget by 40%

HEALTHY MALDEN, INC. Malden, MA

April 2000-July 2001

Executive Director

Led Healthy Malden, Inc, a non-profit public health organization--a partnership between the Mayor's Office and Hallmark Hospital. Developed and managed all programmatic aspects of organization. Administered \$600,000 budget. Directed grant-writing and fund-raising. Promoted organization statewide and nationally. Managed and mentored six staff members.

OFFICE OF ESSEX DISTRICT ATTORNEY KEVIN M. BURKE, Salem, MA

Aug. 1997-April 2000

Producer and Director of *Flashpoint I* and *Flashpoint II: Close Up on Civil Rights* (A Media Literacy Arts Education Program for Adolescents)

Directed U.S. Department of Justice-funded arts education project with \$500,000 budget. Managed team of policy experts from initial design through application of project. Conducted "Facilitating Flashpoint" statewide training program for 600 professionals. Implemented programs with young people in the court system. Planned national conference on media literacy as prevention tool. Oversaw 30-member conference steering committee. Secured additional U.S. Justice funding of \$300,000.

HARVARD UNIVERSITY, Cambridge, MA

Nov. 1997-Nov. 1998

Director of Curriculum, Program for Young Negotiators (PYN)

Managed and developed all curricular and training products. Established local, statewide and national contacts for the organization. Disseminated PYN products through local and national presentations. Involved in all aspects of fund-raising.

EDUCATION DEVELOPMENT CENTER, INC., Newton, MA

Aug. 1992-Nov. 1997

Project Director and Curriculum Developer: *Social Science Policy Research, Programs,*

***Curricula & Workshops: Securing the Future for Young Children: Coalition Approaches to Violence Prevention* (1995-1997); *Healing Hearts/Mending Minds: Multi-Purpose Curriculum for Young Crime Victims* (1995-1997)**

Co-Project Director and Curriculum Developer (1993-1997)

Healing the Hate: A National Bias Crime Prevention Curriculum for Middle School Students

Establishing Peace: A National Media Literacy Conference Series

Associate Project Director (1993-1997)

A Multidisciplinary Approach to Preventing Bias Crime Evaluation of the National Community

Learn and Serve Program

Curriculum Developer and Trainer (1992-1997)

A Model Protocol and Curriculum to Improve the Treatment of Victims of Bias Crimes

SELECTED AWARDS AND PRESENTATIONS

- Creating and Sustaining a Culture District for Roxbury Cultural District, 2025
- Keynote Remarks for the Muddy River Management & Maintenance Oversight Committee Annual Meeting, 2023
- Berklee College of Music Urban Leader Award 2014
- 6th Annual Muddy River Symposium at Wheelock College: *Restoring & Protecting Olmsted's Muddy River Park: Why The Fenway Alliance Got (and Stayed) Involved*
- 5th Annual Muddy River Symposium at Wheelock College: *Importance of the Muddy River Park and Parklands*
- *Creating Place/Building Community through the Power of Partnerships: the Fenway Cultural District & Fenway Alliance* presented at numerous conferences and for several civic groups

MUNICIPAL/STATE APPOINTED COMMITTEES & PRIVATE BOARDS—Select List

Association of Fundraising Professionals Annual Conference Committee-Management Track
Boston Arts Academy Advisory Council
Boston Foundation Arts Strategy Task Force
Boston Redevelopment Authority's East Fenway Zoning Task Force
Boston World Partnerships Selected Partner
Fenway/Mission Hill Co-Chair, City of Boston's Boston Creates 2015 (the *first citywide* cultural planning process)
Friends of Fenway Studios Board of Directors
Forsyth Institute Independent Review Board
Green Ribbon Task Force Cultural Organizations
Massachusetts Cultural Council Focus Group on Cultural Districts
Massachusetts Cultural Council Review Board for Adams Grant Initiative
Muddy River Maintenance and Management Oversight Committee (MMOC), Chair, Treasurer
Member of Community Outreach & Public Participation and Operations Committee for the MMOC
Numerous Boston Redevelopment Authority Task Force & Citizens Advisory Group Appointments
World Class Cities Partnership Member
YMCA Central Branch Advisory Board

EDUCATION

Vassar College, Bachelor of Arts
Boston University, Masters in English Literature

Poughkeepsie, New York
Boston, Massachusetts

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

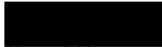
Matthew

First Name

Eddy

Last Name


Email Address


Home Address

Brookline

City

MA

State

02445

Postal Code

What Precinct do you live in (if known)?

☒ Precinct 3


Primary Phone

Which Boards would you like to apply for?

Conservation Commission: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

Served as the administrator for the Muddy River Restoration Project Maintenance and Management Oversight Committee (MMOC) 2020-2025; experience evaluating permits and construction documents. Graduate degree in natural resource management with focus on forest conservation; 10-year Brookline resident who lives in a FEMA 1% floodplain. Enrolled in MACC "Fundamentals for Conservation Commissioners" certificate program. Science teacher, 22 years.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

Advancing synergies between conservation initiatives and Town’s Climate Action and Resiliency and Urban Forest Master Plans. Ongoing stewardship of public and private wetlands and natural areas in context of development. Expanding public outreach.

Are you involved in any other Town activities? If so, describe.

If by Town activities you refer specifically to municipal participation, then no, not at this time.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

No



Upload a Resume

Demographics

Ethnicity

☒ Caucasian/Non-Hispanic

Gender

☒ Male



Date of Birth



Environmental Program Leadership | Watershed Stewardship & Sustainability Initiative Planning |
Non-profit Team Development

PROJECT AND PROGRAM MANAGEMENT EXPERIENCE

- 2025 *Sustainability Consultant, Riverstone Sustainability, Newburyport, MA*
- Provided LEED certification support, sustainability master planning and resilience planning for colleges and universities.
 - Developed Excel-based tool for internal management and reporting of LEED documentation.
- 2020-25 *Committee Administrator, Muddy River Restoration Project
Maintenance & Management Oversight Committee (MMOC), Boston, MA*
- Served as the sole employee for a state-established public “accountability partnership” for agencies executing a \$90 million restoration of an urban river and historic park system.
 - Directed all committee activities and strategic planning. Developed annual committee priorities, proposed oversight objectives, and produced structured reports tracking project milestones. Facilitated all committee and subcommittee meetings; onboarded new committee members.
 - In partnership with committee chair, ensured interagency coordination between Boston Parks & Recreation, Boston City Council, Brookline Department of Public Works, MA Department of Conservation and Recreation, and MA Executive Office of Energy and Environmental Affairs.
 - Managed all committee correspondence, including comment letters, regulatory responses, meeting minutes, and public communications.
 - Compiled statistical data and analyzed technical reports on flood mitigation, water quality, and landscape maintenance; converted findings into clear visuals for committee review and public reporting. Strong Excel and Office Suite skills.
 - Conducted semi-monthly field inspections, maintained detailed photographic and written records, and recommended corrective actions to public agencies.
 - Guided interpretation of state and federal regulations (NPDES/MS4, Chapter 91, 401 WQS, Article 80, etc.); prepared and reviewed city contracts and Scopes of Work for landscape maintenance activities and capital investments in public parks.
 - Cultivated positive working relationships with all MMOC non-profit member organizations. Maintained effective public engagement through website overhaul, social media posts, tours, and articles in local newspapers.
 - Oversaw archives and institutional records, coordinating a digital conversion and office relocation.

PROJECT AND PROGRAM MANAGEMENT EXPERIENCE (CONTINUED)

- 2007-10 *Academic Dean, The Bay School of San Francisco*, San Francisco, CA
- Oversaw all aspects of curriculum development and academic policy development, scheduling, placement, standardized testing, reporting, and student support for a new independent high school of approximately 300 students in grades 9-12.
- 2001 *Project Coordinator, The Conservation Fund*, Arlington, VA
- Convened panel of ten natural resource professionals in reviewing sustainable forestry planning and implementation for the 58,000-acre Chesapeake Forests Project in Salisbury, MD.
- 2000-01 *Assistant Manager of School Forests, Yale School of Forestry and Environmental Studies*
- Assisted the Forest Manager and Director in the day-to-day management of Yale's 11,000 acres of demonstration forest. Oversaw timber sales.
- 1998-99 *Site Foreman/Volunteer Coordinator, AmeriCorps/Habitat for Humanity*, Menlo Park, CA
- Coordinated and oversaw construction of three new single-family homes in cooperation with future low-income homeowners. Trained over 500 volunteers in proper tool use, site safety, construction.

INDEPENDENT SCHOOL EXPERIENCE

Prior to entering the environmental field, I taught high school science (AP and Introductory Biology, Honors and Introductory Chemistry, AP and Honors Environmental Science) and served on key school committees for more than 25 years. Through this work I developed skills in curriculum design, oral and written communication, effective reporting and record-keeping, team development, ability to work with diverse constituencies, comfort with technology, mentorship/supervision, and time management.

- 2023-24 *Science Teacher and Coach, Winsor School*, Boston, MA
- 2016-20 *Science Teacher and Coach, St. Mark's School*, Southborough, MA
- 2012-16 *Science Teacher, Georgetown Day School*, Washington, DC
- 2011-12 *Science Teacher, Washington Latin Public Charter School*, Washington, DC
- 2005-10 *Science Teacher, The Bay School of San Francisco*, San Francisco, CA
- 2002-05 *Science Teacher, Menlo School*, Atherton, CA
- 1993-97 *Science Teacher and Coach, The Potomac School*, McLean, VA

EDUCATION

- 2001 *Master of Forest Science, Yale School of Forestry and Environmental Studies*, New Haven, CT
- 1993 *Bachelor of Arts: Molecular Biophysics and Biochemistry, Yale University*, New Haven, CT

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Ernest
First Name

Cook
Last Name

[Redacted]
Email Address

[Redacted]
Home Address

Brookline
City

MA
State

02446
Postal Code

What Precinct do you live in (if known)?

☒ Precinct 1

[Redacted]
Primary Phone

Which Boards would you like to apply for?

Conservation Commission: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

Served on the board of the Brookline GreenSpace Alliance for many years. Currently vice-president. Board of Advisors of the Charles River Watershed Association. Over 30 years service with the Trust for Public Land in creating new programs to protect and restore urban parks, to foster natural climate solutions, and to finance land protection (including a leading role in the design of the Community Preservation Act in the late 90s). Principal author of open space plans, including the Land Protection Plan authorizing expansion of the Aransas National Wildlife Refuge in Texas. Design and oversight of a conservation easement program to protect habitat of the gopher tortoise in Georgia that succeeded in preventing this species from being listed under the ESA. Co-chair of the Sustainability Committee of the Riverside Boat Club in Cambridge, MA.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

Keenly interested in advancing green infrastructure strategies to manage stormwater.

Are you involved in any other Town activities? If so, describe.

Brookline GreenSpace Alliance, as mentioned above. Former Town Meeting member. Played a role in supporting previous overrides with public opinion polling and campaign strategy (but not involved in the May 2026 campaign).

Do you have time constraints that would limit your ability to attend one to two meetings a month?

No. I am semi-retired and gradually reducing my professional workload.



Upload a Resume

Demographics

Ethnicity

☒ Caucasian/Non-Hispanic

Gender

☒ Male



Date of Birth

Select one of the following

☒ answer 1

ERNEST COOK

Brookline, MA 02446

PARKS AND CONSERVATION PROGRAM LEADER

Widely experienced in land conservation, public finance, philanthropy and fundraising. Expertise in design and implementation of programs that create and manage parks, including planning, funding, evaluation and land acquisition. Specialist in government relations and ballot measures.

CONSULTING EXPERIENCE

Principal, Land/Water Associates

2010 – present

Advisor to foundations to develop grant programs focused on government funding of conservation, the economic value of the natural world, conservation easements, and land protection projects throughout the U.S. and Canada. Advisor to conservation organizations and public agencies on public and private funding.

Key clients and projects include:

- **Network for Landscape Conservation**
Served as Executive Director (part time) responsible for managing relationships with federal agency partners, the Association of Fish and Wildlife Agencies, and funders. With the Fish & Wildlife Service, convened a national forum on the “Future of Conservation”.
- **New City Parks**
Raised state and federal funds for revitalizing urban parks in low-income cities in New York.
- **National Wildlife Refuge Association**
Served as lead consultant in preparing land protection plans for expansion of two wildlife refuges in Texas and associated environmental assessment.
- **Cynthia and George Mitchell Foundation**
Coordinated several foundations to launch the “Texas Environmental Impact Finance Challenge” and collaborated with the impact investment firm Quantified Ventures to manage an RFP process and technical design of financing instruments that will introduce pay-for-performance financing for investments in resilience to local governments in Texas.
- **Bloomington Management Advisors**
Member of a consulting team evaluating the Delaware River Watershed Initiative for the William Penn Foundation.
- **US Endowment for Forestry and Communities**
Prepared a successful proposal to the USDA Natural Resources Conservation Service for a Regional Conservation Partnership Program award to fund conservation easements and habitat restoration to advance the Georgia Gopher Tortoise Conservation Initiative. Now overseeing program implementation.
- **Friends of Brazoria Wildlife Refuges**
Raised over \$2 million in private funds to leverage \$11 million in commitments from the Migratory Bird Conservation Fund and help the San Bernard National Wildlife Refuge acquire almost 5,000 acres of bottomland hardwood forest.
- **Connecticut River Conservancy**
Evaluated strategies for advancing federal legislation to support a watershed-wide conservation and restoration collaborative.

- **Houston Endowment, Inc.**
Oversaw development of park and conservation master plans for local governments in the Houston area. Promoted participation of land trusts in FEMA hazard mitigation plans and applications for FEMA funding to support nature-based solutions to hazard mitigation.
- **National Park Service**
Prepared a public presentation on the history of land protection leading to establishment of Connecticut's first national park.
- **Texas Conservation Alliance**
Raised over \$500,000 and managed a successful public education campaign reaching millions of voters regarding a proposed constitutional amendment to dedicate the state sales tax on sporting goods to the state parks agency.
- **Knobloch Family Foundation**
As the foundation's first executive director and sole grants officer, developed a strategy to support conservation economics, conservation easement integrity, conservation finance, and complex land protection initiatives and managed \$5-10 million in annual grant awards.

PREVIOUS CAREER EXPERIENCE

The Trust for Public Land

1994 – 2018

Senior Vice President and Director, Park and Conservation Services

Created vision for national parks and conservation programs and services, raised funds, recruited program directors, directed research and government relations, and marketed services to government agencies, nonprofit partners and foundations. Managed \$5 million budget with 25 staff based in offices around the country. Key programs and services included:

- Conservation Finance Program – Founded national program helping state and local governments in research and design of legislation and ballot measures that have dedicated over \$90 billion in public funds to parks and land conservation.
- Conservation Campaign – Founded lobbying affiliate and served as its president since 2000. Supported hundreds of ballot measure campaigns with over 80% winning percentage.
- Parks for People Initiative – Founded and directed national program for many years. The Trust for Public Land has become the nation's leader in creating new urban parks.
- National Conservation Easement Database – Directed creation of geospatial database that presents a comprehensive view of the impact of conservation easements in America.
- Climate Conservation – Led initiative to document and accelerate the impact of land conservation and restoration in mitigating greenhouse gas emissions.

The Trust for Public Land

1983 – 1993

Project Manager, Regional Director

Negotiated land acquisition and sale to public agencies to create new parks and conservation areas. Oversaw field operations, government relations and fundraising for parks and conservation in two regions, Midwest and New England.

EDUCATION

New York University, **Master of Public Administration (M.P.A.), Planning and Public Finance**

Harvard University, **Bachelor of Arts, English and American Literature**

Application Form**Translation Available****Profile****Select whether your application is for reappointment or a new application: ***☒ New Application

Cameron

First Name

M

Middle
Initial

Ashrafzadeh

Last Name

[REDACTED]
Email Address[REDACTED]
Home Address[REDACTED]
Suite or Apt

Brookline

City

MA

State

02446

Postal Code

What Precinct do you live in (if known)?☒ Precinct 1[REDACTED]
Primary Phone**Which Boards would you like to apply for?**

Conservation Commission: Submitted

Do you have an existing contract with the Town?☐ Yes ☒ No**Interests & Experiences****If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.**

As a clinical research coordinator, I spend significant time working in team settings. I also help organize, facilitate, and carryout projects. These organization, team-working, analytical, and problem solving skills are useful items I can bring to these commissions and boards to help bolster and aid them in accomplishing their missions.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

Growing up in a family of physicians, I grew up around the phrase, "an ounce of prevention is worth a pound of cure." The work of the Advisory Council of Public Health has been incredibly impactful in implementing social programs designed to place people in contact with the appropriate care. However, beyond just facilitating connections and providing necessities such as improved nutrition, the promotion of preventative care and screenings can also dramatically improve clinical outcomes. With such great proximity to the Longwood Medical area, attempts to setup screening days and provide health screenings to the people of Brookline and help improve the general health and healthcare management of the public. Wetlands are a vitally important habitat. As vibrant hubs of biodiversity with an increasingly important role in carbon sequestration, protecting these habitats is only becoming more important from an ecological perspective. Further, these habitats provide numerous benefits in terms of mitigating flooding, an item which led to the foundation of the conservation efforts of the Muddy River. The work the Conservation Commission has done with developing and steering the direction of Brookline's park lands is incredible. I believe that the conservation efforts of the Conservation Commission in tandem with the recreational development is imperative for a sustainable and ecologically-beneficial approach to park development. Despite this, I believe there is work that can be done to help engage the public with these conservation areas and help educate on the importance of these wetlands areas. Further, beyond larger private donors, crowd-focused small scale fundraising could provide another revenue stream for the conservation commission to further increase the Land Acquisition Fund. I believe voting is a vitally important part of the American society. I have always grown up around the notion that voting was not merely a right, but a civic duty to help bring about a better world. Brookline, meanwhile, has remained below the state average in voter participation. I would like to help push to bring the voter participation within Brookline up to and beyond the state average. By providing greater access to resources about elections -- including education on upcoming elections and polling stations -- as well as public get out the vote drives, increased voter registration, turnout, and participation can lead to a more democratic electoral process.

Are you involved in any other Town activities? If so, describe.

I am not involved in other town activities.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

Outside of working a full time job, no. After 5 and on weekends I should be readily available.

Question applies to Registrars of Voters

What is your political party affiliation?

Unenrolled


Upload a Resume

Demographics

Ethnicity

☒ Middle Eastern

Gender

☒ Male



Date of Birth

Cameron M. Ashrafzadeh

EDUCATION

Boston University, College of Arts and Sciences

Bachelor of Arts in Biology

Boston, MA

Class of 2024

- **GPA:** 3.56
- **Relevant Coursework:** Introduction to Biology/Chemistry, Organic Chemistry I and II, Cell Biology, Genetics, Principles of Neuroscience, Molecular Biology, Statistics, Calculus I
- **Awards:** Dean's List (Fall 2020, Spring 2021, Spring 2023, Fall 2023, Spring 2024).

CERTIFICATIONS

- CITI Good Clinical Practice and Information Privacy Security
- IATA/DOT Trained
- Diabetic Retinopathy Clinical Research Network Refraction, Visual Acuity, Humphrey Visual Field, and AST Contrast Sensitivity Certified
- LASIK Machine Operation (iDesign Refractive Studio, STAR Excimer Laser, iFS Femtosecond Laser)

PROFESSIONAL EXPERIENCE

Joslin Diabetes Center, Beetham Eye Institute

Clinical Research Coordinator

Boston, MA

June 2024–Present

- Trained and obtained certifications in ICH/GCP, HIPAA privacy, IATA/DOT, and more.
- Trained to work as a clinical research coordinator in a patient-facing role, performing study procedures and pre-examination of patients, including refraction, visual acuity, tonometry, Humphrey visual fields, and more.
- Facilitated study activities by screening, consenting, enrolling, and scheduling patients as well as managing study patient flow during study visits.
- Maintained, validated, and organized study records.
- Processed, stored, and shipped whole blood, serum, plasma, vitreous, and aqueous humor samples.
- The Beetham Eye Institute was awarded as a DRCR Network top recruiting site of 2024 and March 2026 DRCR Site of the Month.
- Invited to speak on a panel at the 2025 DRCR Coordinator Meeting in Asheville, NC.

Chobanian and Avedisian School of Medicine, Dr. Gong Lab

Undergraduate Student Researcher

Boston, MA

October 2021–May 2024

- Interpreted preliminary data with Dr. Gong to determine avenues for further research and implications of current research.
- Performed statistical analysis and wrote abstracts based on findings that were presented at a symposium and lab meetings.
- Constructed 3D models of cells from electron microscopy to determine the effects of netarsudil on cellular dimensions.
- Mentored and trained fellow undergraduate researchers in methods used for cell identification, tracing, and 3D modeling.
- Received UROP student research award funding for project.

Boston University, Animal Behavior Class with Professor Wasserman

Class Lab Learning Assistant

Boston, MA

September 2023–December 2023

- Worked with graduate teaching fellows to organize and optimize the lab for students' experience.
- Answered questions from students to help them with the lab and learn the associated goals.
- Assisted with class setup and cleanup.

Modesto Eye Center

Ophthalmic Technician

Modesto, CA

May – August 2021

- Conducted pre-examination, chief complaint, history or present illness, and reviews of systems with patients.
- Used various modalities to perform diagnostic imaging and visual tests.
- Utilized Covid protocol while managing patient flow.

ADDITIONAL SKILLS

- Proficient with fundus imaging machines, Zeiss's OCT Cirrus machine, OptoVue AngioVue, autorefraction machines, ocular topography machines, visual field machines, refraction, and visual acuity testing.
- Acquainted with lab techniques both in practice and in theory.

COMPUTER AND LANGUAGE SKILLS

Computer: Proficient in Microsoft Office, Adobe Acrobat, 3D Reconstruct, and Amira. Acquainted with RStudio and Prism GraphPad.

Language: English (native), Spanish (intermediate), Farsi (beginner)

PUBLICATIONS

- **Ashrafzadeh C.M.**, Bahi M., Mostafa A., El Manhaly M., Ghoneim M., Al-Bayoumy B., Khamis E., Mostafa M., Aziz H.A., Khaled N., Souka A., Silva P.S., Aiello L.P. & Ashraf M., Prospective Data Curation Enables High-Performance AI for Diabetic Retinopathy Screening in a Resource-Limited Setting, *Ophthalmology Science* (2026), doi: <https://doi.org/10.1016/j.xops.2026.101191>.

ABSTRACTS

- **Ashrafzadeh, C. M.**, Bahi, M., Mostafa, A. M., Al-Bayoumy, B., Khamis, E., Abdelaziz, H., Mostafa, M., Ghonneem, M., Elmanhaly, M., Khalid, N., Souka, A., Sun, J. K., Silva, P. S., Aiello, L. P., & Ashraf, M. (2025). Bridging Gaps in Diabetic Retinopathy Care with Locally Developed AI Technology. *Investigative Ophthalmology & Visual Science*, 66(8), 4185.
- Bahi, M., **Ashrafzadeh, C. M.**, Mostafa, A. M., Al-Bayoumy, B., Khamis, E., Abdelaziz, H., Mostafa, M., Ghonneem, M., Elmanhaly, M., Khalid, N., Souka, A., Sun, J. K., Silva, P. S., Aiello, L. P., & Ashraf, M. (2025). Development of an Artificial Intelligence (AI) Model for Detecting Optical Coherence Tomography (OCT) Confirmed Diabetic Macular Edema (DME) from Ultrawide Field Images (UWFI). *Investigative Ophthalmology & Visual Science*, 66(8), 4192.
- Ozcil, A. T., Sampani, K., **Ashrafzadeh, C. M.**, Bahi, M., Talaspayeva, A., Tiskaoglu, N., Duy, D., Hersch, S., Fickweiler, W., Ashraf, M., Sun, J. K., Aiello, L. P., & Silva, P. S. (2025). Ungradable Rates Using AI-Based Screening for Diabetic Retinopathy Deployed Beyond FDA-Approved Indications. *Investigative Ophthalmology & Visual Science*, 66(8), 1742.
- Tiskaoglu, N., Sampani, K., **Ashrafzadeh, C. M.**, Bahi, M., Talaspayeva, A., Ozcil, A. T., Duy, D., Hersch, S., Fickweiler, W., Ashraf, M., Sun, J. K., Aiello, L. P., & Silva, P. S. (2025). Comparison of Red-Green and Red-Green-Blue Ultrawide Field Imaging for Assessing Diabetic Retinopathy Severity. *Investigative Ophthalmology & Visual Science*, 66(8), 1062.
- Park, S., Arquiza, R., **Ashrafzadeh, C. M.**, Gong, H. (2023) Investigation of the Effect of Netarsudil on the Inner Wall Endothelial Cells of Schlemm's Canal of Human Eye Using Serial Block-Face Scanning, *Mol Biol Cell* 35, 3075 (B747/P1718).
- **Ashrafzadeh, C. M.**, Arquiza, R., and Gong, H. (2022). The Effects of Netarsudil on the Dimensions of Schlemm's Canal Inner Wall Endothelial Cells in Non-Flow Segments. Undergraduate Research Opportunities Program, Unpublished abstract.

PRESENTATIONS

- **Ashrafzadeh, C. M.**, Bahi, M., Mostafa, A., Al-Bayoumy, A., Khamis, E., Abdelaziz, H., Mostafa, M., Ghoneim, M., Elmanhaly, M., Khalid, N., Souka, A., Sun, J. K., Silva, P. S., Aiello, L. P., Ashraf, M. (2025, May 7). *Bridging Gaps in Diabetic Retinopathy Care with Locally Developed AI Technology* [Poster Presentation]. The Association for Research in Vision and Ophthalmology, Salt Lake City, Utah, United States of America
- **Ashrafzadeh, C. M.**, Arquiza, R., Gong, H. (2022, October 21). *Effect of Netarsudil on Dimensions of Schlemm's Canal's Inner Wall Endothelial Cells in Non-Flow Regions of Human Eyes* [Poster Presentation]. Undergraduate Research Opportunity Program Poster Symposium, Boston, MA, United States of America.

HONORS AND AWARDS

- Knights Templar Eye Foundation Travel Grant, ARVO Annual Meeting 2025

EXTRACURRICULAR ACTIVITIES

Piano

Student

Boston, MA

January 2022 – Present

- Learned Chopin Op. 48, no. 2, Rachmaninoff Op. 16, no. 5, Scriabin Op. 16, no. 3, and more.
- Performed in an open attendance student recital held by the Boston University graduate student instructor.

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Khandan

First Name

Baradaran

Last Name

khandan-baradaran@comcast.net

Email Address

Home Address

Brookline

City

MA

State

02446

Postal Code

What Precinct do you live in (if known)?

☒ Precinct 8

Mobile: (617) 966-7155

Primary Phone

Which Boards would you like to apply for?

Brookline Commission for the Arts: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

I have been a Brookline resident for over 30 years, graduating from Heath School and BHS. I have worked in the biotech industry until now. I am a Harvard Ph.D. scientist. My skills include consensus building, budgeting, and management. My hobbies and interests include the arts, preservation of trees and green spaces, and advocacy for democratic norms.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

Urban development projects should include a mix of new housing projects, infrastructure/road repairs and preservation of green spaces, including trees.

Are you involved in any other Town activities? If so, describe.

No

Do you have time constraints that would limit your ability to attend one to two meetings a month?

No


Upload a Resume

Demographics

Ethnicity

☒ Middle Eastern

Gender

☒ Female


Date of Birth

SUMMARY

Scientist entrepreneur with nearly 30 years' experience in the pharmaceutical industry, including over 10 years in the rare disease gene therapy space, including all phases of development and commercialization. Expertise in Regulatory Affairs, CMC, Quality Control and Quality Assurance. Molecular biologist and virologist, providing strategic input from early development to BLA submission, inspection, licensure and post-marketing. Demonstrated ability to initiate and grow new departments, including Quality and Regulatory organizations. Excellent verbal and written communication skills.

SKILLS

- Global Regulatory Strategy (US, EU, UK, Japan)
- Regulatory Affairs & Regulatory CMC Leadership
- IND / IMPD / BLA Submissions
- AAV Gene Therapy & Advanced Therapies
- Quality Systems (GMP, GCP, GLP)
- Inspection Readiness & Compliance
- Health Authority Interactions (FDA, EMA, MHRA)
- Cross-Functional & Executive Leadership

EXPERIENCE

Principal, Mill Creek Consulting LLC

Executive Consultant and Strategic Advisor, Regulatory CMC Cell & Gene Therapy

Jul 2025-Present

- Provides executive-level regulatory and CMC strategy for cell and gene therapy programs across early development through BLA submission, licensure, and post-marketing commitments
- Leads global Regulatory CMC strategy for gene therapy programs, including IND/IMPD submissions, Phase 3-enabling packages, and comparability assessments
- Serves as senior advisor to executive leadership (CEO, CMO, R&D heads) on regulatory risk, development timelines, and agency engagement strategy
- Drives inspection readiness and compliance for FDA, EMA, and MHRA audits, ensuring alignment across GMP, GCP, and quality systems
- Partners with CMC, Quality, and Technical Operations teams to resolve complex development and manufacturing challenges in fast-moving clinical programs
- Provides hands-on leadership for regulatory document development, including INDs, IMPDs, briefing packages, and health authority responses
- Advises biotech leadership teams on organizational build-out of Regulatory, Quality, and CMC functions in early-stage and scaling environments
- Supports multiple rare disease gene therapy programs, bringing over 10 years of specialized AAV and advanced-therapy experience to high-impact consulting engagements
- Consulting projects to date include an AAV gene therapy BLA, a gene editing project and a plasmid project

Nanoscope Therapeutics, Dallas TX

Senior Vice President, Regulatory Affairs

Senior Vice President, Regulatory Affairs and Quality

Jan 2025-Jun 2025**Apr 2024-Jan 2025**

- Led global Regulatory Affairs and Quality strategy for clinical-stage gene therapy programs, ensuring compliance across FDA, EMA, and UK regulatory frameworks
- Oversaw end-to-end regulatory execution for INDs, Phase 2/3 and BLA submissions, and accelerated development pathways in rare disease indications
- Built and scaled Quality and Regulatory organizations to support rapid pipeline expansion and inspection readiness
- Acted as executive sponsor for cross-functional governance across CMC, Clinical, Safety, and Manufacturing
- Provided strategic oversight for external regulatory consultants and vendors, ensuring high-quality deliverables and consistent agency messaging

Ultragenyx Pharmaceutical/Dimension Therapeutics, Cambridge MA**Vice President and Global Head of Regulatory CMC****Principal Scientist, CMC Product Quality****Vice President and Global Head of Quality - Gene Therapy****Vice President and Global Head of Quality****Vice President, Regulatory Affairs and Quality Assurance****May 2021-Apr 2024****Jan 2020-May 2021****Nov 2017-Dec 2019****Sep 2015-Nov 2017****Aug 2014-Sep 2015**

- Led a team of 12 FTEs to oversee 16 pipeline programs: 4 marketed products, 6 modalities and multiple geographies, including 4 late stage AAV gene therapy programs.
- Successfully filed four AAV gene therapy IND/IMPDs in less than three years.
- Gained approvals for multiple major submissions, including 3 Phase-3 enabling submissions and multiple comparability assessments.
- As employee #13 of the startup organization, filed first US IND, hired initial Regulatory and Quality teams and implemented a complete Quality system that enabled 2 third party inspections.
- Managed all aspects of GCP, GMP and Regulatory functions initially and then QA and QC organizations after the initial push.
- Drove integration of Regulatory CMC strategy with technical development and lifecycle management for marketed and pipeline products
- Led a team of 30 FTEs to manage end-to-end Quality, QA, and QC organizations, ensuring compliance across development, manufacturing, and commercialization.

Shire Human Genetic Therapies, Lexington MA**Director, Regulatory CMC****Jul 2013-Aug 2014**

- Led Regulatory CMC strategy for biologics and genetic therapies across development and commercialization
- Partnered with CMC, Manufacturing, and Quality teams to ensure submission-ready documentation and inspection preparedness

Biogen Idec, Cambridge, MA**Associate Director, Regulatory CMC****Nov 2010-Jun 2013**

- Led Regulatory CMC strategy for multiple clinical programs, supporting INDs, BLAs, and global variations

Novartis Vaccines and Diagnostics, Cambridge MA**Head Government Contracts, Regulatory CMC & Compliance****Jan 2010-Nov 2010****Senior Manager, Regulatory Affairs****Jan 2008-Jan 2010**

- Managed regulatory interfaces for federal contracts and public-health initiatives across entire influenza vaccine portfolio, including commercially available vaccine (Fluvirin), BLA ready (Aggripal and CellFluVax) and pandemic flu vaccines (Fluad, H5N1)
- Ensured alignment between regulatory strategy, quality systems, and compliance obligations

Dyx Corp., Cambridge MA**Sr. Manager, Regulatory CMC****Mar 2007-Jan 2008**

- Directed Regulatory CMC activities for biologics programs supporting global clinical development
- Oversaw submission readiness and cross-functional regulatory execution of ecalantide (Kalbitor) BLA

Biogen Idec, Cambridge, MA**Manager, Regulatory CMC****Apr 2005-Mar 2007****Senior Scientist, Corporate Product Quality****Apr 2004-Apr 2005****Senior Scientist, QC Virology****Mar 2002-Apr 2004****Scientist II****Sep 1999-Mar 2002**

- Led Regulatory CMC strategy for multiple clinical programs, supporting INDs, BLAs, and global variations
- Built deep expertise in viral vector QC, product quality, and regulatory compliance
- Served as key liaison between technical development, Quality, and Regulatory organizations

Genome Therapeutics Corporation, Waltham MA
Senior Scientist

Jun 1997-Sep 1999

- Conducted molecular biology and genomics research supporting early therapeutic discovery efforts

EDUCATION

Post-Doctoral Fellow, Biochemistry **1997**
Harvard Medical School

Ph.D., Virology **1995**
Harvard University

Bachelor of Arts, Molecular Biology **1985**
Wellesley College

Publications available upon request.

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Arav

First Name

K

Middle Initial

Patel

Last Name

Email Address

Home Address

Brookline

City

MA

State

02445

Postal Code

What Precinct do you live in (if known)?

☒ Precinct 6

Primary Phone

Which Boards would you like to apply for?

Brookline Commission for the Arts: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Question applies to Brookline Youth Council

Which of the following precincts do you live in? *

☒ Precincts 5, 6, 7, or 8

Question applies to Brookline Youth Council

Are you between the age of 14 and 18? (BYC members must be between these ages to serve.)

☒ Yes ☐ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

I bring hands-on leadership and community engagement experience. As Founder and Chapter Leader of Impact Walls at Brookline High School, I've designed and led public art initiatives and coordinated student volunteers on neighborhood improvement projects. I also have direct experience working with community members through my volunteer work at the Brookline Food Pantry, where I interact with families and help manage operations. These experiences have given me insight into what our community needs and how to mobilize young people to make a real difference.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

I'd like to see more youth involvement in community beautification and public space improvement projects. There's a lot of potential energy among high school students that isn't always channeled into civic engagement. I'd also like to focus on making volunteer opportunities more accessible and visible to young people, and creating more spaces where student voices are heard in town decisions that affect us.

Are you involved in any other Town activities? If so, describe.

Yes. I volunteer at the Brookline Food Pantry, where I help with weekly food distribution and organize donated goods. I'm also a CPR-certified youth soccer referee. Additionally, I work at Tappan Green Restaurant, which is located in Brookline High School.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

No, I'm able to commit to attending regular meetings.


Upload a Resume

Demographics

Ethnicity

☒ Asian or Pacific islander

Gender

☒ Male


Date of Birth

ARAV PATEL

EDUCATION

Brookline High School | Brookline, Massachusetts

Expected Graduation 2028 | GPA: 3.8

Communication 101 | University of Massachusetts Boston

College-level course in public speaking, audience engagement, and persuasive communication

LEADERSHIP & INITIATIVES

Founder and Chapter Leader, Impact Walls | Brookline, Massachusetts | 2025–2026

- Founded the Brookline High School chapter of a nonprofit using public art to strengthen community spaces
- Designed and led a public art mural initiative to improve neighborhood spaces and promote civic pride
- Led and coordinated student volunteers for neighborhood cleanup efforts addressing vandalism and neglected areas

WORK EXPERIENCE

Hotline Staff, Tappan Green Restaurant | Brookline High School | 2025–2026

- Took customer orders and provided food recommendations in a fast-paced restaurant environment
- Prepared and assembled food items with attention to detail and food safety standards
- Delivered orders to customers while maintaining exceptional service and professionalism
- Collaborated with team members to ensure efficient kitchen operations

Youth Soccer Referee | Brookline, Massachusetts | March 2025–June 2025

- Officiated youth soccer games for kindergarten through fifth grade players
- Ensured fair play and player safety while managing game flow
- Demonstrated leadership and decision-making in a fast-paced environment

COMMUNITY SERVICE

Volunteer, Brookline Food Pantry | Brookline, Massachusetts | February 2026–Present

- Support weekly food distribution efforts by preparing produce and meat bags for local families
- Organize donated goods to improve efficiency and distribution operations
- Guide visitors through the pickup process while maintaining an organized and welcoming environment

ATHLETICS

Brookline High School

- Cross Country JV (2024, 2025)
- Indoor Track JV (2025)

LANGUAGES

Chinese (Currently in Chinese 4)

CERTIFICATIONS

CPR Certified

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Kelley Pope
First Name Last Name

[Redacted]
Email Address

[Redacted] [Redacted]
Home Address Suite or Apt

Brookline MA 02446
City State Postal Code

What Precinct do you live in (if known)?

☒ Precinct 17

[Redacted]
Primary Phone

Which Boards would you like to apply for?

Brookline Commission for the Arts: Submitted

Do you have an existing contract with the Town?

☒ Yes ☐ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

Hi Members of Council for the Arts, Bernard Greene suggested I reach out to you all. I'm a young senior now retired and a Music Industry Veteran. For the last several years, I have been a Volunteer Arts and Crafts teacher for the Brookline Senior Center and 2Life. I also sit on Brookline Council on Aging Board. I started my career touring with Dolly Parton ,as I study Stage Production and Lighting in 1978 at UNCW. I then left for California, where I pursued my career and spent a decade at the prestigious Westlake Recording Studios. Along my career path, I became a Manager to Burning Tree and another band. Signing them to a major record company and development deals. I then Produced a live charity concert "Trouble in Paradise", which raise 1/3 of a million dollars in 1985. These funds went directly to house displaced homeless family's who were forced out of their homes due to slum landlords developing deals. Joining me on my plight to rehouse these family's were :Ray Manzarek from The Doors, Christine McVie and Mick Fleetwood from Fleetwood Mac, The Go's Go's , the Bangles, Jackson Browne and many more. I brought Brian Wilson from the Beach Boys out of seclusion. This was his first appearance on stage and 11 years. I was able to reunite with Brian before he passed where he reminded me what my act of kindness did for him. Quote" that you never know how your deeds of kindness can change a person life in a positive way." He expresses to me how grateful he is for that opportunity I gave him on the show I Produced. Humbling and heartfelt we both are. Sadly we lost Brian recently. From LA, I lived in NYC with my then boyfriend Greg Hawkes from The Cars. I toured with him on The Cars "Door to Door" tour in 87. I then moved to London where I worked freelance promotion for several artists. I moved to Boston in 1994 and worked at Berklee College . It was very hard for me to find employment in Music here in Boston the 90's, as what few successful places of employment and most all of them couldn't even match my salary. I retired. I volunteer my time to Outside the Box Festival on the Boston Commons as Artists Liaison. And for Friendshipworks where I still act as their Brookline Ambassador. And was awarded their prestigious David Libby Award for my volunteer work. Since 2000, I resurrected the defunked UK record label Creation Records online in 2000. Where I oversee all the digital platforms . Doing so, has given the bands that's use to call Creation home, a second chance at their bands reuniting and continuing their careers. I even booked a live instore appear with The band RIDE here in Brookline at Village Vinyl. The owner Jonathan loved it. It's been fun. Over the last several years I have been teaching Arts and Crafts at the 2Life Residences in Brookline and Newton. As well as the Brookline Senior Center. I'm also a current Board member for Council on Aging in Brookline. I know I can bring fresh aspects and experience to your board with with my prior and current experiences. And would welcome the opportunity to sit down and introduce myself to you all. Please feel free to call me at 617.676.5268 Looking forward to hearing from you. Kindly Kelley Pope Volunteer Arts and Crafts Teacher

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

I'd like to see more Live Arts evolve in Brookline. Perhaps utilizing Coolidge Corner Theater and outdoor areas for more Art oriented temporary Galleries and live performance and Events. Interested in showcasing new artists. And collaborating on new ideas with the board.

Are you involved in any other Town activities? If so, describe.

Yes I'm a board member at Council on Aging and Ambassador for FriendshipWorks.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

None

Demographics

Ethnicity

☒ Caucasian/Non-Hispanic

Gender

☒ Female

Date of Birth

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Sayaka

First Name

Minegishi

Last Name

Email Address

Home Address

Suite or Apt

Brookline

City

MA

State

02446

Postal Code

Primary Phone

Which Boards would you like to apply for?

Brookline Commission for the Arts: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

I would bring experience as both a practicing artist and community contributor to the Commission. For me, art serves as a voice—one that communicates ideas, emotions, and experiences beyond words while creating opportunities for connection and dialogue. Through my work as an artist, my leadership and art design experience with the Brandeis University Japanese Students Association, my experience at the Lane Cove Music and Cultural Center in Australia, and my upcoming solo exhibition at Brookline Public Library's Putterham Branch, I have developed skills in community engagement, visual communication, and public arts participation. Having lived across multiple countries, I would contribute an inclusive and internationally informed perspective to support Brookline's arts community and expand access to meaningful artistic experiences.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

I would like to see the Commission continue expanding access to the arts by creating more opportunities for emerging and local artists while also supporting creative expression across the broader community. I am especially interested in initiatives that make art visible and accessible in everyday public spaces and encourage participation from people of different backgrounds, cultures, ages, and abilities—including individuals with disabilities—not only professional or established artists. I also value programs that create opportunities for community members to share their voices and experiences through creative work. For me, art serves as a voice that communicates ideas, emotions, and experiences beyond words and creates meaningful connections between people. I would be excited to support initiatives that strengthen cultural exchange, increase inclusion, and help ensure that Brookline’s arts community remains welcoming, representative, and accessible to all.

Are you involved in any other Town activities? If so, describe.

Yes. I am currently preparing for a solo exhibition at the Brookline Public Library Putterham Branch, which will be displayed during July and August. Through this exhibition, I hope to contribute to Brookline’s cultural community by creating opportunities for residents to engage with art in an accessible public setting. My work explores themes of nature, everyday experiences, and connection, and I view art as a voice that communicates ideas and emotions beyond words. In addition, I have been actively involved in artistic and community-oriented activities through leadership and visual design roles in student organizations and through sharing my artwork with local audiences.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

no


Upload a Resume

Demographics

Ethnicity

☒ Asian or Pacific islander

Gender

☒ Nonbinary or third gender


Date of Birth

Select one of the following

- ☒ answer 1
- ☒ answer 2
- ☒ answer 3

Sayaka (Saya) Minegishi

EDUCATION

Brandeis University , Waltham MA	August 2021- Present
Neuroscience 4-year Bachelor/Masters (M.S.) Graduate Program	
Harvard Summer School , Cambridge MA	June - August 2019, June -August 2023
The University of Queensland , Queensland, Australia	August 2020- August 2021
Gap Year: Bachelor of Biomedical Science, Biological and Biomedical Sciences	

PROFESSIONAL EXPERIENCE

Computational Neuroscience Training Grant Fellowship , Waltham MA	May 2024 - Present
<i>Computational Neuroscience Training Fellow</i>	
- A year-long fellowship/grant for my research and training, funded by the National Institutes of Health (NIH). - Investigate the role of calcium-activated chloride channels in blood pressure regulation in the sympathetic ganglia of neonatal animal models. - Gain experience and skills in various aspects of computational neuroscience, including computational modeling, machine learning, programming, data analysis, and lab skills.	
Lane Cove Music and Cultural Centre , New South Wales, Australia	June 2017
<i>Cultural Arts Assistant</i>	
- A week-long internship at the Music and Cultural Arts office. Assisted in answering phone calls, organizing documents, and sending mail to ensure that the business is running smoothly.	

RESEARCH EXPERIENCE

Undergraduate Researcher at the Birren Lab, Brandeis University	September 2021 - Present
<i>Undergraduate Researcher and Research Assistant</i>	
- Create MATLAB programs to conduct automated electrophysiological data acquisition and analysis under Professor Susan Birren at the Volen National Center for Complex Systems - Study electrophysiological techniques using Axon Patch-Clamp, wet lab techniques such as RT-qPCR, cell culture maintenance and imaging, and statistical data analysis - Gain experience and mentorship to bolster computational research and programming skills - Provide computational support to lab staff	

ADDITIONAL EXPERIENCES

Pancreatic Cancer Action Network (PANCAN)	Boston, MA
<i>Volunteer</i>	April 2023 – Present
- Managed activities at the Kids' Play Zone in the PurpleStride Boston fundraising event in April 2023. - Maintain active volunteer status through participation in board meetings and event planning	
Brookline Food Pantry	Brookline, MA
<i>Volunteer</i>	July 2019 - Present
- Regularly engaged in customer service, preparing grocery packages for clients, carrying groceries to the clients' cars and cleaning the pantry.	
Brookline High School Library	Brookline, MA
<i>Volunteer Librarian</i>	October 2019-Jaunuary 2020
- Assisted students and teachers in locating, borrowing, and returning school devices and books, as well as organizing books.	
Brookline Teen Center Academic Support	Brookline, MA
<i>Academic Tutor in Brookline Peer Tutor Program</i>	November 2019 – January 2020
- Tutored Japanese and mathematics, including Algebra Advanced and Precalculus, to students in grades 9 to 12.	

Academic Tutor and Mentor in Brookline Tutor Mentor Program

March 2019-June 2019

- Tutored a fifth-grade student with a learning disability in academics for 2 hours every week, focusing on reading comprehension, oral reading skills, spelling, and mathematics. Also Mentored the student in various activities to help build self-confidence and communication skills.

'Broadie for a Week' at the Broad Institute of MIT and Harvard

Cambridge, MA

High School Intern

April 16th - 19th, 2019

- Engaged in lectures and hands-on laboratory activities in the fields of infectious disease, cancer, cell circuits, and computational biology, through wet lab skills such as qPCR and microscopy

After School Homework Club at Willoughby Girls High School

New South Wales, Australia

Mentor

- Tutored two students in grades seven and eight on subjects ranging from Mathematics to English, working 45 minutes per fortnight.

LEADERSHIP

Brandeis Library Student Advisory Council, *Student Representative*

Sep 2023- June 2024

Brandeis University Japanese Students Association, *Executive Board Member & Art Designer*

Sep 2023- June 2024

Brandeis University American Cancer Society, *Relay for Life Committee*

Sep 2023- June 2024

TRAINING and CERTIFICATIONS

Google Cloud: Developing Applications with Google Cloud Specialization (via Coursera)

October 2021

IBM: Advanced Data Science with IBM Specialization (via Coursera)

June 2021

IBM: IBM Data Science Professional Certificate (via Coursera)

March 2021

Johns Hopkins University: Biostatistics in Public Health Specialization (via Coursera)

March 2021

AWARDS

- Computational Neuroscience Training Grant Fellowship at Brandeis University, funded by the National Institutes of Health, 2024.
- NECTFL Board of Directors Award for Latin at Brookline High School, 2020.
- AP Scholar with Distinction Award, College Board, 2020.
- National Honor Society Membership, Brookline High School Chapter, 2019.
- 2nd Place Winner in the 13-17 Years Category of Lane Cove Captured Photography Competition, 2018.
- First in Year 10 Mathematics at Willoughby Girls High School, 2017.
- 3rd in Course for Latin 200 Hours at New South Wales School of Languages, 2017.
- Equal First in Year 9 Mathematics, Willoughby Girls High School, 2016.
- Equal First in Year 9 Science, Willoughby Girls High School, 2016.
- Distinction (top 8% of test-takers in NSW, Australia) in ICAS Writing Competition Year 9, 2016.

SKILLS

Programming: Matlab, Python, Java, HTML, CSS, Javascript, R, Mathematica. Machine learning and deep learning using Python

Applications: Microsoft Office Suite, Axon pCLAMP Software Suite, Clampfit, Clip Studio Paint Pro, Adobe Dreamweaver, Adobe Photoshop Elements, Procreate

Application Form**Translation Available****Profile****Select whether your application is for reappointment or a new application: ***☒ New Application

Vinay

First Name

B

Middle
Initial

Kadiyala

Last Name

Email Address

Home Address

Suite or Apt

Brookline

City

MA

State

02445

Postal Code

What Precinct do you live in (if known)?☒ Precinct 12

Primary Phone

Which Boards would you like to apply for?

Advisory Council of Public Health: Submitted

Do you have an existing contract with the Town?☐ Yes ☒ No**Interests & Experiences****If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.**

I am an internal medicine/hospitalist physician at Beth Israel Deaconess Medical Center. I have been a full time independently practicing physician for the last 5 years, including during the height of the COVID pandemic. I am also a member of the Health and Public Policy Committee of the MA chapter of the American College of Physicians and have worked on many different policy initiatives over the last few years. In particular, I have been working to advance bills to increase primary care access and support, protect immigrants, and ensure high vaccination rates in MA by removing non-medical exemptions for school vaccination requirements. I believe that my clinical and policy experience will help me be an active and effective member of the Advisory Council of Public Health.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

I want to make sure that we as a town have a plan for preparedness for future infectious disease outbreaks/epidemics given the uncertain times we find ourselves in. I also want to ensure that we maintain high vaccination rates for infections such as flu, measles, mumps, and whooping cough that could devastate vulnerable populations in our community such as children, the elderly, and people who are immunocompromised. I also want to focus on the social determinants of health including housing, access to good nutrition, and overall affordability in our town.

Are you involved in any other Town activities? If so, describe.

I am not currently involved in any town activities.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

I work full time at Beth Israel Deaconess Medical Center and sometimes have to work evening shifts, but I will be able to attend most meetings.

 Upload a Resume

Demographics

Ethnicity

☒ Asian or Pacific islander

Gender

☒ Male

 Date of Birth

Vinay Kadiyala MD

Education

Albany Medical Center Residency in Internal Medicine	Albany, NY	2017-2020
Albany Medical College Doctor of Medicine May 2017	Albany, NY	2013-2017
Rensselaer Polytechnic Institute, Bachelor of Sciences, <i>cum laude</i> in Biology- RPI-AMC 7 year Accelerated Physician-Scientist Program	Troy, NY	2010-2014

Professional Work History

Hospitalist Physician Beth Israel Deaconess Medical Center	Boston, MA	August 2022- present
Instructor in Medicine Harvard Medical School	Boston, MA	August 2022- present
Hospitalist Physician Mass General Brigham Salem Hospital	Salem, MA	December 2020-May 2022

Teaching Experience

Clinical Instructor Beth Israel Deaconess Medical Center and Harvard Medical School	Boston, MA	August 2022- present
Practice of Medicine Clinical Instructor Harvard Medical School Taught medical students basic clinical exam, history, and physical skills	Boston, MA	May 2023- present
Core Faculty for Clinical Skills Development Harvard Medical School Taught 1st and 2nd year medical students clinical skills and precepted standardized patient sessions	Boston, MA	April 2024- present
Rapid Response Supervisor Salem Hospital Supervised residents during overnight rapid responses	Salem, MA	Jan 2021- May 2022
Learn to Teach, Teach to Learn Albany Medical College Taught 1st and 2nd year medical students clinical skills and observed clinical encounters	Albany, NY	June 2016-May 2017

Health Related Service/ Leadership

HMFP Wiki Committee Beth Israel Deaconess Medical Center	Boston, MA	January 2023-present
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- Helped consolidate and edit information about workflow and responsibilities in a centralized database

Albany Medical College Medical Spanish Club Albany, NY 2014-2015
Co-President

- Helped medical students learn conversational and medical Spanish to better communicate with patients and organized community events for the local Hispanic community

Licensure and Certification

MA State Medical License	2020-present
Board Certified, American Board of Internal Medicine	2020-present
Advanced Cardiovascular Life Support	Renewed October 2024

Projects

Beth Israel Deaconess Medical Center- Department of Medicine

Boston, MA 2025-2026

From tool to teammate in a randomized controlled trial of clinician-AI collaborative workflows for diagnosis

- Evaluated workflows between large language models (LLMs) and human clinicians in terms of both diagnostic workup and overall clinical accuracy to try to optimize the use of LLMs in clinical practice

Massachusetts General Hospital- Division of Nephrology

Boston, MA 2021-2022

A Propensity-score Matched Observational Study of the Effect of Remdesivir on Kidney Function in Hospitalized Patients with COVID-19 and Impaired Kidney Function

- Carried out a propensity-score matched cohort study that demonstrated no significant difference in renal function between remdesivir-treated patients with COVID-19 and non-remdesivir treated matched comparators

Albany Medical College- Department of Internal Medicine/ Internal Medicine Group

Albany, NY 2017-2019

Is it Time to Say Goodbye to Your PPI? Deprescribing Proton Pump Inhibitors in an Academic Practice

- Created a protocol to identify patients taking proton pump inhibitors and to deprescribe these medications if appropriate.
- Poster was presented at New York ACP Chapter Meeting on 10/12/2019 and won 2nd Prize

Albany Medical College-Department of Regenerative and Cancer Cell Biology Albany, NY
 2013- 2017

The Effects of FAK Knockdown on Cox 2 mRNA Stability in Breast Cancer Cells

- Investigated the role of the intracellular tyrosine kinase FAK in the signaling pathway by which integrin $\alpha 3 \beta 1$ confers stability to Cox-2 mRNA transcripts in triple-negative breast cancer cells

Awards:

- **Bravo Zulu Award- Salem Hospital Medical Emergency Response Committee** 2022
 Awarded to a physician who goes above and beyond in their efforts to provide quality and compassionate care to patients at Salem Hospital

Advocacy Work

ACP National Leadership Day 2021/2022/2025 Washington DC

- Met with members of the US Congress from Massachusetts to discuss critical issues facing physicians and patients and to advocate for legislation to address those concerns

Massachusetts ACP Advocacy Day Boston, MA 2021/2022/2025/2026

- Met with state legislators in Massachusetts to discuss critical issues facing physicians and patients in Massachusetts and to advocate for legislation to address those concerns.

Medical Student Advocacy Group Albany, NY 2014-2017

- Interned with the New York ACP for one month while in medical school and received formal training in political lobbying and advocacy including attending multiple state legislative committee meetings.
- Met with state legislators to gain support for multiple pieces of legislation including a bill that would guarantee labeling of prescription drugs in language of patient's choice beyond currently offered English, Spanish, and French

Personal

- Languages: English- native speaker, Spanish- near-fluent, Telugu-conversational
- Interests: Reading, politics, history, Tae Kwon Do-black belt
- **Jeopardy!** Aired Feb 16, 2018. One of 400 contestants out of more than 100,000 applicants

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Cameron

First Name

M

Middle
Initial

Ashrafzadeh

Last Name

Email Address

Home Address

Suite or Apt

Brookline

City

MA

State

02446

Postal Code

What Precinct do you live in (if known)?

☒ Precinct 1

Primary Phone

Which Boards would you like to apply for?

Advisory Council of Public Health: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

As a clinical research coordinator, I spend significant time working in team settings. I also help organize, facilitate, and carryout projects. These organization, team-working, analytical, and problem solving skills are useful items I can bring to these commissions and boards to help bolster and aid them in accomplishing their missions.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

Growing up in a family of physicians, I grew up around the phrase, "an ounce of prevention is worth a pound of cure." The work of the Advisory Council of Public Health has been incredibly impactful in implementing social programs designed to place people in contact with the appropriate care. However, beyond just facilitating connections and providing necessities such as improved nutrition, the promotion of preventative care and screenings can also dramatically improve clinical outcomes. With such great proximity to the Longwood Medical area, attempts to setup screening days and provide health screenings to the people of Brookline and help improve the general health and healthcare management of the public. Wetlands are a vitally important habitat. As vibrant hubs of biodiversity with an increasingly important role in carbon sequestration, protecting these habitats is only becoming more important from an ecological perspective. Further, these habitats provide numerous benefits in terms of mitigating flooding, an item which led to the foundation of the conservation efforts of the Muddy River. The work the Conservation Commission has done with developing and steering the direction of Brookline's park lands is incredible. I believe that the conservation efforts of the Conservation Commission in tandem with the recreational development is imperative for a sustainable and ecologically-beneficial approach to park development. Despite this, I believe there is work that can be done to help engage the public with these conservation areas and help educate on the importance of these wetlands areas. Further, beyond larger private donors, crowd-focused small scale fundraising could provide another revenue stream for the conservation commission to further increase the Land Acquisition Fund. I believe voting is a vitally important part of the American society. I have always grown up around the notion that voting was not merely a right, but a civic duty to help bring about a better world. Brookline, meanwhile, has remained below the state average in voter participation. I would like to help push to bring the voter participation within Brookline up to and beyond the state average. By providing greater access to resources about elections -- including education on upcoming elections and polling stations -- as well as public get out the vote drives, increased voter registration, turnout, and participation can lead to a more democratic electoral process.

Are you involved in any other Town activities? If so, describe.

I am not involved in other town activities.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

Outside of working a full time job, no. After 5 and on weekends I should be readily available.

Question applies to Registrars of Voters

What is your political party affiliation?

Unenrolled


Upload a Resume

Demographics

Ethnicity

☒ Middle Eastern

Gender

☒ Male



Date of Birth

Cameron M. Ashrafzadeh

20 Chapel Street, Apt B606 | Brookline, MA 02446 | cmash@bu.edu | (209) 605-9596

EDUCATION

Boston University, College of Arts and Sciences

Bachelor of Arts in Biology

Boston, MA

Class of 2024

- **GPA:** 3.56
- **Relevant Coursework:** Introduction to Biology/Chemistry, Organic Chemistry I and II, Cell Biology, Genetics, Principles of Neuroscience, Molecular Biology, Statistics, Calculus I
- **Awards:** Dean's List (Fall 2020, Spring 2021, Spring 2023, Fall 2023, Spring 2024).

CERTIFICATIONS

- CITI Good Clinical Practice and Information Privacy Security
- IATA/DOT Trained
- Diabetic Retinopathy Clinical Research Network Refraction, Visual Acuity, Humphrey Visual Field, and AST Contrast Sensitivity Certified
- LASIK Machine Operation (iDesign Refractive Studio, STAR Excimer Laser, iFS Femtosecond Laser)

PROFESSIONAL EXPERIENCE

Joslin Diabetes Center, Beetham Eye Institute

Clinical Research Coordinator

Boston, MA

June 2024–Present

- Trained and obtained certifications in ICH/GCP, HIPAA privacy, IATA/DOT, and more.
- Trained to work as a clinical research coordinator in a patient-facing role, performing study procedures and pre-examination of patients, including refraction, visual acuity, tonometry, Humphrey visual fields, and more.
- Facilitated study activities by screening, consenting, enrolling, and scheduling patients as well as managing study patient flow during study visits.
- Maintained, validated, and organized study records.
- Processed, stored, and shipped whole blood, serum, plasma, vitreous, and aqueous humor samples.
- The Beetham Eye Institute was awarded as a DRCR Network top recruiting site of 2024 and March 2026 DRCR Site of the Month.
- Invited to speak on a panel at the 2025 DRCR Coordinator Meeting in Asheville, NC.

Chobanian and Avedisian School of Medicine, Dr. Gong Lab

Undergraduate Student Researcher

Boston, MA

October 2021–May 2024

- Interpreted preliminary data with Dr. Gong to determine avenues for further research and implications of current research.
- Performed statistical analysis and wrote abstracts based on findings that were presented at a symposium and lab meetings.
- Constructed 3D models of cells from electron microscopy to determine the effects of netarsudil on cellular dimensions.
- Mentored and trained fellow undergraduate researchers in methods used for cell identification, tracing, and 3D modeling.
- Received UROP student research award funding for project.

Boston University, Animal Behavior Class with Professor Wasserman

Class Lab Learning Assistant

Boston, MA

September 2023–December 2023

- Worked with graduate teaching fellows to organize and optimize the lab for students' experience.
- Answered questions from students to help them with the lab and learn the associated goals.
- Assisted with class setup and cleanup.

Modesto Eye Center

Ophthalmic Technician

Modesto, CA

May – August 2021

- Conducted pre-examination, chief complaint, history or present illness, and reviews of systems with patients.
- Used various modalities to perform diagnostic imaging and visual tests.
- Utilized Covid protocol while managing patient flow.

ADDITIONAL SKILLS

- Proficient with fundus imaging machines, Zeiss's OCT Cirrus machine, OptoVue AngioVue, autorefraction machines, ocular topography machines, visual field machines, refraction, and visual acuity testing.
- Acquainted with lab techniques both in practice and in theory.

COMPUTER AND LANGUAGE SKILLS

Computer: Proficient in Microsoft Office, Adobe Acrobat, 3D Reconstruct, and Amira. Acquainted with RStudio and Prism GraphPad.

Language: English (native), Spanish (intermediate), Farsi (beginner)

PUBLICATIONS

- **Ashrafzadeh C.M.**, Bahi M., Mostafa A., El Manhaly M., Ghoneim M., Al-Bayoumy B., Khamis E., Mostafa M., Aziz H.A., Khaled N., Souka A., Silva P.S., Aiello L.P. & Ashraf M., Prospective Data Curation Enables High-Performance AI for Diabetic Retinopathy Screening in a Resource-Limited Setting, *Ophthalmology Science* (2026), doi: <https://doi.org/10.1016/j.xops.2026.101191>.

ABSTRACTS

- **Ashrafzadeh, C. M.**, Bahi, M., Mostafa, A. M., Al-Bayoumy, B., Khamis, E., Abdelaziz, H., Mostafa, M., Ghonneem, M., Elmanhaly, M., Khalid, N., Souka, A., Sun, J. K., Silva, P. S., Aiello, L. P., & Ashraf, M. (2025). Bridging Gaps in Diabetic Retinopathy Care with Locally Developed AI Technology. *Investigative Ophthalmology & Visual Science*, 66(8), 4185.
- Bahi, M., **Ashrafzadeh, C. M.**, Mostafa, A. M., Al-Bayoumy, B., Khamis, E., Abdelaziz, H., Mostafa, M., Ghonneem, M., Elmanhaly, M., Khalid, N., Souka, A., Sun, J. K., Silva, P. S., Aiello, L. P., & Ashraf, M. (2025). Development of an Artificial Intelligence (AI) Model for Detecting Optical Coherence Tomography (OCT) Confirmed Diabetic Macular Edema (DME) from Ultrawide Field Images (UWFI). *Investigative Ophthalmology & Visual Science*, 66(8), 4192.
- Ozcil, A. T., Sampani, K., **Ashrafzadeh, C. M.**, Bahi, M., Talaspayeva, A., Tiskaoglu, N., Duy, D., Hersch, S., Fickweiler, W., Ashraf, M., Sun, J. K., Aiello, L. P., & Silva, P. S. (2025). Ungradable Rates Using AI-Based Screening for Diabetic Retinopathy Deployed Beyond FDA-Approved Indications. *Investigative Ophthalmology & Visual Science*, 66(8), 1742.
- Tiskaoglu, N., Sampani, K., **Ashrafzadeh, C. M.**, Bahi, M., Talaspayeva, A., Ozcil, A. T., Duy, D., Hersch, S., Fickweiler, W., Ashraf, M., Sun, J. K., Aiello, L. P., & Silva, P. S. (2025). Comparison of Red-Green and Red-Green-Blue Ultrawide Field Imaging for Assessing Diabetic Retinopathy Severity. *Investigative Ophthalmology & Visual Science*, 66(8), 1062.
- Park, S., Arquiza, R., **Ashrafzadeh, C. M.**, Gong, H. (2023) Investigation of the Effect of Netarsudil on the Inner Wall Endothelial Cells of Schlemm's Canal of Human Eye Using Serial Block-Face Scanning, *Mol Biol Cell* 35, 3075 (B747/P1718).
- **Ashrafzadeh, C. M.**, Arquiza, R., and Gong, H. (2022). The Effects of Netarsudil on the Dimensions of Schlemm's Canal Inner Wall Endothelial Cells in Non-Flow Segments. Undergraduate Research Opportunities Program, Unpublished abstract.

PRESENTATIONS

- **Ashrafzadeh, C. M.**, Bahi, M., Mostafa, A., Al-Bayoumy, A., Khamis, E., Abdelaziz, H., Mostafa, M., Ghoneim, M., Elmanhaly, M., Khalid, N., Souka, A., Sun, J. K., Silva, P. S., Aiello, L. P., Ashraf, M. (2025, May 7). *Bridging Gaps in Diabetic Retinopathy Care with Locally Developed AI Technology* [Poster Presentation]. The Association for Research in Vision and Ophthalmology, Salt Lake City, Utah, United States of America
- **Ashrafzadeh, C. M.**, Arquiza, R., Gong, H. (2022, October 21). *Effect of Netarsudil on Dimensions of Schlemm's Canal's Inner Wall Endothelial Cells in Non-Flow Regions of Human Eyes* [Poster Presentation]. Undergraduate Research Opportunity Program Poster Symposium, Boston, MA, United States of America.

HONORS AND AWARDS

- Knights Templar Eye Foundation Travel Grant, ARVO Annual Meeting 2025

EXTRACURRICULAR ACTIVITIES

Piano

Student

Boston, MA

January 2022 – Present

- Learned Chopin Op. 48, no. 2, Rachmaninoff Op. 16, no. 5, Scriabin Op. 16, no. 3, and more.
- Performed in an open attendance student recital held by the Boston University graduate student instructor.

Application Form

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Solyana
First Name

Henok
Last Name

[Redacted]
Email Address

[Redacted]
Home Address

Brookline
City

MA
State

02446
Postal Code

What Precinct do you live in (if known)?

☒ Precinct 7

[Redacted]
Primary Phone

Which Boards would you like to apply for?

Advisory Council of Public Health: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Question applies to Brookline Youth Council

Which of the following precincts do you live in? *

☒ Precincts 5, 6, 7, or 8

Question applies to Brookline Youth Council

Are you between the age of 14 and 18? (BYC members must be between these ages to serve.)

☒ Yes ☐ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

I can offer a unique youth perspective along with prior experience in structured discussion, public speaking, and critical thinking through my time at Model United Nations and debate. These ventures have trained me to critically analyze complex issues from multiple perspectives, communicate articulately and respectfully, and support arguments with grounded evidence. As a scholar interested in law and public service, I am especially drawn in by the issues I see affecting youth, education, equity, and public health. I am eager to contribute inspirational ideas, ask thoughtful questions, and help represent the viewpoints of young individuals in community decision-making while also learning from other members.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

I would like to see these boards and commissions address issues related to fairness, access to legal resources, and support for vulnerable community members. Specifically, I am interested in how local systems can better safeguard tenants facing high-stakes challenges such as housing insecurity and eviction. My capstone project centers around advocating for a right to counsel in Massachusetts for residents in civil eviction cases who cannot attain or afford an attorney, since there is a major gap in legal representation-studies by the National Coalition for a Civil Right to Counsel found that about 3-4% of tenants have legal representation in eviction cases while 80-83% of landlords do. I am deeply interested in how local boards can help address inequities like this through policy discussion, community outreach, and increased awareness of residents' rights. I would also love to see a more centered focus on guaranteeing that all community members, regardless of income, have fair access to justice and support systems.

Are you involved in any other Town activities? If so, describe.

Currently, my involvement in town activities is mainly school-based and civic engagement opportunities. I participate in Model United Nations and Public Forum debate, where I take part in public policy and global issues through structured research and discussion.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

Not at all, especially when it comes to something as fascinating and important to me as advocating and community responsibility.

Demographics

Ethnicity

☒ African American

Gender

☒ Female


Date of Birth

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Jessica

First Name

Michelson

Last Name

Email Address

Home Address

Brookline

City

MA

State

02467

Postal Code

Primary Phone

Which Boards would you like to apply for?

Advisory Council of Public Health: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

Public health policy and senior government experience. I have a decade of experience in senior policy, strategy, and administrative roles in the British Government, including as a junior policy and legislative advisor to the Prime Minister and, more recently, as a senior advisor to the Secretary of State for Health and Social Care. I was the inaugural senior administrator for community-based healthcare sectors in the UK Government (approx 300,000 NHS staff) and drove system-wide transformation to establish community-based healthcare as foundational to NHS care delivery. I also led the UK's COVID-19 pandemic response across community-based healthcare sectors, ensuring that jobs were preserved, services remained viable and essential patient care continued alongside the pandemic response. From an educational perspective, in addition to graduate degrees in public management (MS, Warwick Business School, funded by the UK's Cabinet Office) and local government management (PgDip, Warwick University Institute for Governance and Public Management, sponsored by the Deputy Prime Minister's Office), I also studied conflict management at the Hebrew University of Jerusalem (MA, completed in Hebrew), which has proven highly valuable for a career in government and public health. I bring relevant experience and, hopefully, a different perspective to contribute to the extensive breadth and depth of expertise already represented on the Advisory Council.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

I am happy to support work in any areas identified as helpful by the town, and to learn from the other ACPH members and the rich data you have gathered about prioritization of issues.

Are you involved in any other Town activities? If so, describe.

N/A

Do you have time constraints that would limit your ability to attend one to two meetings a month?

No

Demographics

Translation Available

Profile

Select whether your application is for reappointment or a new application: *

☒ New Application

Robert

First Name

E

Middle Initial

Moran

Last Name

Email Address

Home Address

Suite or Apt

Brookline

City

MA

State

02446

Postal Code

What Precinct do you live in (if known)?

☒ Precinct 11

Primary Phone

Which Boards would you like to apply for?

Naming Committee: Submitted

Do you have an existing contract with the Town?

☐ Yes ☒ No

Interests & Experiences

If New Applicant, what type of experience can you offer this/these Board(s) & Commission(s)? / If Applicant for Reappointment, list your accomplishments on this Board/Commission during your most recent term.

I minored in History in college at Georgetown, and have maintained a strong interest in history. My wife and I have lived at our home on Winchester Street for more than 20 years. I have resided in Brookline for over 30 years. I did not grow up in Brookline. I grew up in Chelmsford in the Merrimack Valley, the grandson of immigrants on both my paternal (Ireland) and maternal sides (Madeira, Portugal). My mother also was born in Madeira, moving to Dracut, MA when she was a baby. I attended public schools from first grade through high school. After graduation from Boston College Law School and a few years in law practice, I moved to Brookline. I have been a commercial real estate attorney in Boston for over 30 years. As a commercial real estate attorney, I pride myself on successfully working with and collaborating with attorneys (on the other side of a real estate transaction), architects, surveyors, title insurers, bankers, and developers. As such compromise, rather than confrontation, is my working style.

If New Applicant, what type of issue(s) would you like to see this/these Board(s) & Commission(s) address? / If Applicant for Reappointment, what are your future goals on this Board/Commission should you be reappointed?

I would like the Committee to consider appointing historically significant individuals. These individuals should either be (i) nationally significant individuals with a strong connection to Brookline, or (ii) local individuals who have contributed greatly to the Town. I would refrain from recommending nationally significant individuals without a connection to Brookline.

Are you involved in any other Town activities? If so, describe.

I have been involved in my neighborhood, working with the Williams Centre Winchester Neighborhood Coalition to maintain the high quality of life in the neighborhood. I have appeared before the Select Board, with my neighbors, and written letters to the Select Board on this matter. I have also advocated for preserving parking spaces for residents of the neighborhood. I have appeared before the Transportation Board and written letters to the Transportation Board regarding parking issues in the neighborhood. On the townwide level, I worked with the Republican Town Committee in the recent override vote.

Do you have time constraints that would limit your ability to attend one to two meetings a month?

No IF MY PROFILE FROM MY FIRM WEBSITE DID NOT UPLOAD, YOU CAN VIEW MY PROFILE AT GILMAC.COM. IT IS A BIT OUTDATED; NOTHING HAS CHANGED EXCEPT I HAVE MORE OVER 30 YEARS EXPERIENCE, RATHER THAN 20.


Upload a Resume

Demographics

Ethnicity

☒ Caucasian/Non-Hispanic

Gender

☒ Male



Date of Birth

Robert E. Moran



Attorney

Location:

Boston, MA

Phone:



Fax:



Email:

[Email me](#)

Vcard:

[Vcard](#)

Robert E. Moran is a member of the bar in Massachusetts and New Hampshire, the United States District Court for the Districts of Massachusetts and New Hampshire, the United States Court of Appeals, First Circuit and the United

States Tax Court. Mr. Moran received a Bachelor of Arts degree, Summa Cum Laude, from Georgetown University in 1980. He received his Juris Doctor degree, Cum Laude, from Boston College Law School in 1983. His academic honors include Phi Beta Kappa, Phi Alpha Theta and Pi Sigma Alpha. Mr. Moran is a member of the Boston, Massachusetts, New Hampshire and American Bar Associations. Mr. Moran is also a member of the Massachusetts Conveyancers Association.

Mr. Moran has over twenty years of experience in all aspects of commercial real estate, including the purchase, sale, financing and development of multi-million dollar commercial and residential properties. Mr. Moran concentrates in representing closely-held businesses, including their formation, operation and sale. Mr. Moran has successfully negotiated commercial loan workouts and has extensive experience in business law, corporate law, and commercial law. He has written articles and lectured on various topics in the areas of real estate and business law.

Areas Of Practice

- Commercial Real Estate
- Commercial and Residential Properties
- Closely-Held Businesses
- Business Law
- Corporate Law
- Commercial Law

Bar Admissions

- Massachusetts, 1985
- New Hampshire, 1983
- U.S. District Court District of Massachusetts
- U.S. District Court District of New Hampshire
- U.S. Court of Appeals 1st Circuit

- U.S. Tax Court

Education

- **Boston College Law School**, Newton, Massachusetts
 - J.D. - 1983
 - Honors: *cum laude*
- **Georgetown University**, Washington, District of Columbia
 - B.A. - 1980
 - Honors: *summa cum laude*

Professional Associations And Memberships

- Boston Bar Association, Member
- Massachusetts Bar Association, Member
- New Hampshire Bar Association, Member
- American Bar Association, Member
- Real Estate Bar Association for Massachusetts (Massachusetts Conveyancers Association), Member

Fraternities / Sororities

- Phi Beta Kappa
- Phi Alpha Theta
- Pi Sigma Alpha

Practice Areas

Commercial Litigation

